Yahoo Group Archive: TS-520_820_530_830 (2013-01 — 2013-07)

Yahoo Group summary: KENWOOD TS-520_820_530_830

These Yahoo Groups messages were archived in WARC format by ArchiveTeam in 2017. This PDF was generated by Digital Library of Amateur Radio & Communications from the WARC files in 2026.

Date span: 2013-01-01 through 2013-07-31

Source WARC: ts-520_820_530_830.d0kBnMS.warc.gz

Source item: https://archive.org/details/yahoo-groups-2017-04-17T04-04-28Z-8e1d1d

Messages included in this PDF: 3344

Messages omitted as spam from this PDF: 7

Yahoo replaced the domain portions of email addresses with @... in the archived messages. Characters lost in Yahoo's archived text appear as ?.

Messages are presented in ascending Yahoo message-ID order. Gaps indicate records absent from the source WARC or messages omitted from this PDF as spam.

40402. Re: [TS-520_820_530_830] TS-830S CW.N vs CW.W

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-01 02:31:06 UTC
From: Brian Forney
Topic: 40401 Message: 40402

Hi Dave:

Congratulations on acquiring your 830S and your journey into CW. It is very rewarding.

To start, check that your IF shift is centered (12:00) and your VBT is fully clockwise (bandwidth fully open).

73,
  Brian (K7TKT)

From: dnsneale <dgnabq@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, December 31, 2012 4:29 PM
Subject: [TS-520_820_530_830] TS-830S CW.N vs CW.W

HI,

I'm new to Ham radio and new to the Kenwood 830S recently acquired from a local SK. I have most of it figured out, though I'm pretty slow on tune-up.

I have decided to get into CW and started learning code. In the meantime I have been listening on 40M to some of the stations. When tuning to these I can easily tune with the Mode switch in CW.W but I get absolutely no signal on CW.N. I figure i must be missing a switch setting.

Anyone have a suggestion of what to check?

TIA

73,

Dave
KF5OCP

[Non-text portions of this message have been removed]

40403. Re: [TS-520_820_530_830] Thanks and Happy New Year

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-01 02:46:30 UTC
From: Denise Hargreaves
Topic: 40399 Message: 40403

Brian....

Great to hear you got things working....We have much in common...My contributions to this group are very little....I just do not have the experience....
what I have learned has enhanced my ham radio experience immeasurably...I fear there is not enough years in my life left to be much of a tech...but I do not hesitate to get dirty and trouble shoot problems with my hybrid gear....this is totally the result of the quality of the people here and their willingness to help..
I have and always will be thirsty for more knowledge....always take a couple of courses a year....some just for interest....some to keep my family safe
(advanced coastal navigation)....this I feel has been one of the best "ongoing" courses for anyone interested in electronics....
I echo your thanks.....Happy New Year to All..
Regards....Wes....VA6DWH

On 2012-12-31, at 9:27 AM, Brian Forney wrote:

> Hi all:
>
> I've been lurking on the board since picking up an barely functional TS-830S a few years ago. My electronics experience is pretty limited but by reading the posts I've been slowly absorbing info. Shortly after I got the radio I sent it off for repairs and an alignment and it came back working but was still a bit of a disappointment.
>
> I've always thought my 830 was a little deaf. It got much better after I cleaned the antenna relay (based on advice from this group!) but my all-band entry level Yaesu still heard better. That just didn't seem right. My guess has always been that my 830 had taken a hard knock on the way back to me from being repaired and I wished I could perform the basic service at home to avoid the strain of shipping it across the country.
>
> Well, I have just finished my first alignment using the steps in the user manual and some of the information posted on the board. The change after the antenna/mix coil pack steps was dramatic. I picked up an average of 1 s-unit of calibrator level per band. I gained as much as 2.5 s-units on some bands. (No wonder it seemed deaf before...)
>
> The 830 now hears much better than my other radio...like I always thought it should. If it wasn't for the great information I've picked up over time here and the knowledge that if I goofed things up I could come here for support, I would probably not have taken this on. And the best part is that I understand the radio better now.
>
> So....thanks and Happy New Year
>
> 73,
> Brian (K7TKT)
>
>

>

[Non-text portions of this message have been removed]

40404. Re: [TS-520_820_530_830] TS-830S CW.N vs CW.W

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-01 05:29:59 UTC
From: Mike
Topic: 40401 Message: 40404

HI Dave,

I doubt you are missing a switch setting but I have to ask, are you sure the CW filter is installed in your 830? If you look on page 24, Fig 5-21, in the TS-830S operator's manual, you will see where and how the CW filters are installed. A simple visual inspection of this area on the IF Unit board will tell you if the CW filters are installed. It's no uncommon for sellers to remove filters and sell them separately from the sale of the TS-830S.

73s
Mike
W5RKL

On 12/31/2012 8:31 PM, Brian Forney wrote:
>
> Hi Dave:
>
> Congratulations on acquiring your 830S and your journey into CW. It
> is very rewarding.
>
> To start, check that your IF shift is centered (12:00) and your VBT is
> fully clockwise (bandwidth fully open).
>
> 73,
> Brian (K7TKT)
>
> _____
> From: dnsneale <dgnabq@... <mailto:dgnabq%40gmail.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Monday, December 31, 2012 4:29 PM
> Subject: [TS-520_820_530_830] TS-830S CW.N vs CW.W
>
>
>
> HI,
>
> I'm new to Ham radio and new to the Kenwood 830S recently acquired
> from a local SK. I have most of it figured out, though I'm pretty slow
> on tune-up.
>
> I have decided to get into CW and started learning code. In the
> meantime I have been listening on 40M to some of the stations. When
> tuning to these I can easily tune with the Mode switch in CW.W but I
> get absolutely no signal on CW.N. I figure i must be missing a switch

> setting.
>
> Anyone have a suggestion of what to check?
>
> TIA
>
> 73,
>
> Dave
> KF5OCP
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

40405. Re: [TS-520_820_530_830] TS-830S CW.N vs CW.W

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-01 13:14:22 UTC
From: lotek1@comcast.net
Topic: 40401 Message: 40405

Yes. . .in order to use the narrow filter, IF ONE IS INSTALLED , the VBT must be fully clockwise. Not all 830's have the narrow filter installed.

Phil

----- Original Message -----
From: "Brian Forney" <brian_forney@yahoo.com>
To: "TS-520 820 530 830" <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, December 31, 2012 9:31:06 PM
Subject: Re: [TS-520_820_530_830] TS-830S CW.N vs CW.W

Hi Dave:

Congratulations on acquiring your 830S and your journey into CW. It is very rewarding.

To start, check that your IF shift is centered (12:00) and your VBT is fully clockwise (bandwidth fully open).

73,
Brian (K7TKT)

_____
From: dnsneale < dgnabq@... >
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, December 31, 2012 4:29 PM
Subject: [TS-520_820_530_830] TS-830S CW.N vs CW.W

HI,

I'm new to Ham radio and new to the Kenwood 830S recently acquired from a local SK. I have most of it figured out, though I'm pretty slow on tune-up.

I have decided to get into CW and started learning code. In the meantime I have been listening on 40M to some of the stations. When tuning to these I can easily tune with the Mode switch in CW.W but I get absolutely no signal on CW.N. I figure i must be missing a switch setting.

Anyone have a suggestion of what to check?

TIA

73,

Dave
KF5OCP

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[Non-text portions of this message have been removed]

40406. Re: [TS-520_820_530_830] TS-830S CW.N vs CW.W

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-01 14:37:20 UTC
From: Dave
Topic: 40401 Message: 40406

Please excuse moly ignorance but is the Ts520 the same

Dave M0GGK

Sent from my iPad

On 1 Jan 2013, at 13:14, lotek1@... wrote:

> Yes. . .in order to use the narrow filter, IF ONE IS INSTALLED , the VBT must be fully clockwise. Not all 830's have the narrow filter installed.
>
> Phil
>
> ----- Original Message -----
> From: "Brian Forney" <brian_forney@yahoo.com>
> To: "TS-520 820 530 830" <TS-520_820_530_830@yahoogroups.com>
> Sent: Monday, December 31, 2012 9:31:06 PM
> Subject: Re: [TS-520_820_530_830] TS-830S CW.N vs CW.W
>
> Hi Dave:
>
> Congratulations on acquiring your 830S and your journey into CW. It is very rewarding.
>
> To start, check that your IF shift is centered (12:00) and your VBT is fully clockwise (bandwidth fully open).
>
> 73,
> Brian (K7TKT)
>
> _____
> From: dnsneale < dgnabq@... >
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, December 31, 2012 4:29 PM
> Subject: [TS-520_820_530_830] TS-830S CW.N vs CW.W
>
> HI,
>
> I'm new to Ham radio and new to the Kenwood 830S recently acquired from a local SK. I have most of it figured out, though I'm pretty slow on tune-up.
>
> I have decided to get into CW and started learning code. In the meantime I have been listening on 40M to some of the stations. When tuning to these I can easily tune with the Mode switch in CW.W but I get absolutely no signal on CW.N. I figure i must be missing a switch setting.
>
> Anyone have a suggestion of what to check?

>
> TIA
>
> 73,
>
> Dave
> KF5OCP
>
> [Non-text portions of this message have been removed]
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

40407. Re: [TS-520_820_530_830] TS-830S CW.N vs CW.W

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-01 15:03:33 UTC
From: Mike
Topic: 40401 Message: 40407

Dave,

If you are referring to the CW filters in the 520 and 830 then no they are not the same, different IF frequencies.

The 520 has an IF frequency of 3.395Mhz while the 830 has 2 IF frequencies, first is 8Mhz followed by 455Khz so a filter from a 520 will not work in an 830.

73s
Mike
W5RKL

On 1/1/2013 8:37 AM, Dave wrote:
>
> Please excuse moly ignorance but is the Ts520 the same
>
> Dave M0GGK
>
> Sent from my iPad
>
> On 1 Jan 2013, at 13:14, lotek1@...
> <mailto:lotek1%40comcast.net> wrote:
>
> > Yes. . .in order to use the narrow filter, IF ONE IS INSTALLED , the
> VBT must be fully clockwise. Not all 830's have the narrow filter
> installed.
> >
> > Phil
> >
> > ----- Original Message -----
> > From: "Brian Forney" <brian_forney@...
> <mailto:brian_forney%40yahoo.com>>
> > To: "TS-520 820 530 830" <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>>
> > Sent: Monday, December 31, 2012 9:31:06 PM
> > Subject: Re: [TS-520_820_530_830] TS-830S CW.N vs CW.W
> >
> > Hi Dave:
> >
> > Congratulations on acquiring your 830S and your journey into CW. It
> is very rewarding.
> >
> > To start, check that your IF shift is centered (12:00) and your VBT
> is fully clockwise (bandwidth fully open).
> >

> > 73,
> > Brian (K7TKT)
> >
> > _____
> > From: dnsneale < dgnabq@... <mailto:dgnabq%40gmail.com> >
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Monday, December 31, 2012 4:29 PM
> > Subject: [TS-520_820_530_830] TS-830S CW.N vs CW.W
> >
> > HI,
> >
> > I'm new to Ham radio and new to the Kenwood 830S recently acquired
> from a local SK. I have most of it figured out, though I'm pretty slow
> on tune-up.
> >
> > I have decided to get into CW and started learning code. In the
> meantime I have been listening on 40M to some of the stations. When
> tuning to these I can easily tune with the Mode switch in CW.W but I
> get absolutely no signal on CW.N. I figure i must be missing a switch
> setting.
> >
> > Anyone have a suggestion of what to check?
> >
> > TIA
> >
> > 73,
> >
> > Dave
> > KF5OCP
> >
> > [Non-text portions of this message have been removed]
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> > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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40408. Re: TS-830S CW.N vs CW.W

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-01 15:03:44 UTC
From: dnsneale
Topic: 40401 Message: 40408

Thanks Brian!

The VBT was it. I think it is the only knob or switch I didn't try.

Happy New Year to you all.

Dave

--- In TS-520_820_530_830@yahoogroups.com, Brian Forney <brian_forney@...> wrote:
>
> Hi Dave:
>
> Congratulations on acquiring your 830S and your journey into CW. Â It is very rewarding. Â Â
>
> To start, check that your IF shift is centered (12:00) and your VBT is fully clockwise (bandwidth fully open).
>
> 73,
> Â Brian (K7TKT)Â
>
>
> _____
> From: dnsneale <dgnabq@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, December 31, 2012 4:29 PM
> Subject: [TS-520_820_530_830] TS-830S CW.N vs CW.W
>
>
> Â
> HI,
>
> I'm new to Ham radio and new to the Kenwood 830S recently acquired from a local SK. I have most of it figured out, though I'm pretty slow on tune-up.
>
> I have decided to get into CW and started learning code. In the meantime I have been listening on 40M to some of the stations. When tuning to these I can easily tune with the Mode switch in CW.W but I get absolutely no signal on CW.N. I figure i must be missing a switch setting.
>
> Anyone have a suggestion of what to check?
>
> TIA
>
> 73,
>

> Dave
> KF5OCP
>
>
>
>
> [Non-text portions of this message have been removed]
>

40409. Re: [TS-520_820_530_830] TS-830S CW.N vs CW.W

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-01 15:06:02 UTC
From: Dave
Topic: 40401 Message: 40409

Thanks mike I am going to put a filter in my ts520 ..

73 es HNY Dave

Sent from my iPad

On 1 Jan 2013, at 15:03, Mike <w5rkl@...> wrote:

> Dave,
>
> If you are referring to the CW filters in the 520 and 830 then no they
> are not the same, different IF frequencies.
>
> The 520 has an IF frequency of 3.395Mhz while the 830 has 2 IF
> frequencies, first is 8Mhz followed by 455Khz so a filter from a 520
> will not work in an 830.
>
> 73s
> Mike
> W5RKL
>
> On 1/1/2013 8:37 AM, Dave wrote:
> >
> > Please excuse moly ignorance but is the Ts520 the same
> >
> > Dave M0GGK
> >
> > Sent from my iPad
> >
> > On 1 Jan 2013, at 13:14, lotek1@...
> > <mailto:lotek1%40comcast.net> wrote:
> >
> > > Yes. . .in order to use the narrow filter, IF ONE IS INSTALLED , the
> > VBT must be fully clockwise. Not all 830's have the narrow filter
> > installed.
> > >
> > > Phil
> > >
> > > ----- Original Message -----
> > > From: "Brian Forney" <brian_forney@...
> > <mailto:brian_forney%40yahoo.com>>
> > > To: "TS-520 820 530 830" <TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>>
> > > Sent: Monday, December 31, 2012 9:31:06 PM
> > > Subject: Re: [TS-520_820_530_830] TS-830S CW.N vs CW.W
> > >

> > > Hi Dave:
> > >
> > > Congratulations on acquiring your 830S and your journey into CW. It
> > is very rewarding.
> > >
> > > To start, check that your IF shift is centered (12:00) and your VBT
> > is fully clockwise (bandwidth fully open).
> > >
> > > 73,
> > > Brian (K7TKT)
> > >
> > > _____
> > > From: dnsneale < dgnabq@... <mailto:dgnabq%40gmail.com> >
> > > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Monday, December 31, 2012 4:29 PM
> > > Subject: [TS-520_820_530_830] TS-830S CW.N vs CW.W
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> > setting.
> > >
> > > Anyone have a suggestion of what to check?
> > >
> > > TIA
> > >
> > > 73,
> > >
> > > Dave
> > > KF5OCP
> > >
> > > [Non-text portions of this message have been removed]
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> > > [Non-text portions of this message have been removed]
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>
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[Non-text portions of this message have been removed]

40410. Re: [TS-520_820_530_830] TS-830S CW.N vs CW.W

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-01 15:07:23 UTC
From: lotek1@comcast.net
Topic: 40401 Message: 40410

We are all full of "ignorance" :) I don't know if the 520 is similar but, if you need a manual for the 830 they are available online and on the Yahoo site for this group.

----- Original Message -----
From: "Dave" <dave.2e0ncb@...>
To: "TS-520 820 530 830" <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, January 1, 2013 9:37:20 AM
Subject: Re: [TS-520_820_530_830] TS-830S CW.N vs CW.W

Please excuse moly ignorance but is the Ts520 the same

Dave M0GGK

Sent from my iPad

On 1 Jan 2013, at 13:14, lotek1@... wrote:

> Yes. . .in order to use the narrow filter, IF ONE IS INSTALLED , the VBT must be fully clockwise. Not all 830's have the narrow filter installed.
>
> Phil
>
> ----- Original Message -----
> From: "Brian Forney" < brian_forney@... >
> To: "TS-520 820 530 830" < TS-520_820_530_830@yahoogroups.com >
> Sent: Monday, December 31, 2012 9:31:06 PM
> Subject: Re: [TS-520_820_530_830] TS-830S CW.N vs CW.W
>
> Hi Dave:
>
> Congratulations on acquiring your 830S and your journey into CW. It is very rewarding.
>
> To start, check that your IF shift is centered (12:00) and your VBT is fully clockwise (bandwidth fully open).
>
> 73,
> Brian (K7TKT)
>
> ________________________________
> From: dnsneale < dgnabq@... >
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, December 31, 2012 4:29 PM
> Subject: [TS-520_820_530_830] TS-830S CW.N vs CW.W
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> HI,
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> I'm new to Ham radio and new to the Kenwood 830S recently acquired from a local SK. I have most of it figured out, though I'm pretty slow on tune-up.
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> 73,
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> Dave
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>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

40411. Re: TS-830S CW.N vs CW.W

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-01 15:09:30 UTC
From: dnsneale
Topic: 40401 Message: 40411

Hi Mike,

I did consider that the unit had been sold without the filters but was not anxious to tear into the hardware without getting an expert opinion. Thanks for the suggestion.

As it happens I had the VBT set at 12 o'clock and did not think to change it.

The good news I was listening to several clear signals this AM after opening the tuning up, VBT at 5 o'clock.

Thanks for your suggestion.

Happy New Year!

Dave
KF5OCP

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> HI Dave,
>
> I doubt you are missing a switch setting but I have to ask, are you sure
> the CW filter is installed in your 830? If you look on page 24, Fig
> 5-21, in the TS-830S operator's manual, you will see where and how the
> CW filters are installed. A simple visual inspection of this area on the
> IF Unit board will tell you if the CW filters are installed. It's no
> uncommon for sellers to remove filters and sell them separately from the
> sale of the TS-830S.
>
> 73s
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> W5RKL
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> On 12/31/2012 8:31 PM, Brian Forney wrote:
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> >
> > 73,
> > Brian (K7TKT)
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> > _____

> > From: dnsneale <dgnabq@... <mailto:dgnabq%40gmail.com>>
> > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Monday, December 31, 2012 4:29 PM
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> >
> > [Non-text portions of this message have been removed]
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> >
>
>
>
> [Non-text portions of this message have been removed]
>

40412. Re: [TS-520_820_530_830] TS-830S CW.N vs CW.W

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-01 16:08:42 UTC
From: Bob Macklin
Topic: 40401 Message: 40412

The TS-520 is factory wired to only select one filter. That is normally the SSB filter.

The CW filter installation instructions tell you to move the selection wire from the SSB filter to the CW filter.

But that always selects the CW filter.

To be able to switch between the filters mode switch needs to be rewired to add an separate wire from the switch to the CW filter.

I have a 520 sitting here with a CW filter sitting on top of needing the attention to update it. But since I have not had a problem with CW selectivity I have not taken the time to do it.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Dave
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, January 01, 2013 6:37 AM
Subject: Re: [TS-520_820_530_830] TS-830S CW.N vs CW.W

Please excuse moly ignorance but is the Ts520 the same

Dave M0GGK

Sent from my iPad

On 1 Jan 2013, at 13:14, lotek1@... wrote:

> Yes. . .in order to use the narrow filter, IF ONE IS INSTALLED , the VBT must be fully clockwise. Not all 830's have the narrow filter installed.
>
> Phil
>
> ----- Original Message -----
> From: "Brian Forney" <brian_forney@...>
> To: "TS-520 820 530 830" <TS-520_820_530_830@yahoogroups.com>
> Sent: Monday, December 31, 2012 9:31:06 PM
> Subject: Re: [TS-520_820_530_830] TS-830S CW.N vs CW.W
>
> Hi Dave:
>
> Congratulations on acquiring your 830S and your journey into CW. It is very rewarding.
>

> To start, check that your IF shift is centered (12:00) and your VBT is fully clockwise (bandwidth fully open).
>
> 73,
> Brian (K7TKT)
>
> _____
> From: dnsneale < dgnabq@... >
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, December 31, 2012 4:29 PM
> Subject: [TS-520_820_530_830] TS-830S CW.N vs CW.W
>
> HI,
>
> I'm new to Ham radio and new to the Kenwood 830S recently acquired from a local SK. I have most of it figured out, though I'm pretty slow on tune-up.
>
> I have decided to get into CW and started learning code. In the meantime I have been listening on 40M to some of the stations. When tuning to these I can easily tune with the Mode switch in CW.W but I get absolutely no signal on CW.N. I figure i must be missing a switch setting.
>
> Anyone have a suggestion of what to check?
>
> TIA
>
> 73,
>
> Dave
> KF5OCP
>
> [Non-text portions of this message have been removed]
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

40413. Re: [TS-520_820_530_830] Re: TS-830S CW.N vs CW.W

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-01 16:12:14 UTC
From: Brian Forney
Topic: 40401 Message: 40413

Hi Dave:

Great. I have been working on forming a better understanding (from a CW operators perspective) of how CW.W, CW.N, VBT and IF shift work for CW on my 830 of late. If you have a way to connect your headphone jack to a PC (you just need a male-male headphone cord and a size adapter) you can see the effect of these controls visually using free software called Spectrogram 5.17. It was very educational to me to see the the impact of each of these on bandwidth while keeping in mind that CW signals are normally around 800 hz in the passband.

My 830 has one 500hz CW filter. Viewing my bandwidth in Spectrogram helped me understand why having my IF shift set to around 10:00 worked best for CW. (Hint: If your IF is 12:00 (centered) and you narrow your VBT, that 800hz CW signal is no longer in the passband.) It also helped me see what narrowing VBT did when I was in CW.N mode and why I would not want to do this with only one CW filter installed. I guess I needed to see it to understand it. Very worthwhile.

I downloaded Spectrogram 5.17 from this site: http://www.w5big.com/spectrogram.htm Don't use the Visualization Software link...it's just adware now. Use the link for the old free version at the end of the first paragraph. It works great.

An interesting discussion of using the Spectrogram software can be found here:
http://groups.yahoo.com/group/TS-520_820_530_830/message/32474

I hope you enjoy your new to you 830.

Happy new year and 73,
  Brian (K7TKT)

From: dnsneale <dgnabq@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, January 1, 2013 8:03 AM
Subject: [TS-520_820_530_830] Re: TS-830S CW.N vs CW.W

Thanks Brian!

The VBT was it. I think it is the only knob or switch I didn't try.

Happy New Year to you all.

Dave

[Non-text portions of this message have been removed]

40414. Re: Thanks and Happy New Year

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-01 17:23:43 UTC
From: Chris Kepus
Topic: 40399 Message: 40414

Happy New Year to all,

As another lurker, just want to let all you "advisors", "mentors", and "Elmers" out there how much your counsel and encouragement is appreciated. You get us going and stay with us until the radio is playing. Brian's success is an inspiration to folks like myself that have been building up the courage and knowledge to open the case on our Kenwood. One of my NY's resolutions, that I intend to keep (really!! ;-), is to get my TS-830S on the Hybrid Net this year.

Thanks again!!

73,

Chris

W7JPG

[Non-text portions of this message have been removed]

40415. Re: [TS-520_820_530_830] Re: TS-830S CW.N vs CW.W

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-01 16:04:57 UTC
From: AI4WM Bill
Topic: 40401 Message: 40415

Dave,
Congratulations on getting your TS-830S. The ts-830S is still one of the best out there. I have one and had quite a bit of CW fun with it last night. Straight Key Night is one night the bands are usually hopping and last night was no exception.

Don't be afraid to take the top cover off to check if all the filters are installed. If you have a manual it will show where they should be installed. See page 24 of the instruction book.
Just be sure to use a good properly fitting phillips screw driver and take your time.

Here is a link showing the inside with top off and no optional filters.

73,

Bill

AI4WM

--- On Tue, 1/1/13, dnsneale <dgnabq@...> wrote:

From: dnsneale <dgnabq@...>
Subject: [TS-520_820_530_830] Re: TS-830S CW.N vs CW.W
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, January 1, 2013, 10:09 AM

Hi Mike,

I did consider that the unit had been sold without the filters but was not anxious to tear into the hardware without getting an expert opinion. Thanks for the suggestion.

As it happens I had the VBT set at 12 o'clock and did not think to change it.

The good news I was listening to several clear signals this AM after opening the tuning up, VBT at 5 o'clock.

Thanks for your suggestion.

Happy New Year!

Dave

KF5OCP

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:

>

> HI Dave,

>

> I doubt you are missing a switch setting but I have to ask, are you sure
> the CW filter is installed in your 830? If you look on page 24, Fig
> 5-21, in the TS-830S operator's manual, you will see where and how the
> CW filters are installed. A simple visual inspection of this area on the
> IF Unit board will tell you if the CW filters are installed. It's no
> uncommon for sellers to remove filters and sell them separately from the
> sale of the TS-830S.
>
> 73s
> Mike
> W5RKL
>
> On 12/31/2012 8:31 PM, Brian Forney wrote:
> >
> > Hi Dave:
> >
> > Congratulations on acquiring your 830S and your journey into CW. It
> > is very rewarding.
> >
> > To start, check that your IF shift is centered (12:00) and your VBT is
> > fully clockwise (bandwidth fully open).
> >
> > 73,
> > Brian (K7TKT)
> >
> > _____
> > From: dnsneale <dgnabq@... <mailto:dgnabq%40gmail.com>>
> > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>

> > Sent: Monday, December 31, 2012 4:29 PM

> > Subject: [TS-520_820_530_830] TS-830S CW.N vs CW.W

> >

> >

> >

> > HI,

> >

> > I'm new to Ham radio and new to the Kenwood 830S recently acquired

> > from a local SK. I have most of it figured out, though I'm pretty slow

> > on tune-up.

> >

> > I have decided to get into CW and started learning code. In the

> > meantime I have been listening on 40M to some of the stations. When

> > tuning to these I can easily tune with the Mode switch in CW.W but I

> > get absolutely no signal on CW.N. I figure i must be missing a switch

> > setting.

> >

> > Anyone have a suggestion of what to check?

> >

> > TIA

> >

> > 73,

> >

> > Dave

> > KF5OCP

> >

> > [Non-text portions of this message have been removed]

> >

> >

>

>

>

> [Non-text portions of this message have been removed]

>

[Non-text portions of this message have been removed]

40416. Re: [TS-520_820_530_830] TS-830S CW.N vs CW.W

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-02 00:39:30 UTC
From: John Davidson
Topic: 40401 Message: 40416

Bob and all,
I knew some guys who used one of the less used switches , like the fixed chan selector , to switch the ssb filter in On CW mode. I never thought this was necessary.
I don't know if you are a Serious CW op (I think not) But when I bought my new TS520 as is at a close out price, got it home and hooked it up, it took about 30 minutes of operating before I got on the phone and ordered my 400 Hz CW filter, it was nearly unusable with a SSB filter on CW !!!!!

From: Bob Macklin <macklinbob@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, January 1, 2013 11:08 AM
Subject: Re: [TS-520_820_530_830] TS-830S CW.N vs CW.W

The TS-520 is factory wired to only select one filter. That is normally the SSB filter.The CW filter installation instructions tell you to move the selection wire from the SSB filter to the CW filter.
But that always selects the CW filter.
To be able to switch between the filters mode switch needs to be rewired to add an separate wire from the switch to the CW filter.

I have a 520 sitting here with a CW filter sitting on top of needing the attention to update it. But since I have not had a problem with CW selectivity I have not taken the time to do it.

Bob Macklin
K5MYJ
Seattle, iPad

[Non-text portions of this message have been removed]

40417. Re: [TS-520_820_530_830] Re: TS-830S CW.N vs CW.W

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-02 00:45:06 UTC
From: John Davidson
Topic: 40401 Message: 40417

Adding the CW filter in the TS520 only takes about 15 minutes. Just remove the cover, just fasten down the new filter. Unsolder and move the brown wire. I don't think the 830s is any more work.

From: dnsneale <dgnabq@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, January 1, 2013 10:09 AM
Subject: [TS-520_820_530_830] Re: TS-830S CW.N vs CW.W

Hi Mike,

I did consider that the unit had been sold without the filters but was not anxious to tear into the hardware without getting an expert opinion. Thanks for the suggestion.
from the
> sale of the TS-830S.
>
> 73s
Reply via web post Reply to sender Reply to group Start a New Topic Messages in this topic (10)
Recent Activity: * New Members 10
Visit Your Group

Switch to: Text-Only, Daily Digest • Unsubscribe • Terms of Use • Send us Feedback
.

[Non-text portions of this message have been removed]

40418. Re: TS-830S CW.N vs CW.W

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-02 13:05:17 UTC
From: Brian Allen
Topic: 40401 Message: 40418

I feel the TS 520 cw filter switch mod is very necessary, especially if cw is your main mode. If you do the mod, switch the filter on and off on a weak cw contact, you will see the importance. The filter will knock out some stations completely. On the 830 and 520, if the band is not crowded, I don't use the filter. Especially dx on 15 meters.

There are many times you have to have a filter. Sometimes just to cut out the hash....

kb4mng

[Non-text portions of this message have been removed]

40419. Re: TS-830S CW.N vs CW.W

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-02 13:57:55 UTC
From: dnsneale
Topic: 40401 Message: 40419

Yup, the filter is installed and working properly once i figured out the VBT issue.

Thanks to all who contributed!

73,

Dave
KF5OCP

--- In TS-520_820_530_830@yahoogroups.com, Brian Allen <bsa0791@...> wrote:
>
> I feel the TS 520 cw filter switch mod is very necessary, especially if cw is your main mode. If you do the mod, switch the filter on and off on a weak cw contact, you will see the importance. The filter will knock out some stations completely. On the 830 and 520, if the band is not crowded, I don't use the filter. Especially dx on 15 meters.
>
> There are many times you have to have a filter. Sometimes just to cut out the hash....
>
>
> kb4mng
>
>
> [Non-text portions of this message have been removed]
>

40420. TS 830S Faulty on 10 Metre Band

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-02 09:45:34 UTC
From: John Elvy
Topic: 40420 Message: 40420

Hello Fellow Members, Happy New Year to you all.

I have recently acquired a Kenwood TS 830s Hybrid which is in reasonable working condition except that all the 10m
Band is completely dead on TX. None of the controls work on this band at all, but when I connected my signal Generator to the Antenna connector the set appears to have
quite acceptable RX levels on all segments of the 10m Band.
Prior to me diving into the set I thought I would post a message seeking advice from fellow members.
I note the plastic shaft coupler on the band switch has been replaced, It is possibly a re alignment problem?
Any comments/help would be appreciated.
Does anyone know of a source of 830S bandswitch wafers? (New or pre owned) just in case I require them.
John.. ZL2BH

[Non-text portions of this message have been removed]

40421. RE: [TS-520_820_530_830] TS 830S Faulty on 10 Metre Band

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-02 22:38:23 UTC
From: fpath fpath
Topic: 40420 Message: 40421

John,

Congrats on your new buy. If your having doubts about the bandswtich alignment, have a look at the phots in the file section. If you have any trouble accessing I can sent direct to you.Have you tried to wiggle the band switch when on 10?

Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: johnelvy@...
Date: Wed, 2 Jan 2013 22:45:34 +1300
Subject: [TS-520_820_530_830] TS 830S Faulty on 10 Metre Band

Hello Fellow Members, Happy New Year to you all.

I have recently acquired a Kenwood TS 830s Hybrid which is in reasonable working condition except that all the 10m
Band is completely dead on TX. None of the controls work on this band at all, but when I connected my signal Generator to the Antenna connector the set appears to have
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Prior to me diving into the set I thought I would post a message seeking advice from fellow members.
I note the plastic shaft coupler on the band switch has been replaced, It is possibly a re alignment problem?
Any comments/help would be appreciated.
Does anyone know of a source of 830S bandswitch wafers? (New or pre owned) just in case I require them.
John.. ZL2BH

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

40422. TS-520 - heater ON, then loud "POP!"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-03 00:27:08 UTC
From: hambonef8s
Topic: 40422 Message: 40422

Hi All,

I have a TS-520 that I bought over a year ago. It was in great operational condition until recently. After a month or two of inactivity (had just been using it as a receiver, heaters off), I turned the heaters ON and soon after (few seconds??) a single loud POP sound was heard. I turned it off and it's been sitting there for weeks...

I know---I need to get brave and plug it back in to see if I can see any HV on the meter, etc. I didn't look before shutting it down. But for now, I'm wanting a bit more info before I power it back up...

At first I thought maybe a capacitor had exploded, but I can't see that with a visual inspection (and the spaghetti wiring makes me nervous about poking around too much). I did a bit of searching on the group here, and saw mention of "cathode resistor" but honestly, I don't even know where to look for that (even after looking over the service manual).

Any suggestions on what is the "likely suspect?" The old rigs aren't my forte, but maybe I can fix it with a bit of guidance from this informed group!

Thanks in advance,

Mark N8MH

40423. Where to purchase YG-3395C filter?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-03 03:16:03 UTC
From: MountainMike
Topic: 40423 Message: 40423

Season's Greetings to all the Group!

I would like to locate either a YG-3395C or YG-3395CN (narrow) CW IF filter. Do any of you have experience in this area?

On this same topic, I may have located one at the below (Gary Brown) website: Has anybody dealt with GARY BROWN at "Radio Boatanchor Parts"?

(http://tubes_tubes_tubes.tripod.com/index.html)?

73,
Mike wb6csh

40424. Re: Where to purchase YG-3395C filter?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-03 11:14:44 UTC
From: Brian Allen
Topic: 40423 Message: 40424

The best place I have found to purchase filters is INRAD. A great company to deal with. I have not dealt with the business you mentioned. I have never heard anything negative about them.

Brian

[Non-text portions of this message have been removed]

40425. Re: [TS-520_820_530_830] TS 830S Faulty on 10 Metre Band

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-03 06:34:40 UTC
From: John Elvy
Topic: 40420 Message: 40425

Hi Dave,
Thanks for the advice.
I have wriggled the bandswitch while on 10m but no joy i'm afraid.
I will check the file file section as you suggest and If i have any issues locating the info I'll come back to you..
Regards
John. ZL2BH

-----Original Message-----
From: fpath fpath
Sent: Thursday, January 03, 2013 11:38 AM
To: ts-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] TS 830S Faulty on 10 Metre Band

John,

Congrats on your new buy. If your having doubts about the bandswtich alignment, have a look at the phots in the file section. If you have any trouble accessing I can sent direct to you.Have you tried to wiggle the band switch when on 10?

Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: johnelvy@...
Date: Wed, 2 Jan 2013 22:45:34 +1300
Subject: [TS-520_820_530_830] TS 830S Faulty on 10 Metre Band

Hello Fellow Members, Happy New Year to you all.

I have recently acquired a Kenwood TS 830s Hybrid which is in reasonable working condition except that all the 10m
Band is completely dead on TX. None of the controls work on this band at all, but when I connected my signal Generator to the Antenna connector the set appears to have
quite acceptable RX levels on all segments of the 10m Band.
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Any comments/help would be appreciated.
Does anyone know of a source of 830S bandswitch wafers? (New or pre owned) just in case I require them.
John.. ZL2BH

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Yahoo! Groups Links

40426. TS830S No output on 12, 17 and 30

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-03 16:26:43 UTC
From: ravnpeter@ymail.com
Topic: 40426 Message: 40426

There is no output on 12, 17 and 30 meters on the TS830S I on my desk. The transmitter won't tune on these bands, but works fine on all other bands. The receiver works fine on all bands.

Any suggestion will be accpreciated.

Thanks.

OZ8CTH, Peter

40427. Re: TS830S No output on 12, 17 and 30

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-03 16:33:16 UTC
From: n6wk_skcc3
Topic: 40426 Message: 40427

Peter, You need to Enable the Warc bands. Must cut a Blue wire on the AF board.

73,
Gordon
N6WK

--- In TS-520_820_530_830@yahoogroups.com, "ravnpeter@..." wrote:
>
> There is no output on 12, 17 and 30 meters on the TS830S I on my desk. The transmitter won't tune on these bands, but works fine on all other bands. The receiver works fine on all bands.
>
> Any suggestion will be accpreciated.
>
> Thanks.
>
> OZ8CTH, Peter
>

40428. Re: TS830S No output on 12, 17 and 30

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-03 16:51:19 UTC
From: ravnpeter@ymail.com
Topic: 40426 Message: 40428

Gordon,

Which blue wire on the AF Board?

73 Peter

--- In TS-520_820_530_830@yahoogroups.com, "n6wk_skcc3" wrote:
>
> Peter, You need to Enable the Warc bands. Must cut a Blue wire on the AF board.
>
> 73,
> Gordon
> N6WK
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "ravnpeter@" wrote:
> >
> > There is no output on 12, 17 and 30 meters on the TS830S I on my desk. The transmitter won't tune on these bands, but works fine on all other bands. The receiver works fine on all bands.
> >
> > Any suggestion will be accpreciated.
> >
> > Thanks.
> >
> > OZ8CTH, Peter
> >
>

40429. Re: TS830S No output on 12, 17 and 30

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-03 16:54:36 UTC
From: ravnpeter@ymail.com
Topic: 40426 Message: 40429

Don,

Which blue wire on the AF board?

73 Peter

--- In TS-520_820_530_830@yahoogroups.com, "n6wk_skcc3" wrote:
>
> Peter, You need to Enable the Warc bands. Must cut a Blue wire on the AF board.
>
> 73,
> Gordon
> N6WK
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "ravnpeter@" wrote:
> >
> > There is no output on 12, 17 and 30 meters on the TS830S I on my desk. The transmitter won't tune on these bands, but works fine on all other bands. The receiver works fine on all bands.
> >
> > Any suggestion will be accpreciated.
> >
> > Thanks.
> >
> > OZ8CTH, Peter
> >
>

40430. Re: TS830S No output on 12, 17 and 30

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-03 16:55:18 UTC
From: n6wk_skcc3
Topic: 40426 Message: 40430

http://f1.grp.yahoofs.com/v1/AKvlUEUQelbr6HrbRO9WBIcEpQ--mwo3Y4CHnz_7omVaE9b_Cmcif8cl8BPygoQsdsiHCAfBOXY-LNz8Enri/Warc%20band%20enable.jpg

--- In TS-520_820_530_830@yahoogroups.com, "ravnpeter@..." wrote:
>
>
> Gordon,
>
> Which blue wire on the AF Board?
>
> 73 Peter
>
> --- In TS-520_820_530_830@yahoogroups.com, "n6wk_skcc3" wrote:
> >
> > Peter, You need to Enable the Warc bands. Must cut a Blue wire on the AF board.
> >
> > 73,
> > Gordon
> > N6WK
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "ravnpeter@" wrote:
> > >
> > > There is no output on 12, 17 and 30 meters on the TS830S I on my desk. The transmitter won't tune on these bands, but works fine on all other bands. The receiver works fine on all bands.
> > >
> > > Any suggestion will be accpreciated.
> > >
> > > Thanks.
> > >
> > > OZ8CTH, Peter
> > >
> >
>

40431. Re: TS830S No output on 12, 17 and 30

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-03 18:54:18 UTC
From: ravnpeter@ymail.com
Topic: 40426 Message: 40431

Thanks, Gordon.That solved the problem.

vy 73 de Peter

--- In TS-520_820_530_830@yahoogroups.com, "n6wk_skcc3" wrote:
>
>
> http://f1.grp.yahoofs.com/v1/AKvlUEUQelbr6HrbRO9WBIcEpQ--mwo3Y4CHnz_7omVaE9b_Cmcif8cl8BPygoQsdsiHCAfBOXY-LNz8Enri/Warc%20band%20enable.jpg
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "ravnpeter@" wrote:
> >
> >
> > Gordon,
> >
> > Which blue wire on the AF Board?
> >
> > 73 Peter
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "n6wk_skcc3" wrote:
> > >
> > > Peter, You need to Enable the Warc bands. Must cut a Blue wire on the AF board.
> > >
> > > 73,
> > > Gordon
> > > N6WK
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "ravnpeter@" wrote:
> > > >
> > > > There is no output on 12, 17 and 30 meters on the TS830S I on my desk. The transmitter won't tune on these bands, but works fine on all other bands. The receiver works fine on all bands.
> > > >
> > > > Any suggestion will be accpreciated.
> > > >
> > > > Thanks.
> > > >
> > > > OZ8CTH, Peter
> > > >
> > >
> > >
> >
>

40432. Re: TS830S No output on 12, 17 and 30

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-03 19:16:14 UTC
From: n6wk_skcc3
Topic: 40426 Message: 40432

Glad I could help Peter.
It was in the file section of this site. Hi Hi..
73,
Gordon
N6WK

--- In TS-520_820_530_830@yahoogroups.com, "ravnpeter@..." wrote:
>
> Thanks, Gordon.That solved the problem.
>
> vy 73 de Peter
>
> --- In TS-520_820_530_830@yahoogroups.com, "n6wk_skcc3" wrote:
> >
> >
> > http://f1.grp.yahoofs.com/v1/AKvlUEUQelbr6HrbRO9WBIcEpQ--mwo3Y4CHnz_7omVaE9b_Cmcif8cl8BPygoQsdsiHCAfBOXY-LNz8Enri/Warc%20band%20enable.jpg
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "ravnpeter@" wrote:
> > >
> > >
> > > Gordon,
> > >
> > > Which blue wire on the AF Board?
> > >
> > > 73 Peter
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "n6wk_skcc3" wrote:
> > > >
> > > > Peter, You need to Enable the Warc bands. Must cut a Blue wire on the AF board.
> > > >
> > > > 73,
> > > > Gordon
> > > > N6WK
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "ravnpeter@" wrote:
> > > > >
> > > > > There is no output on 12, 17 and 30 meters on the TS830S I on my desk. The transmitter won't tune on these bands, but works fine on all other bands. The receiver works fine on all bands.
> > > > >
> > > > > Any suggestion will be accpreciated.
> > > > >

> > > > > Thanks.
> > > > >
> > > > > OZ8CTH, Peter
> > > > >
> > > > >
> > > >
> > >
> >

40433. Re: [TS-520_820_530_830] TS 830S Faulty on 10 Metre Band

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-03 19:58:20 UTC
From: Mike
Topic: 40420 Message: 40433

Have you verified the presence of the 10 meter VCO signal at the RF
Unit's VCO terminal in transmit? It's possible the 10 meter VCO signal
is there but it's level at the transmit mixer is unusable.

73s
Mike
W5RKL

On 1/3/2013 12:34 AM, John Elvy wrote:
>
> Hi Dave,
> Thanks for the advice.
> I have wriggled the bandswitch while on 10m but no joy i'm afraid.
> I will check the file file section as you suggest and If i have any
> issues
> locating the info I'll come back to you..
> Regards
> John. ZL2BH
>
> -----Original Message-----
> From: fpath fpath
> Sent: Thursday, January 03, 2013 11:38 AM
> To: ts-520_820_530_830@yahoogroups.com
> <mailto:ts-520_820_530_830%40yahoogroups.com>
> Subject: RE: [TS-520_820_530_830] TS 830S Faulty on 10 Metre Band
>
> John,
>
> Congrats on your new buy. If your having doubts about the bandswtich
> alignment, have a look at the phots in the file section. If you have any
> trouble accessing I can sent direct to you.Have you tried to wiggle
> the band
> switch when on 10?
>
> Dave
> VK5PDL
>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> From: johnelvy@... <mailto:johnelvy%40gmail.com>
> Date: Wed, 2 Jan 2013 22:45:34 +1300
> Subject: [TS-520_820_530_830] TS 830S Faulty on 10 Metre Band
>
> Hello Fellow Members, Happy New Year to you all.
>

> I have recently acquired a Kenwood TS 830s Hybrid which is in reasonable
> working condition except that all the 10m
> Band is completely dead on TX. None of the controls work on this band at
> all, but when I connected my signal Generator to the Antenna connector
> the
> set appears to have
> quite acceptable RX levels on all segments of the 10m Band.
> Prior to me diving into the set I thought I would post a message seeking
> advice from fellow members.
> I note the plastic shaft coupler on the band switch has been replaced,
> It is
> possibly a re alignment problem?
> Any comments/help would be appreciated.
> Does anyone know of a source of 830S bandswitch wafers? (New or pre
> owned)
> just in case I require them.
> John.. ZL2BH
>
> [Non-text portions of this message have been removed]
>
> [Non-text portions of this message have been removed]
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>

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40434. Re: Where to purchase YG-3395C filter?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-04 00:50:09 UTC
From: Ken Wedemeyer
Topic: 40423 Message: 40434

I am not sure about the filters ,but I have purchased several items from Gary Brown and have been pleased with the results 73, Ken K7EMO

--- In TS-520_820_530_830@yahoogroups.com, "MountainMike" wrote:
>
> Season's Greetings to all the Group!
>
> I would like to locate either a YG-3395C or YG-3395CN (narrow) CW IF filter. Do any of you have experience in this area?
>
> On this same topic, I may have located one at the below (Gary Brown) website: Has anybody dealt with GARY BROWN at "Radio Boatanchor Parts"?
>
> (http://tubes_tubes_tubes.tripod.com/index.html)?
>
> 73,
> Mike wb6csh
>

40435. Kenwood TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-04 05:00:25 UTC
From: rkings1956
Topic: 6609 Message: 40435

I recently purchased a Kenwood TS-520 it has a set of 6146A tubes. In the service manual it shows a set of 6146B tubes. Should I change them to 6146Bs? The rig is working good. Need some advise. Thanks

KD6FSK
Rob

40436. Re: [TS-520_820_530_830] Kenwood TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-04 16:20:40 UTC
From: Jim Lamanteer
Topic: 6609 Message: 40436

BOB YOU DO NOT NEED TO CHANGE THE TUBES UNTILL THEY START GOING SOFT ON YOU. YOUR 520 WILL BE JUST FINE WITH THOSE TUBES IN IT.WHEN YOU DO REPLACE THEM THEN YOU CAN PUT A SET OF 6146Bs IN IT. FOR NOW ENJOY IT. JIMMY WB2KNR

From: rkings1956 <rkings1956@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, January 4, 2013 12:00 AM
Subject: [TS-520_820_530_830] Kenwood TS-520

I recently purchased a Kenwood TS-520 it has a set of 6146A tubes. In the service manual it shows a set of 6146B tubes. Should I change them to 6146Bs? The rig is working good. Need some advise. Thanks

KD6FSK
Rob

[Non-text portions of this message have been removed]

40437. Re: [TS-520_820_530_830] Kenwood TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-04 16:50:11 UTC
From: John Davidson
Topic: 6609 Message: 40437

If you replace A's with B's you better check neutralization and adjust .

From: Jim Lamanteer <jimlamanteer@yahoo.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Friday, January 4, 2013 11:20 AM
Subject: Re: [TS-520_820_530_830] Kenwood TS-520

BOB YOU DO NOT NEED TO CHANGE THE TUBES UNTILL THEY START GOING SOFT ON YOU. YOUR 520 WILL BE JUST FINE WITH THOSE TUBES IN IT.WHEN YOU DO REPLACE THEM THEN YOU CAN PUT A SET OF 6146Bs IN IT. FOR NOW ENJOY IT. JIMMY WB2KNR

From: rkings1956 mailto:rkings1956%40yahoo.com>
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Friday, January 4, 2013 12:00 AM
Subject: [TS-520_820_530_830] Kenwood TS-520

I recently purchased a Kenwood TS-520 it has a set of 6146A tubes. In the service manual it shows a set of 6146B tubes. Should I change them to 6146Bs? The rig is working good. Need some advise. Thanks

KD6FSK
Rob

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[Non-text portions of this message have been removed]

40438. RE: [SPAM] Re: [TS-520_820_530_830] Kenwood TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-04 17:29:26 UTC
From: Bill Kuhn
Topic: 40438 Message: 40438

You should neutralize anytime you change the final tubes.

It should be easier to do with 6146Bs.

And I agree - if the radio is working OK, don't fix it!

73 DE NO0OO

Bill Kuhn

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From: TS-520_820_530_830@yahoogroups.com on behalf of John Davidson
Sent: Fri 1/4/2013 10:50 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [SPAM] Re: [TS-520_820_530_830] Kenwood TS-520

If you replace A's with B's you better check neutralization and adjust .

From: Jim Lamanteer jimlamanteer@... <mailto:jimlamanteer%40yahoo.com> >
To: "TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> "
TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> >
Sent: Friday, January 4, 2013 11:20 AM
Subject: Re: [TS-520_820_530_830] Kenwood TS-520

BOB YOU DO NOT NEED TO CHANGE THE TUBES UNTILL THEY START GOING SOFT ON YOU. YOUR 520 WILL BE JUST FINE WITH THOSE TUBES IN IT.WHEN YOU DO REPLACE THEM THEN YOU CAN PUT A SET OF 6146Bs IN IT. FOR NOW ENJOY IT. JIMMY WB2KNR

From: rkings1956 mailto:rkings1956%40yahoo.com>
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Friday, January 4, 2013 12:00 AM
Subject: [TS-520_820_530_830] Kenwood TS-520

I recently purchased a Kenwood TS-520 it has a set of 6146A tubes. In the service manual it shows a set of 6146B tubes. Should I change them to 6146Bs? The rig is working good. Need some advise. Thanks

KD6FSK
Rob

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[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

40439. Question regarding Final Drive Tubes.???

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-04 17:45:02 UTC
From: w9cac
Topic: 40439 Message: 40439

Having recently acquired a TS-520, my son and I decided to give the unit a thorough once over. Upon removing the cover over the final drive tubes, we noticed that there were a pair of S2001/A tubes in the sockets. Currently, we are getting about 110 watts out on SSB. The radio tunes up beautifully.
However, after some checking, we are still seriously confused as to what their replacements would be if we were ever to need them.
I have found sites that say it is ok to replace those tubes with 6146B's, other sites say that they need to be just 6146's, still other sites have stated that either 6146B's or 6146W's would be just fine.
Since our operational learning curve is still pretty high, I would really like some input here, so as to not equip our shack with the wrong tubes.

73"s Dave
W9CAC
P.S. Even data sheets show all three as a replacement. I understand that while the W's are military equivalents, they can be hard on the radio. Our application for the rig is as a base station, not mobile

40440. RE: [TS-520_820_530_830] Question regarding Final Drive Tubes.???

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-04 18:34:21 UTC
From: Bill Kuhn
Topic: 40439 Message: 40440

The S2001/A are japanese variants of the 6146B.

Replace with either S2001/A or 6146B. Make sure to check/set neutralization when you replace.

Bill Kuhn - MCSE, MCP+I, MCTS
President
The Kuhn Group, Inc.

EMail: bkuhn@...
Web: http://www.kuhngroup.com <http://www.kuhngroup.com/>
Office: 785.437.3277

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From: TS-520_820_530_830@yahoogroups.com on behalf of w9cac
Sent: Fri 1/4/2013 11:45 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Question regarding Final Drive Tubes.???

Having recently acquired a TS-520, my son and I decided to give the unit a thorough once over. Upon removing the cover over the final drive tubes, we noticed that there were a pair of S2001/A tubes in the sockets. Currently, we are getting about 110 watts out on SSB. The radio tunes up beautifully.
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73"s Dave
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40441. Re: [TS-520_820_530_830] Question regarding Final Drive Tubes.???

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-04 20:00:07 UTC
From: Joseph Stiles
Topic: 40439 Message: 40441

Greetings group...well Happy New Year....

I have used 6146B's & 6146W's for replacing the 2001A's...I have NOT used the "A's" Both the "B's" & the "W's" have worked well for me. There is a good document in the "files section" of this board regarding the final amplifier tubes. Must make sure to neutralize per OP or Service manual. 110 watts on SSB is just a bit high...except MAYBE on the lower bands. I think that using a known calibrated meter you would see100 watts. For proper SSB power out reading...the meter has to be able to "read" the average RF envelope. If you are jacking up the mic gain or jacking up the processor...you may indicate 110 watts..but causing splatter. IF the 2001A's are putting out rated power out...there is no need to replace them...I have an 820S that still has its original 2001A's. PLEASE be careful...I have not had good luck with the "ASIAN" market tubes...I used a set once...one or both arced over..popping the cathode resistors...not much of a problem on the 520/820 series to replace....but on the 530/830...a real pain the the *&$@.

Due to inflation....that's my 10 cents worth

73 Joe
WB7UQU

From: Bill Kuhn <bkuhn@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, January 4, 2013 10:34 AM
Subject: RE: [TS-520_820_530_830] Question regarding Final Drive Tubes.???

The S2001/A are japanese variants of the 6146B.

Replace with either S2001/A or 6146B. Make sure to check/set neutralization when you replace.

Bill Kuhn - MCSE, MCP+I, MCTS
President
The Kuhn Group, Inc.

EMail: bkuhn@...
Web: http://www.kuhngroup.com http://www.kuhngroup.com/>
Office: 785.437.3277

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From: TS-520_820_530_830@yahoogroups.com on behalf of w9cac
Sent: Fri 1/4/2013 11:45 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Question regarding Final Drive Tubes.???

Having recently acquired a TS-520, my son and I decided to give the unit a thorough once over. Upon removing the cover over the final drive tubes, we noticed that there were a pair of S2001/A tubes in the sockets. Currently, we are getting about 110 watts out on SSB. The radio tunes up beautifully.
However, after some checking, we are still seriously confused as to what their replacements would be if we were ever to need them.
I have found sites that say it is ok to replace those tubes with 6146B's, other sites say that they need to be just 6146's, still other sites have stated that either 6146B's or 6146W's would be just fine.
Since our operational learning curve is still pretty high, I would really like some input here, so as to not equip our shack with the wrong tubes.

73"s Dave
W9CAC
P.S. Even data sheets show all three as a replacement. I understand that while the W's are military equivalents, they can be hard on the radio. Our application for the rig is as a base station, not mobile

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[Non-text portions of this message have been removed]

40442. RE: [SPAM] Re: [TS-520_820_530_830] Question regarding Final Drive Tubes.???

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-04 20:31:49 UTC
From: Bill Kuhn
Topic: 40442 Message: 40442

True - I should have mentioned 6146W. They work fine. That is what is currently in my 530S.

73 de NO0OO

Bill Kuhn

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From: TS-520_820_530_830@yahoogroups.com on behalf of Joseph Stiles
Sent: Fri 1/4/2013 2:00 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [SPAM] Re: [TS-520_820_530_830] Question regarding Final Drive Tubes.???

Greetings group...well Happy New Year....

I have used 6146B's & 6146W's for replacing the 2001A's...I have NOT used the "A's" Both the "B's" & the "W's" have worked well for me. There is a good document in the "files section" of this board regarding the final amplifier tubes. Must make sure to neutralize per OP or Service manual. 110 watts on SSB is just a bit high...except MAYBE on the lower bands. I think that using a known calibrated meter you would see100 watts. For proper SSB power out reading...the meter has to be able to "read" the average RF envelope. If you are jacking up the mic gain or jacking up the processor...you may indicate 110 watts..but causing splatter. IF the 2001A's are putting out rated power out...there is no need to replace them...I have an 820S that still has its original 2001A's. PLEASE be careful...I have not had good luck with the "ASIAN" market tubes...I used a set once...one or both arced over..popping the cathode resistors...not much of a problem on the 520/820 series to replace....but on the 530/830...a real pain the the *&$@.

Due to inflation....that's my 10 cents worth

73 Joe
WB7UQU

From: Bill Kuhn bkuhn@... <mailto:bkuhn%40kuhngroup.com> >
To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Friday, January 4, 2013 10:34 AM
Subject: RE: [TS-520_820_530_830] Question regarding Final Drive Tubes.???

The S2001/A are japanese variants of the 6146B.

Replace with either S2001/A or 6146B. Make sure to check/set neutralization when you replace.

Bill Kuhn - MCSE, MCP+I, MCTS
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Office: 785.437.3277

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From: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> on behalf of w9cac
Sent: Fri 1/4/2013 11:45 AM
To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>
Subject: [TS-520_820_530_830] Question regarding Final Drive Tubes.???

Having recently acquired a TS-520, my son and I decided to give the unit a thorough once over. Upon removing the cover over the final drive tubes, we noticed that there were a pair of S2001/A tubes in the sockets. Currently, we are getting about 110 watts out on SSB. The radio tunes up beautifully.
However, after some checking, we are still seriously confused as to what their replacements would be if we were ever to need them.
I have found sites that say it is ok to replace those tubes with 6146B's, other sites say that they need to be just 6146's, still other sites have stated that either 6146B's or 6146W's would be just fine.
Since our operational learning curve is still pretty high, I would really like some input here, so as to not equip our shack with the wrong tubes.

73"s Dave
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P.S. Even data sheets show all three as a replacement. I understand that while the W's are military equivalents, they can be hard on the radio. Our application for the rig is as a base station, not mobile

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40443. [SPAM] Re: [TS-520_820_530_830] Kenwood TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-04 19:57:48 UTC
From: w9cac
Topic: 40438 Message: 40443

Thanks guys for the info. after reading the info on neutralization of the finals, I worked backward through the manual and found a little two line sentence that stated to replace the S2001/A's with 6146B's.
Funny how that works sometimes. Well, I will now order what we may need in the future.
Thanks for the help.

73's Dave W9CAC

--- In TS-520_820_530_830@yahoogroups.com, "Bill Kuhn" wrote:
>
> You should neutralize anytime you change the final tubes.
>
> It should be easier to do with 6146Bs.
>
> And I agree - if the radio is working OK, don't fix it!
>
> 73 DE NO0OO
> ----------
>
> Bill Kuhn
>
> We hate CenturyLink - The worst ISP in the business.
>
> ----------
>
> In God We Trust
>
>
> ----------
>
> From: TS-520_820_530_830@yahoogroups.com on behalf of John Davidson
> Sent: Fri 1/4/2013 10:50 AM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [SPAM] Re: [TS-520_820_530_830] Kenwood TS-520
>
>
>
>
> If you replace A's with B's you better check neutralization and adjust .
>
> ----------
> From: Jim Lamanteer jimlamanteer@... >
> To: "TS-520_820_530_830@yahoogroups.com " TS-520_820_530_830@yahoogroups.com >
> Sent: Friday, January 4, 2013 11:20 AM
> Subject: Re: [TS-520_820_530_830] Kenwood TS-520

>
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> BOB YOU DO NOT NEED TO CHANGE THE TUBES UNTILL THEY START GOING SOFT ON YOU. YOUR 520 WILL BE JUST FINE WITH THOSE TUBES IN IT.WHEN YOU DO REPLACE THEM THEN YOU CAN PUT A SET OF 6146Bs IN IT. FOR NOW ENJOY IT. JIMMY WB2KNR
>
> _____
> From: rkings1956 mailto:rkings1956%40yahoo.com>
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Friday, January 4, 2013 12:00 AM
> Subject: [TS-520_820_530_830] Kenwood TS-520
>
>
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> KD6FSK
> Rob
>
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> [Non-text portions of this message have been removed]
>

40444. Re: Question regarding Final Drive Tubes.???

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-04 20:26:29 UTC
From: w9cac
Topic: 40439 Message: 40444

Joe,
Thanks for the advice. We used a general commercial type watt meter my son has, it could be off in itself, don't know the last time it was calibrated. We followed the tuning instructions and avoid over-driving the processor. We are being as conservative as we can. We plan on this rig lasting a long time. We also plan on spending the money for a good matched set of "American Labeled" tubes just to be sure we have good stock in the event we need them. We do not foresee a breakdown problem for these tubes any time soon though.

73's Dave
W9CAC

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles wrote:
>
> Greetings group...well Happy New Year....
>
> Â Â I have used 6146B's & 6146W's for replacing the 2001A's...I have NOT used the "A's" Â Both the "B's" & the "W's" have worked well for me. There is a good document in the "files section" of this board regarding the final amplifier tubes.Â Must make sure to neutralize per OP or Service manual. 110 watts on SSB is just a bit high...except MAYBE on the lower bands. I think that using a known calibrated meter you would see100 watts. For proper SSB power out reading...the meter has to be able to "read" the average RF envelope. If you are jacking up the mic gain or jacking up the processor...you may indicate 110 watts..but causing splatter. IF the 2001A's are putting out rated power out...there is no need to replace them...I have an 820S that still has its original 2001A's. PLEASE be careful...I have not had good luck with the "ASIAN" market tubes...I used a set once...one or both arced over..popping the cathode resistors...not much of a problem on the
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> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: Bill Kuhn
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Friday, January 4, 2013 10:34 AM
> Subject: RE: [TS-520_820_530_830] Question regarding Final Drive Tubes.???
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>
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>
> Bill Kuhn - MCSE, MCP+I, MCTS
> President
> The Kuhn Group, Inc.
>
> EMail: bkuhn@...
> Web: http://www.kuhngroup.com http://www.kuhngroup.com/>
> Office: 785.437.3277
>
> We hate CenturyLink - The worst ISP in the business.
>
> _____
>
> In God We Trust
>
>
> _____
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> From: TS-520_820_530_830@yahoogroups.com on behalf of w9cac
> Sent: Fri 1/4/2013 11:45 AM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Question regarding Final Drive Tubes.???
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> P.S. Even data sheets show all three as a replacement. I understand that while the W's are military equivalents, they can be hard on the radio. Our application for the rig is as a base station, not mobile
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40445. Re: [TS-520_820_530_830] Re: Question regarding Final Drive Tubes.???

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-04 22:00:19 UTC
From: Joseph Stiles
Topic: 40439 Message: 40445

Dave,

  No problem. However, there is NO reason to use "matched set" final tubes here...they are not necessary and you pay a premium price. There has been lots of "discussion" regarding this subject...and most seem to agree that it's a waste.

   Again, due to inflation....my 10 cents worth.

73 Joe
WB7UQU

From: w9cac <cosmocyb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, January 4, 2013 12:26 PM
Subject: [TS-520_820_530_830] Re: Question regarding Final Drive Tubes.???

Joe,
Thanks for the advice. We used a general commercial type watt meter my son has, it could be off in itself, don't know the last time it was calibrated. We followed the tuning instructions and avoid over-driving the processor. We are being as conservative as we can. We plan on this rig lasting a long time. We also plan on spending the money for a good matched set of "American Labeled" tubes just to be sure we have good stock in the event we need them. We do not foresee a breakdown problem for these tubes any time soon though.

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W9CAC

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> _____
> From: Bill Kuhn
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Friday, January 4, 2013 10:34 AM
> Subject: RE: [TS-520_820_530_830] Question regarding Final Drive Tubes.???
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> Sent: Fri 1/4/2013 11:45 AM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Question regarding Final Drive Tubes.???
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40446. Re: Question regarding Final Drive Tubes.???

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-04 22:26:25 UTC
From: w9cac
Topic: 40439 Message: 40446

Joe,
Again thanks. Saving money is a good thing. Getting sound advise is another. Thanks you and the group again for all the input. Very much appreciated.
However, I think inflation really makes it two-bits now. But I like your dime.

73's Dave
W9CAC

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles wrote:
>
> Dave,
>
> Â No problem. However, there is NO reason to use "matched set" final tubes here...they are not necessary and you pay a premium price. There has been lots of
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> From: w9cac
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Friday, January 4, 2013 12:26 PM
> Subject: [TS-520_820_530_830] Re: Question regarding Final Drive Tubes.???
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> > From: Bill Kuhn
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Friday, January 4, 2013 10:34 AM
> > Subject: RE: [TS-520_820_530_830] Question regarding Final Drive Tubes.???
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> > Replace with either S2001/A or 6146B. Make sure to check/set neutralization when you replace.
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> > Sent: Fri 1/4/2013 11:45 AM
> > To: TS-520_820_530_830@yahoogroups.com
> > Subject: [TS-520_820_530_830] Question regarding Final Drive Tubes.???
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40447. Re: [TS-520_820_530_830] Question regarding Final Drive Tubes.???

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-04 22:33:51 UTC
From: Jim Lamanteer
Topic: 40439 Message: 40447

DAVE YOUR S2001`S ARE THE ORIGINAL TUBES IF U ARE GETTING 110 WATTS THER SURE IS NOTHING WRONG WITH THOSE TUBES. WHEN THE TIME COMES TO REPLACE THEM EITHER 6146Bs OR 6146Ws WILL BE JUST FINE THATS LIKE ASKING WHAT SHOULD U BUY A CHEVY OR A FORD OR A DODGE ITS YOUR CHOICE THEY WILL ALL DO THE SMAE JOB JUST FINE. U JUST HAVE TO NETURALIZE THEM WHEN U REPLACE THEM. PLEASE USE EXTREME CAUTION WHEN U DO IF U HAVE NEVER DONE THAT PLEASE ASK SOMEBODY THE VOLTAGE IN THE H.V. CAGE CAN KILL U. HOPE THIS HELPS U. JIMMY WB2KNR

From: w9cac <cosmocyb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, January 4, 2013 12:45 PM
Subject: [TS-520_820_530_830] Question regarding Final Drive Tubes.???

Having recently acquired a TS-520, my son and I decided to give the unit a thorough once over. Upon removing the cover over the final drive tubes, we noticed that there were a pair of S2001/A tubes in the sockets. Currently, we are getting about 110 watts out on SSB. The radio tunes up beautifully.
However, after some checking, we are still seriously confused as to what their replacements would be if we were ever to need them.
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Since our operational learning curve is still pretty high, I would really like some input here, so as to not equip our shack with the wrong tubes.

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P.S. Even data sheets show all three as a replacement. I understand that while the W's are military equivalents, they can be hard on the radio. Our application for the rig is as a base station, not mobile

[Non-text portions of this message have been removed]

40448. Re: [TS-520_820_530_830] Re: Question regarding Final Drive Tubes.???

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-04 22:34:48 UTC
From: John Davidson
Topic: 40439 Message: 40448

Final tubes are originally S2001, A Japaneese number for a 6146 tube.
You said "drive tube" ? a Driver tube is the small 12BY7 type , the Finals are the two bigger 6146 type tubes in the final amplifier circuit..
I agree a "matched pair" would be nice for a push-pull modulator for an QM rig but NOT so for the parallel circuit used in the RFPA finals. Two new tubes is close enough in spec as long as they both thav the same number and letter, as in two 6146 tubes or two 6146A or two 6146B tubes etc...
By the way I replaced my TS520 S2001 tubes with 6146B's at the 15 year mark and they have been running since then with no loss of performance. I bought this rig new.

From: Joseph Stiles <stilesjoseph@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Friday, January 4, 2013 5:00 PM
Subject: Re: [TS-520_820_530_830] Re: Question regarding Final Drive Tubes.???
Dave,
  No problem. However, there is NO reason to use "matched set" final tubes here...they are not necessary and you pay a premium price. There has been lots of
"discussion" regarding this subject...and most seem to agree that it's a waste.

   Again, due to inflation....my 10 cents worth.
73 Joe
WB7UQU

From: w9cac mailto:cosmocyb%40yahoo.com>
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Friday, January 4, 2013 12:26 PM
Subject: [TS-520_820_530_830] Re: Question regarding Final Drive Tubes.???*&$@.
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> In God We Trust
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> > However, after some checking, we are still seriously confused as to what their replacements would be if we were ever to need them.

[Non-text portions of this message have been removed]

40449. Re: reducing the power output of the ts-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-04 22:29:58 UTC
From: Robert George Nelson
Topic: 40439 Message: 40449

Hello, I have just joined the group, My name is Robert Nelson, 2I0RCN, from Northern Ireland, Iam currently restricted to an RF output of 50Watts, I have just bought a ts-520 and Iam looking advice on how I could reduce the power of the rig to this level, any advice will be most welcome.

cheers and 73,

de Robert. 2I0RCN.
From: Joseph Stiles <stilesjoseph@yahoo.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Friday, 4 January 2013, 22:00
Subject: Re: [TS-520_820_530_830] Re: Question regarding Final Drive Tubes.???

Dave,

  No problem. However, there is NO reason to use "matched set" final tubes here...they are not necessary and you pay a premium price. There has been lots of "discussion" regarding this subject...and most seem to agree that it's a waste.

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From: w9cac mailto:cosmocyb%40yahoo.com>
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Friday, January 4, 2013 12:26 PM
Subject: [TS-520_820_530_830] Re: Question regarding Final Drive Tubes.???

Joe,
Thanks for the advice. We used a general commercial type watt meter my son has, it could be off in itself, don't know the last time it was calibrated. We followed the tuning instructions and avoid over-driving the processor. We are being as conservative as we can. We plan on this rig lasting a long time. We also plan on spending the money for a good matched set of "American Labeled" tubes just to be sure we have good stock in the event we need them. We do not foresee a breakdown problem for these tubes any time soon though.

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> From: mailto:TS-520_820_530_830%40yahoogroups.com on behalf of w9cac
> Sent: Fri 1/4/2013 11:45 AM
> To: mailto:TS-520_820_530_830%40yahoogroups.com
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40450. Re: [TS-520_820_530_830] Re: Question regarding Final Drive Tubes.???

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-04 22:32:47 UTC
From: Tom Pierce
Topic: 40439 Message: 40450

This is an article I came across, maybe this will help
Tom
K0THP

From: Joseph Stiles <stilesjoseph@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Friday, January 4, 2013 4:00 PM
Subject: Re: [TS-520_820_530_830] Re: Question regarding Final Drive Tubes.???

Dave,

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> Subject: [TS-520_820_530_830] Question regarding Final Drive Tubes.???
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40451. Re: Question regarding Final Drive Tubes.???

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-04 22:14:27 UTC
From: rrm135
Topic: 40439 Message: 40451

I ruined the first set of 6148B tubes I installed in my TS-830. Not sure if they were Asian or Russian, was several years ago. When I purchased the next pair from R&L Electronics in Hamilton, OH, the salesman informed me he had experienced the same problem. They found out that the original American tubes were "burnt-in" prior to sale, The Asian/Russian tubes "were not". I was told to use the new tubes at low power and slowly increase output. I run about 25 watts out on CW for aprox. 30 minutes air time and then each time slowly increased to full 100 watts output. This pair worked fine for several years until I sold the Rig. Good Luck---Dick, AA8YN

--- In TS-520_820_530_830@yahoogroups.com, "w9cac" wrote:
>
> Joe,
> Thanks for the advice. We used a general commercial type watt meter my son has, it could be off in itself, don't know the last time it was calibrated. We followed the tuning instructions and avoid over-driving the processor. We are being as conservative as we can. We plan on this rig lasting a long time. We also plan on spending the money for a good matched set of "American Labeled" tubes just to be sure we have good stock in the event we need them. We do not foresee a breakdown problem for these tubes any time soon though.
>
> 73's Dave
> W9CAC
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles wrote:
> >
> > Greetings group...well Happy New Year....
> >
> > Â Â I have used 6146B's & 6146W's for replacing the 2001A's...I have NOT used the "A's" Â Both the "B's" & the "W's" have worked well for me. There is a good document in the "files section" of this board regarding the final amplifier tubes.Â Must make sure to neutralize per OP or Service manual. 110 watts on SSB is just a bit high...except MAYBE on the lower bands. I think that using a known calibrated meter you would see100 watts. For proper SSB power out reading...the meter has to be able to "read" the average RF envelope. If you are jacking up the mic gain or jacking up the processor...you may indicate 110 watts..but causing splatter. IF the 2001A's are putting out rated power out...there is no need to replace them...I have an 820S that still has its original 2001A's. PLEASE be careful...I have not had good luck with the "ASIAN" market tubes...I used a set once...one or both arced over..popping the cathode resistors...not much of a problem on the
> > 520/820 series to replace....but on the 530/830...a real pain the the *&$@.
> >
> > Due to inflation....that's my 10 cents worth
> >
> > Â
> > 73Â Joe
> > WB7UQU
> >

> >
> >
> > _____
> > From: Bill Kuhn
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Friday, January 4, 2013 10:34 AM
> > Subject: RE: [TS-520_820_530_830] Question regarding Final Drive Tubes.???
> >
> >
> > Â
> > The S2001/A are japanese variants of the 6146B.
> >
> > Replace with either S2001/A or 6146B. Make sure to check/set neutralization when you replace.
> > _____
> >
> > Bill Kuhn - MCSE, MCP+I, MCTS
> > President
> > The Kuhn Group, Inc.
> >
> > EMail: bkuhn@
> > Web: http://www.kuhngroup.com http://www.kuhngroup.com/>
> > Office: 785.437.3277
> >
> > We hate CenturyLink - The worst ISP in the business.
> >
> > _____
> >
> > In God We Trust
> >
> >
> > _____
> >
> > From: TS-520_820_530_830@yahoogroups.com on behalf of w9cac
> > Sent: Fri 1/4/2013 11:45 AM
> > To: TS-520_820_530_830@yahoogroups.com
> > Subject: [TS-520_820_530_830] Question regarding Final Drive Tubes.???
> >
> > Having recently acquired a TS-520, my son and I decided to give the unit a thorough once over. Upon removing the cover over the final drive tubes, we noticed that there were a pair of S2001/A tubes in the sockets. Currently, we are getting about 110 watts out on SSB. The radio tunes up beautifully.
> > However, after some checking, we are still seriously confused as to what their replacements would be if we were ever to need them.
> > I have found sites that say it is ok to replace those tubes with 6146B's, other sites say that they need to be just 6146's, still other sites have stated that either 6146B's or 6146W's would be just fine.
> > Since our operational learning curve is still pretty high, I would really like some input here, so as to not equip our shack with the wrong tubes.
> >

> > 73"s Dave
> > W9CAC
> > P.S. Even data sheets show all three as a replacement. I understand that while the W's are military equivalents, they can be hard on the radio. Our application for the rig is as a base station, not mobile
> >
> > [Non-text portions of this message have been removed]
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

40452. Re: [TS-520_820_530_830] Question regarding Final Drive Tubes.???

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-04 23:08:06 UTC
From: Mike
Topic: 40439 Message: 40452

I agree. The 520 will typically produce between 90 and 105 watts output.
Trying to push the finals for a higher output will only lead to
early/shorter life span for the final tubes and a lot of distortion in
the output signal that will create splatter and adjacent frequency
interference.

A watt meter is not needed to know what the final amplifier's input and
output power levels are when the final amplifier is properly tuned.

73s
Mike
W5RKL

On 1/4/2013 4:33 PM, Jim Lamanteer wrote:
>
> DAVE YOUR S2001`S ARE THE ORIGINAL TUBES IF U ARE GETTING 110 WATTS
> THER SURE IS NOTHING WRONG WITH THOSE TUBES. WHEN THE TIME COMES TO
> REPLACE THEM EITHER 6146Bs OR 6146Ws WILL BE JUST FINE THATS LIKE
> ASKING WHAT SHOULD U BUY A CHEVY OR A FORD OR A DODGE ITS YOUR CHOICE
> THEY WILL ALL DO THE SMAE JOB JUST FINE. U JUST HAVE TO NETURALIZE
> THEM WHEN U REPLACE THEM. PLEASE USE EXTREME CAUTION WHEN U DO IF U
> HAVE NEVER DONE THAT PLEASE ASK SOMEBODY THE VOLTAGE IN THE H.V. CAGE
> CAN KILL U. HOPE THIS HELPS U. JIMMY WB2KNR
>
> _____
> From: w9cac cosmocyb@... <mailto:cosmocyb%40yahoo.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Friday, January 4, 2013 12:45 PM
> Subject: [TS-520_820_530_830] Question regarding Final Drive Tubes.???
>
>
>
>
>
> Having recently acquired a TS-520, my son and I decided to give the
> unit a thorough once over. Upon removing the cover over the final
> drive tubes, we noticed that there were a pair of S2001/A tubes in the
> sockets. Currently, we are getting about 110 watts out on SSB. The
> radio tunes up beautifully.
> However, after some checking, we are still seriously confused as to
> what their replacements would be if we were ever to need them.
> I have found sites that say it is ok to replace those tubes with
> 6146B's, other sites say that they need to be just 6146's, still other
> sites have stated that either 6146B's or 6146W's would be just fine.
> Since our operational learning curve is still pretty high, I would
> really like some input here, so as to not equip our shack with the

> wrong tubes.
>
> 73"s Dave
> W9CAC
> P.S. Even data sheets show all three as a replacement. I understand
> that while the W's are military equivalents, they can be hard on the
> radio. Our application for the rig is as a base station, not mobile
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

40453. Re: [TS-520_820_530_830] Re: Question regarding Final Drive Tubes.???

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 00:23:31 UTC
From: KB1TCD
Topic: 40439 Message: 40453

Joe,

I have used matched sets on high end audio but I agree that it's not
worth the trouble on ham gear.
Ten cents worth due to inflation??? Try a whole worthless dollar!!! hi,hi!

73 de Jose, KB1TCD

40454. TS520 VOX unit transistor 2SA562Y

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 00:19:28 UTC
From: zl3ha
Topic: 40454 Message: 40454

Hi all and HNY
I've just had this transistor (Q8) literally blow apart in my TS520. Has anyone had experience of finding a suitable and readily available replacement; and what might be the most likely cause of the failure?
Best 73
Grant, ZL3HA

40455. Re: Question regarding Final Drive Tubes.???

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 00:31:37 UTC
From: N7IQV
Topic: 40439 Message: 40455

Another point to consider here: Let the tubes loaf along at 90 or so watts. The op at the far end will not hear the difference in power, and you pretty much avoid any possibility of overdriving and killing off the final tubes. Even at 50 watts output, you only lose 3 dB..barely detectable at the other end of your QSO.

As to the other question of the 50 watt limit, as I recall, you can pull one of the final tubes. I realize my memory is not perfect, but should that second final be pulled, VOILA! Instant spare final!

John/N7IQV

--- In TS-520_820_530_830@yahoogroups.com, KB1TCD wrote:
>
> Joe,
>
> I have used matched sets on high end audio but I agree that it's not
> worth the trouble on ham gear.
> Ten cents worth due to inflation??? Try a whole worthless dollar!!! hi,hi!
>
> 73 de Jose, KB1TCD
>

40456. Re: Kenwood TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 01:02:02 UTC
From: rkings1956
Topic: 6609 Message: 40456

Thanks guys for the info.

--- In TS-520_820_530_830@yahoogroups.com, "rkings1956" wrote:
>
> I recently purchased a Kenwood TS-520 it has a set of 6146A tubes. In the service manual it shows a set of 6146B tubes. Should I change them to 6146Bs? The rig is working good. Need some advise. Thanks
>
> KD6FSK
> Rob
>

40457. Re: Where to purchase YG-3395C filter?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 03:00:08 UTC
From: MountainMike
Topic: 40423 Message: 40457

Ken- Thanks for the "thumbs up" on Gary.
73 Mike wb6csh

--- In TS-520_820_530_830@yahoogroups.com, "Ken Wedemeyer" wrote:
>
> I am not sure about the filters ,but I have purchased several items from Gary Brown and have been pleased with the results 73, Ken K7EMO
>
<TRIMMED>

40458. ts-820 if board question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 04:28:54 UTC
From: scooterb31
Topic: 40458 Message: 40458

I am in the process of re-caping my ts-820. I removed the IF board (x48-1150-00)some time ago to replaced the caps, but was one short. I am now ready to re-install the board, but the molex connectors don't seem to line up, so I need to know how to correctly connect them. Connections are as follows: IF1, IF2, IF3, IF4, and IF5. IF2, IF3, IF4, and IF5 are no brainers. It's IF1 that I have a question about. The board has 7 pins and there are two molex connectors each with 3 pins, so if someone could let me know how IF1 is connected I would greatly appreciate it. I am looking forward to finally get this rig back on the air after 20 plus years in someones closet.

40459. Re: [TS-520_820_530_830] ts-820 if board question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 05:34:50 UTC
From: Joseph Stiles
Topic: 40458 Message: 40459

connect as follows: IF1.... when looking at component side of board and edge connectors down...IF-1 should be on the left lower corner.

Find the 3 pin connector with the grey colored small diameter shielded cable...one "hole" will be empty...plug into
the RF (empty) GND pins. The small center conductor should be farthest right

Locate the 4 pin connector.....WHITE-GREY-ORANGE-GREEN-WHITE w/grey stripe... this connected right next to the
connector above

Next would be GREEN-VIOLET-GREY....whether it is placed right next to the 4 pin connector above or not ...depends on
how you want to select your filter combo...check your operators manual.

73 Joe
WB7UQU

From: scooterb31 <kc0ozc@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, January 4, 2013 8:28 PM
Subject: [TS-520_820_530_830] ts-820 if board question

I am in the process of re-caping my ts-820. I removed the IF board (x48-1150-00)some time ago to replaced the caps, but was one short. I am now ready to re-install the board, but the molex connectors don't seem to line up, so I need to know how to correctly connect them. Connections are as follows: IF1, IF2, IF3, IF4, and IF5. IF2, IF3, IF4, and IF5 are no brainers. It's IF1 that I have a question about. The board has 7 pins and there are two molex connectors each with 3 pins, so if someone could let me know how IF1 is connected I would greatly appreciate it. I am looking forward to finally get this rig back on the air after 20 plus years in someones closet.

[Non-text portions of this message have been removed]

40460. Re: [TS-520_820_530_830] Re: Question regarding Final Drive Tubes.???

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 05:43:27 UTC
From: Joseph Stiles
Topic: 40439 Message: 40460

Jose,

I have used "matched pairs" on a couple of my real old broadcast band/ shortwave receivers..in the audio amp section of the old upright "nice piece of furniture" type...built circa 1934 to 38. My brother-in-law uses matched pairs on his high-end guitar/audio amp.

73 Joe
WB7UQU

From: KB1TCD <kb1tcd@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, January 4, 2013 4:23 PM
Subject: Re: [TS-520_820_530_830] Re: Question regarding Final Drive Tubes.???

Joe,

I have used matched sets on high end audio but I agree that it's not
worth the trouble on ham gear.
Ten cents worth due to inflation??? Try a whole worthless dollar!!! hi,hi!

73 de Jose, KB1TCD

[Non-text portions of this message have been removed]

40461. Re: ts-820 if board question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 06:02:33 UTC
From: scooterb31
Topic: 40458 Message: 40461

Joe,

Thanks for the response. I now understand my mistake, and thanks for pointing out the reference in the manual that I obviously missed.

73
Scott
KCØOZC
>
>
>
>
> [Non-text portions of this message have been removed]
>

40462. LSB Tinny Sounding

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 14:07:54 UTC
From: seoj1
Topic: 40462 Message: 40462

Hello group. I am a newby to hybrid radios. I received my first TS-830s yesterday and took the covers off to see if I could see any obvious problems. I found one of the HV caps had leaked at some point. I have ordered a replacement cap kit and will replace them when they arrive. I also noticed on receive that USB sounds good (maybe a bit bassy, but completely readable), but LSB is very tinny, like it had a cw filter on it.
Has anybody here had this issue? And if so, how have you fixed it?

40463. Re: LSB Tinny Sounding

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 15:06:22 UTC
From: seoj1
Topic: 40462 Message: 40463

Well...I just proved that I am a newby to these rigs! After reading through the downloaded manual, I discovered the operation of all of the receive controls...VBT, Tone, etc..

sorry for the interruption!

--- In TS-520_820_530_830@yahoogroups.com, "seoj1" wrote:
>
> Hello group. I am a newby to hybrid radios. I received my first TS-830s yesterday and took the covers off to see if I could see any obvious problems. I found one of the HV caps had leaked at some point. I have ordered a replacement cap kit and will replace them when they arrive. I also noticed on receive that USB sounds good (maybe a bit bassy, but completely readable), but LSB is very tinny, like it had a cw filter on it.
> Has anybody here had this issue? And if so, how have you fixed it?
>

40464. Re: [TS-520_820_530_830] LSB Tinny Sounding

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 15:19:05 UTC
From: Mike
Topic: 40462 Message: 40464

Have you looked at the front panel IF Shift and NOTCH control on the front panel? They should have their knobs pointing at 12 o'clock or at the detent felt when rotating the knobs.

Do you have the 830's operator manual? If not then I recommend you download it, free, from Gordon's website, see link below

www.n6wk.com/kenwood/

then take the time to read it before you operate the 830. Many operating questions can be easily answered by reading the operator's manual.

73s
Mike
W5RKL

On 1/5/2013 8:07 AM, seoj1 wrote:
>
> Hello group. I am a newby to hybrid radios. I received my first
> TS-830s yesterday and took the covers off to see if I could see any
> obvious problems. I found one of the HV caps had leaked at some point.
> I have ordered a replacement cap kit and will replace them when they
> arrive. I also noticed on receive that USB sounds good (maybe a bit
> bassy, but completely readable), but LSB is very tinny, like it had a
> cw filter on it.
> Has anybody here had this issue? And if so, how have you fixed it?
>
>

[Non-text portions of this message have been removed]

40465. TS830S: RF output meter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 15:35:39 UTC
From: ravnpeter@ymail.com
Topic: 40465 Message: 40465

The needle on the RF ouput meter on my new TS830S doesn,t move in spite of fact that there is full output on all bands and the meter works in all other positions. A burnt resistor or diode?
Thanks.
OZ8CTH, Peter

40466. Re: [TS-520_820_530_830] Re: LSB Tinny Sounding

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 15:37:10 UTC
From: Mike
Topic: 40462 Message: 40466

I don't mean any disrespect but this is a common mistake made by many hams today. They either do not read the manual that came with the radio or they don't attempt to download the manual or locate and purchase the manual that didn't come with the radio. Many operating questions can be answered by taking the time to read the manual before attempting to operate the radio.

73s
Mike
W5RKL

On 1/5/2013 9:06 AM, seoj1 wrote:
>
> Well...I just proved that I am a newby to these rigs! After reading
> through the downloaded manual, I discovered the operation of all of
> the receive controls...VBT, Tone, etc..
>
> sorry for the interruption!
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "seoj1" wrote:
> >
> > Hello group. I am a newby to hybrid radios. I received my first
> TS-830s yesterday and took the covers off to see if I could see any
> obvious problems. I found one of the HV caps had leaked at some point.
> I have ordered a replacement cap kit and will replace them when they
> arrive. I also noticed on receive that USB sounds good (maybe a bit
> bassy, but completely readable), but LSB is very tinny, like it had a
> cw filter on it.
> > Has anybody here had this issue? And if so, how have you fixed it?
> >
>
>

[Non-text portions of this message have been removed]

40467. Re: [TS-520_820_530_830] TS830S: RF output meter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 15:51:03 UTC
From: Mike
Topic: 40465 Message: 40467

Did you check the rear panel's "RF VOLT" pot setting? This procedure is discussed in the 830's operator's manual on page 12.

If the meter still doesn't move after adjusting the RF VOLT pot on the rear panel then it's quite possible diode D9 (1N60) may be open.

73s
Mike
W5RKL

On 1/5/2013 9:35 AM, ravnpeter@... wrote:
>
> The needle on the RF ouput meter on my new TS830S doesn,t move in
> spite of fact that there is full output on all bands and the meter
> works in all other positions. A burnt resistor or diode?
> Thanks.
> OZ8CTH, Peter
>
>

[Non-text portions of this message have been removed]

40468. Re: [TS-520_820_530_830] TS830S: RF output meter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 15:50:54 UTC
From: Ken Winterling
Topic: 40465 Message: 40468

Peter,

Check the RF VOLT CONTROL adjustment on the rear panel.

Ken
WA2LBI

On Sat, Jan 5, 2013 at 10:35 AM, ravnpeter@... <fasan5@...>wrote:

> **
>
>
> The needle on the RF ouput meter on my new TS830S doesn,t move in spite of
> fact that there is full output on all bands and the meter works in all
> other positions. A burnt resistor or diode?
> Thanks.
> OZ8CTH, Peter
>
>
>

[Non-text portions of this message have been removed]

40469. Re: [TS-520_820_530_830] Re: reducing the power output of the ts-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 16:17:38 UTC
From: Mark Gilger
Topic: 40439 Message: 40469

Robert,
Check out Kenwood Service Bulletin #2, dated 10-01-75 located here:

http://wb4hfn.com/KENWOOD/Articles/SERVICE%20NOTES%20-%20ALL%20HYBRIDS.pdf

Or you can simply control the ALC via the
Auxillary socket on the rear panel with this simple modification:

http://vss.pl/mods.dk/mods.php3-radio=kenwood&model=ts-520&selectid=739.htm

Regards,
Mark

>
>
>
>
>Hello, I have just joined the group, My name is
>Robert Nelson, 2I0RCN, from Northern Ireland,
>Iam currently restricted to an RF output of
>50Watts, I have just bought a ts-520 and Iam
>looking advice on how I could reduce the power
>of the rig to this level, any advice will be most welcome.
>Â
>cheers and 73,
>Â
>de Robert. 2I0RCN.
>From: Joseph Stiles <mailto:stilesjoseph%40yahoo.com>stilesjoseph@...>
>To:
>"<mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com"
><mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com>
>
>Sent: Friday, 4 January 2013, 22:00
>Subject: Re: [TS-520_820_530_830] Re: Question regarding Final Drive Tubes.???
>
>Â
>Dave,
>
>Â No problem. However, there is NO reason to
>use "matched set" final tubes here...they are
>not necessary and you pay a premium price. There has been lots of
>"discussion" regarding this subject...and most
>seem to agree that it's a waste.
>
>Â Â Again, due to inflation....my 10 cents worth.

>
>Â
>73Â Joe
>WB7UQU
>
>_____
>From: w9cac mailto:cosmocyb%40yahoo.com>
>To: mailto:TS-520_820_530_830%40yahoogroups.com
>Sent: Friday, January 4, 2013 12:26 PM
>Subject: [TS-520_820_530_830] Re: Question regarding Final Drive Tubes.???
>
>Â
>Joe,
>Thanks for the advice. We used a general
>commercial type watt meter my son has, it could
>be off in itself, don't know the last time it
>was calibrated. We followed the tuning
>instructions and avoid over-driving the
>processor. We are being as conservative as we
>can. We plan on this rig lasting a long time. We
>also plan on spending the money for a good
>matched set of "American Labeled" tubes just to
>be sure we have good stock in the event we need
>them. We do not foresee a breakdown problem for
>these tubes any time soon though.
>
>73's Dave
>W9CAC
>
>--- In mailto:TS-520_820_530_830%40yahoogroups.com, Joseph Stiles wrote:
> >
> > Greetings group...well Happy New Year....
> >
> > ÃÂ ÃÂ I have used 6146B's s for replacing
> the 2001A's...I have NOT used the "A's"
> ÃÂ Both the "B's" & the "W's" have worked
> well for me. There is a good document in the
> "files section" of this board regarding the
> final amplifier tubes.ÃÂ Must make sure to
> neutralize per OP or Service manual. 110 watts
> on SSB is just a bit high...except MAYBE on the
> lower bands. I think that using a known
> calibrated meter you would see100 watts. For
> proper SSB power out reading...the meter has to
> be able to "read" the average RF envelope. If
> you are jacking up the mic gain or jacking up
> the processor...you may indicate 110 watts..but
> causing splatter. IF the 2001A's are putting
> out rated power out...there is no need to

> replace them...I have an 820S that still has
> its original 2001A's. PLEASE be careful...I
> have not had good luck with the "ASIAN" market
> tubes...I used a set once...one or both arced
> over..popping the cathode resistors...not much of a
>problem on the
> > 520/820 series to replace....but on the 530/830...a real pain the the *&$@.
> >
> > Due to inflation....that's my 10 cents worth
> >
> > Ã□Â
> > 73Ã□Â Joe
> > WB7UQU
> >
> >
> >
> > _____
> > From: Bill Kuhn
> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > Sent: Friday, January 4, 2013 10:34 AM
> > Subject: RE: [TS-520_820_530_830] Question regarding Final Drive Tubes.???
> >
> >
> > Ã□Â
> > The S2001/A are japanese variants of the 6146B.
> >
> > Replace with either S2001/A or 6146B. Make
> sure to check/set neutralization when you replace.
> > _____
> >
> > Bill Kuhn - MCSE, MCP+I, MCTS
> > President
> > The Kuhn Group, Inc.
> >
> > EMail: bkuhn@...
> > Web:
> <http://www.kuhngroup.com/>http://www.kuhngroup.com/
> http://www.kuhngroup.com/>
> > Office: 785.437.3277
> >
> > We hate CenturyLink - The worst ISP in the business.
> >
> > _____
> >
> > In God We Trust
> >
> >
> > _____
> >

> > From: mailto:TS-520_820_530_830%40yahoogroups.com on behalf of w9cac
> > Sent: Fri 1/4/2013 11:45 AM
> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > Subject: [TS-520_820_530_830] Question regarding Final Drive Tubes.???
> >
> > Having recently acquired a TS-520, my son and
> I decided to give the unit a thorough once
> over. Upon removing the cover over the final
> drive tubes, we noticed that there were a pair
> of S2001/A tubes in the sockets. Currently, we
> are getting about 110 watts out on SSB. The radio tunes up beautifully.
> > However, after some checking, we are still
> seriously confused as to what their
> replacements would be if we were ever to need them.
> > I have found sites that say it is ok to
> replace those tubes with 6146B's, other sites
> say that they need to be just 6146's, still
> other sites have stated that either 6146B's or 6146W's would be just fine.
> > Since our operational learning curve is still
> pretty high, I would really like some input
> here, so as to not equip our shack with the wrong tubes.
> >
> > 73"s Dave
> > W9CAC
> > P.S. Even data sheets show all three as a
> replacement. I understand that while the W's
> are military equivalents, they can be hard on
> the radio. Our application for the rig is as a base station, not mobile
> >
> > [Non-text portions of this message have been removed]
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> > [Non-text portions of this message have been removed]
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40470. Re: [TS-520_820_530_830] TS-520 - heater ON, then loud "POP!"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 16:27:58 UTC
From: Mark L. Hammond
Topic: 40422 Message: 40470

Hello Again,

Well, so far, only 1 reply off list. I'll try again, with some updated information about my TS-520.

Last night I did another visual inspection of the radio and saw that two 10 ohm resistors (pretty hefty--a watt or two rating?) were cracked and needed replacing; one literally fell in half with a gentle touch. Each final tube socket had one 10 ohm resistor connected to ground. I replaced them both with even larger old style 10 ohm resistors (it's what I had on hand).

In testing the rig, it appears to "tune" up OK, and all appears normal except that it's only putting out a fraction of a watt or so. I double checked the SG switch on the back and it is UP. High voltage looks OK (about 900V as a I recall) and drops a bit when the heater switch is turned ON; no more popping has been heard.

So based on the single loud POP when I turned the heater switch ON--is likely to be the high voltage caps? Or any other suggestions on what to inspect/test/replace next? I can tell that getting th0se out of this old rig is going to be a real challenge...if it was really easy, I'd have done it already...hi hi.

I have spare tubes (driver and finals) but don't want to just swap them out...my hunch is that it's something else.

Again, I'll appreciate some advice :)

73,

Mark N8MH

At 12:27 AM 1/3/2013 +0000, you wrote:
>
>
>Hi All,
>
>I have a TS-520 that I bought over a year ago. It was in great operational condition until recently. After a month or two of inactivity (had just been using it as a receiver, heaters off), I turned the heaters ON and soon after (few seconds??) a single loud POP sound was heard. I turned it off and it's been sitting there for weeks...
>
>I know---I need to get brave and plug it back in to see if I can see any HV on the meter, etc. I didn't look before shutting it down. But for now, I'm wanting a bit more info before I power it back up...
>
>At first I thought maybe a capacitor had exploded, but I can't see that with a visual inspection (and the spaghetti wiring makes me nervous about poking around too much). I did a bit of searching on the group here, and saw mention of "cathode resistor" but honestly, I

don't even know where to look for that (even after looking over the service manual).
>
>Any suggestions on what is the "likely suspect?" The old rigs aren't my forte, but maybe I can fix it with a bit of guidance from this informed group!
>
>Thanks in advance,
>
>Mark N8MH
>
>

[Non-text portions of this message have been removed]

40471. Re: TS-520 - heater ON, then loud "POP!"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 16:50:52 UTC
From: k5hfg
Topic: 40422 Message: 40471

Hello Mark,

Sorry I missed your post. A bunch od us check this each day but somehow I missed your post.

First of all I would suggest you check on K4EAA's website or Jim Showkers web site for a lot of info on these Hybrids.

The Res you describe is most likely the cathode resistors. they are 1 watt. You should also check and most likely replace the screen resistors as well and do not forget the one on the rectifier board. If you check on K4EAA's website there are several explanations and photos that will help you get a piture in you mind. It may be a good idea to go thru the HV circuit and make sure all your voltages are correct. Do not forget to discharge the HV caps before playing in that area. I do not know your skill level or experience with these Hybrids but it is a good idea to read all you can before jumping in. May save some components and prevent sparking out of the Ham community early. I think the 2 websites will be a great help. Jim's website is hybridrestore
73 and have fun with the 520. Don K5HFG

40472. Re: [TS-520_820_530_830] Re: TS-520 - heater ON, then loud "POP!"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 17:08:35 UTC
From: Mark L. Hammond
Topic: 40422 Message: 40472

Thanks, Don.

My skill level with the tube radios is very low (beginner), but I'm trying. Thanks for the high voltage reminder!!

I have combed through both sites and been reading things off and on for the past year. I did buy a complete recap kit from JIm S. and also got the "resistor kit for final section." Last night when replacing those two broken resistors, I was pretty sure the 10 ohm resistors in the resistor kit were the right ones, but I chickened out because there were SO small, and decided to use the old style resistors on hand because they more closely resembled what I was replacing.

I see the "resistor kit" includes the necessary screen resistors; now I have to find them ;) I'm really struggling with matching up what I see in the radio with what is in the circuit diagrams and small schematics. Guess that's part of the process...

What is setting me back is my reluctance to "jump right in" due to all the wires with little slack in them, and without any connectors or headers. I'm being a chicken I guess.

I am aware I could send it off for a full restore/recap, but that amounts to about $500-600! Not sure I like the rig that much..hi hi.

Thanks again for the safety reminder and pointers to info.

73,

Mark N8MH

At 04:50 PM 1/5/2013 +0000, you wrote:
>
>
>Hello Mark,
>
>Sorry I missed your post. A bunch od us check this each day but somehow I missed your post.
>
>First of all I would suggest you check on K4EAA's website or Jim Showkers web site for a lot of info on these Hybrids.
>
>The Res you describe is most likely the cathode resistors. they are 1 watt. You should also check and most likely replace the screen resistors as well and do not forget the one on the rectifier board. If you check on K4EAA's website there are several explanations and photos that will help you get a piture in you mind. It may be a good idea to go thru the HV circuit and make sure all your voltages are correct. Do not forget to discharge the HV caps before playing in that area. I do not know your skill level or experience with these Hybrids but it is a good idea to read all you can before jumping in. May save some components and prevent sparking out of the Ham community early. I think the 2 websites will

be a great help. Jim's website is hybridrestore
>73 and have fun with the 520. Don K5HFG
>
>

[Non-text portions of this message have been removed]

40473. Re: LSB Tinny Sounding

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 17:46:20 UTC
From: seoj1
Topic: 40462 Message: 40473

Mike, No disrespect taken! I DL the manual soon after I got the rig. I also have DL'd the 830s Survival Guide. I will be reading thru those this weekend.
J

--- In TS-520_820_530_830@yahoogroups.com, Mike wrote:
>
> I don't mean any disrespect but this is a common mistake made by many
> hams today. They either do not read the manual that came with the radio
> or they don't attempt to download the manual or locate and purchase the
> manual that didn't come with the radio. Many operating questions can be
> answered by taking the time to read the manual before attempting to
> operate the radio.
>
> 73s
> Mike
> W5RKL
>
> On 1/5/2013 9:06 AM, seoj1 wrote:
> >
> > Well...I just proved that I am a newby to these rigs! After reading
> > through the downloaded manual, I discovered the operation of all of
> > the receive controls...VBT, Tone, etc..
> >
> > sorry for the interruption!
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > , "seoj1" wrote:
> > >
> > > Hello group. I am a newby to hybrid radios. I received my first
> > TS-830s yesterday and took the covers off to see if I could see any
> > obvious problems. I found one of the HV caps had leaked at some point.
> > I have ordered a replacement cap kit and will replace them when they
> > arrive. I also noticed on receive that USB sounds good (maybe a bit
> > bassy, but completely readable), but LSB is very tinny, like it had a
> > cw filter on it.
> > > Has anybody here had this issue? And if so, how have you fixed it?
> > >
> >
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

40474. Re: TS-520 - heater ON, then loud "POP!"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 18:07:38 UTC
From: k5hfg
Topic: 40422 Message: 40474

No problem Mark. You have to dig in these old Hybrids. If you remove some of the tie wraps from the wire bundles it is easier to get at the wires you need to. You can replace the wraps after you finish. It helps to tag each wire you remove for quick reconnection and also reminds you to reconnect. I use yellow vinyl tape and look around for it before I close up. It has been a puzzlement saver many times.If you are in the final section, take a moment to look between the 6146's. At the top of that long RF choke you see a metal divider. Take long blade phillips screwdriver and place the point on the chasis and lean the shaft against the divider to discharge the HV. Make sure you are not touching the shaft. wrap a screwdriver with vinyl tape and keep it on your bench in the open just for this one job.Do this each time you get into the final cage. Whether the rig was just turned off or if it has been sitting for awhile. After awhile it will become a GOOD habit and you will not become a giant resistor!! We stress this safety constantly because it is easy to forget that there is enough amperage in there to KILL. Go ahead and crawl into it! If you run into any problems there are many in this group to help you. Do not get discouraged if your post is not answered immediately, many of us are still in the work force and we can not get to it right away. You may notice that answers seem to come all at once. That is when most everyone has some spare time to pursue our hobby. Don K5HFG

40475. Re: Kenwood TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 18:00:12 UTC
From: Jody
Topic: 6609 Message: 40475

--- In TS-520_820_530_830@yahoogroups.com, "rkings1956" wrote:
>
> Thanks guys for the info.
>
> --- In TS-520_820_530_830@yahoogroups.com, "rkings1956" wrote:
> >
> > I recently purchased a Kenwood TS-520 it has a set of 6146A tubes. In the service manual it shows a set of 6146B tubes. Should I change them to 6146Bs? The rig is working good. Need some advise. Thanks
> >
> > KD6FSK
> > Rob

I found some 6146 tubes in a misc (all items $1) box at the local hamfest so I grabbed up a few. An Elmer said the differences between a/b/and w's when they first came along. The A's were a little tighter to tune would have a litter higher output but were not very long lasting (140watts+ can be tuned with them) B's were the average of tuning and longevity. And The W were for actual mobile rigs when you had the 520 mounted in the t model bouncing down the dirt main road or out cutting firewood and needed a way to talk back to the base. With less output (aprox. 70W) but were more robust.

40476. Re: TS520 VOX unit transistor 2SA562Y

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 18:16:18 UTC
From: jimlamanteer
Topic: 40454 Message: 40476

GRANT I JUST RECENTLY REPLACED MY Q-8 ON THE VOX BOARD WITH AN NTE290A ITS A SUB FOR THE 2SA562 AND IT WILL DO JUST FINE BUT U SHOULD ALSO REPLACE YOUR D-8 DIODE AS WELL USUALLY IT GOES MAKING THE Q-8 FAIL. I BOUGHT SOME REPLACEMENT DIODES OFF OF KEN K4EAA THEY SUB FOR THE N16263 DIODES. THE NTE Q-8 I GOT FROM MOUSER. HOPE THIS HELPS 73`S JIMMY WB2KNR

--- In TS-520_820_530_830@yahoogroups.com, "zl3ha" wrote:
>
> Hi all and HNY
> I've just had this transistor (Q8) literally blow apart in my TS520. Has anyone had experience of finding a suitable and readily available replacement; and what might be the most likely cause of the failure?
> Best 73
> Grant, ZL3HA
>

40477. Re: [TS-520_820_530_830] Re: TS-520 - heater ON, then loud "POP!"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 18:23:45 UTC
From: Cliff White
Topic: 40422 Message: 40477

Just as a reminder, be sure your meter and any other test equipment
you're using in there is rated for at least 1,000 volts! It'd be really
easy to blow up a nice DVM or VOM in that section of the radio.

40478. Re: [TS-520_820_530_830] Re: TS-520 - heater ON, then loud "POP!"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 18:42:50 UTC
From: Mark L. Hammond
Topic: 40422 Message: 40478

Great reminder--thanks Cliff!

At 12:23 PM 1/5/2013 -0600, you wrote:
>
>
>Just as a reminder, be sure your meter and any other test equipment
>you're using in there is rated for at least 1,000 volts! It'd be really
>easy to blow up a nice DVM or VOM in that section of the radio.

[Non-text portions of this message have been removed]

40479. Re: [TS-520_820_530_830] Re: TS-520 - heater ON, then loud "POP!"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 18:47:16 UTC
From: Mark L. Hammond
Topic: 40422 Message: 40479

Thanks, Don. I think I had this figured out (discharge), but am happy to get firm confirmation.

At this point, I'm still reading, reading, reading...

73!

Mark N8MH

At 06:07 PM 1/5/2013 +0000, you wrote:
>
>
>No problem Mark. You have to dig in these old Hybrids. If you remove some of the tie wraps from the wire bundles it is easier to get at the wires you need to. You can replace the wraps after you finish. It helps to tag each wire you remove for quick reconnection and also reminds you to reconnect. I use yellow vinyl tape and look around for it before I close up. It has been a puzzlement saver many times.If you are in the final section, take a moment to look between the 6146's. At the top of that long RF choke you see a metal divider. Take long blade phillips screwdriver and place the point on the chasis and lean the shaft against the divider to discharge the HV. Make sure you are not touching the shaft. wrap a screwdriver with vinyl tape and keep it on your bench in the open just for this one job.Do this each time you get into the final cage. Whether the rig was just turned off or if it has been sitting for awhile. After awhile it will become a GOOD habit and you will not become a giant resistor!! We stress this safety constantly because it is easy to forget that there is enough amperage in there to KILL. Go ahead and crawl into it! If you run into any problems there are many in this group to help you. Do not get discouraged if your post is not answered immediately, many of us are still in the work force and we can not get to it right away. You may notice that answers seem to come all at once. That is when most everyone has some spare time to pursue our hobby. Don K5HFG
>
>

[Non-text portions of this message have been removed]

40480. Re: [TS-520_820_530_830] TS-520 - heater ON, then loud "POP!"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 19:08:33 UTC
From: Mike
Topic: 40422 Message: 40480

The "Heater" switch has nothing to do with the HV filter capacitors failing.The sole purpose of the "Heater" switch is to apply filament voltage to the driver and both final tubes.

Improper tuning, abuse by a previous owner(s), aging capacitor, or all 3 most likely have contributed to the failure of the HV filter capacitors, not by simply turning the HEATER switch ON.

You said your skill level for tube radios is low (beginner). Based on that information Irecommend you do some studying first before you attempt any service on your 520. I recommend you obtain an early edition of the ARRL Handbook, mid 60's for example, and study Vacuum Tube and Amplifier Class topics. You can find the handbooks on eBay or your local library. You can't successfully service vacuum tube circuits if you do not understand how vacuum tubes and amplifier classes workand that information is contained in the ARRL Handbook.

I also recommend obtaining the book

BASIC RADIO COURSE
Author: John T. Frye

and study it from cover to cover. This book is out of print but quite often can be found on Amazon.com (used), at used book stores, or eBay. Amazon.com currently has one (used) available for $4.99 plus shipping. This book is written in simple text withpictorial examples of subjects covered along with a few questions at the end of each chapter to ensure you understand the chapter's subject matter.

These books contain an wealth of information.

Also, if you don't have it, download the TS-520's Service Manual from Gordon's website

www.n6wk.com/kenwood/

Once you download the service manual, take some time and study the "Circuit Description" sectionand block diagram so you get an idea of how the 520 works. You can't successfully service the 520 if you do not know/understand how it works inside.

Once you have these books, take some time and studybefore you attempt to service your 520.

73s
Mike
W5RKL

On 1/5/2013 10:27 AM, Mark L. Hammond wrote:
>
> Hello Again,
>
> Well, so far, only 1 reply off list. I'll try again, with some updated
> information about my TS-520.
>
> Last night I did another visual inspection of the radio and saw that
> two 10 ohm resistors (pretty hefty--a watt or two rating?) were
> cracked and needed replacing; one literally fell in half with a gentle
> touch. Each final tube socket had one 10 ohm resistor connected to
> ground. I replaced them both with even larger old style 10 ohm
> resistors (it's what I had on hand).
>
> In testing the rig, it appears to "tune" up OK, and all appears normal
> except that it's only putting out a fraction of a watt or so. I double
> checked the SG switch on the back and it is UP. High voltage looks OK
> (about 900V as a I recall) and drops a bit when the heater switch is
> turned ON; no more popping has been heard.
>
> So based on the single loud POP when I turned the heater switch ON--is
> likely to be the high voltage caps? Or any other suggestions on what
> to inspect/test/replace next? I can tell that getting th0se out of
> this old rig is going to be a real challenge...if it was really easy,
> I'd have done it already...hi hi.
>
> I have spare tubes (driver and finals) but don't want to just swap
> them out...my hunch is that it's something else.
>
> Again, I'll appreciate some advice :)
>
> 73,
>
> Mark N8MH
>
> At 12:27 AM 1/3/2013 +0000, you wrote:
> >
> >
> >Hi All,
> >
> >I have a TS-520 that I bought over a year ago. It was in great
> operational condition until recently. After a month or two of
> inactivity (had just been using it as a receiver, heaters off), I
> turned the heaters ON and soon after (few seconds??) a single loud POP
> sound was heard. I turned it off and it's been sitting there for weeks...
> >
> >I know---I need to get brave and plug it back in to see if I can see
> any HV on the meter, etc. I didn't look before shutting it down. But
> for now, I'm wanting a bit more info before I power it back up...
> >
> >At first I thought maybe a capacitor had exploded, but I can't see

> that with a visual inspection (and the spaghetti wiring makes me
> nervous about poking around too much). I did a bit of searching on the
> group here, and saw mention of "cathode resistor" but honestly, I
> don't even know where to look for that (even after looking over the
> service manual).
> >
> >Any suggestions on what is the "likely suspect?" The old rigs aren't
> my forte, but maybe I can fix it with a bit of guidance from this
> informed group!
> >
> >Thanks in advance,
> >
> >Mark N8MH
> >
> >
>
> [Non-text portions of this message have been removed]
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[Non-text portions of this message have been removed]

40481. Re: [TS-520_820_530_830] TS-520 - heater ON, then loud "POP!"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 19:21:39 UTC
From: Mark L. Hammond
Topic: 40422 Message: 40481

Mike,

Thanks for the sage advice. Indeed, I'm at the reading stage. The specific resources mentioned should prove useful.

73,

Mark N8MH

At 01:08 PM 1/5/2013 -0600, you wrote:
>
>
>The "Heater" switch has nothing to do with the HV filter capacitors
>failing.The sole purpose of the "Heater" switch is to apply filament
>voltage to the driver and both final tubes.
>
>Improper tuning, abuse by a previous owner(s), aging capacitor, or all 3
>most likely have contributed to the failure of the HV filter capacitors,
>not by simply turning the HEATER switch ON.
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>You said your skill level for tube radios is low (beginner). Based on
>that information Irecommend you do some studying first before you
>attempt any service on your 520. I recommend you obtain an early edition
>of the ARRL Handbook, mid 60's for example, and study Vacuum Tube and
>Amplifier Class topics. You can find the handbooks on eBay or your local
>library. You can't successfully service vacuum tube circuits if you do
>not understand how vacuum tubes and amplifier classes workand that
>information is contained in the ARRL Handbook.
>
>I also recommend obtaining the book
>
>BASIC RADIO COURSE
>Author: John T. Frye
>
>and study it from cover to cover. This book is out of print but quite
>often can be found on Amazon.com (used), at used book stores, or eBay.
>Amazon.com currently has one (used) available for $4.99 plus shipping.
>This book is written in simple text withpictorial examples of subjects
>covered along with a few questions at the end of each chapter to ensure
>you understand the chapter's subject matter.
>
>These books contain an wealth of information.
>
>Also, if you don't have it, download the TS-520's Service Manual from
>Gordon's website
>

>www.n6wk.com/kenwood/
>
>Once you download the service manual, take some time and study the
>"Circuit Description" sectionand block diagram so you get an idea of how
>the 520 works. You can't successfully service the 520 if you do not
>know/understand how it works inside.
>
>Once you have these books, take some time and studybefore you attempt to
>service your 520.
>
>73s
>Mike
>W5RKL
>
>On 1/5/2013 10:27 AM, Mark L. Hammond wrote:
>>
>> Hello Again,
>>
>> Well, so far, only 1 reply off list. I'll try again, with some updated
>> information about my TS-520.
>>
>> Last night I did another visual inspection of the radio and saw that
>> two 10 ohm resistors (pretty hefty--a watt or two rating?) were
>> cracked and needed replacing; one literally fell in half with a gentle
>> touch. Each final tube socket had one 10 ohm resistor connected to
>> ground. I replaced them both with even larger old style 10 ohm
>> resistors (it's what I had on hand).
>>
>> In testing the rig, it appears to "tune" up OK, and all appears normal
>> except that it's only putting out a fraction of a watt or so. I double
>> checked the SG switch on the back and it is UP. High voltage looks OK
>> (about 900V as a I recall) and drops a bit when the heater switch is
>> turned ON; no more popping has been heard.
>>
>> So based on the single loud POP when I turned the heater switch ON--is
>> likely to be the high voltage caps? Or any other suggestions on what
>> to inspect/test/replace next? I can tell that getting th0se out of
>> this old rig is going to be a real challenge...if it was really easy,
>> I'd have done it already...hi hi.
>>
>> I have spare tubes (driver and finals) but don't want to just swap
>> them out...my hunch is that it's something else.
>>
>> Again, I'll appreciate some advice :)
>>
>> 73,
>>
>> Mark N8MH
>>
>> At 12:27 AM 1/3/2013 +0000, you wrote:

>> >
>> >
>> >Hi All,
>> >
>> >I have a TS-520 that I bought over a year ago. It was in great
>> operational condition until recently. After a month or two of
>> inactivity (had just been using it as a receiver, heaters off), I
>> turned the heaters ON and soon after (few seconds??) a single loud POP
>> sound was heard. I turned it off and it's been sitting there for weeks...
>> >
>> >I know---I need to get brave and plug it back in to see if I can see
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>> >At first I thought maybe a capacitor had exploded, but I can't see
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>> group here, and saw mention of "cathode resistor" but honestly, I
>> don't even know where to look for that (even after looking over the
>> service manual).
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>> >Any suggestions on what is the "likely suspect?" The old rigs aren't
>> my forte, but maybe I can fix it with a bit of guidance from this
>> informed group!
>> >
>> >Thanks in advance,
>> >
>> >Mark N8MH
>> >
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40482. Re: [TS-520_820_530_830] Re: reducing the power output of the ts-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 18:32:56 UTC
From: zen18531@zen.co.uk
Topic: 40482 Message: 40482

Robert,

Frankly, I wouldn't worry. No one is going to care much if you are tx'ing on 100w, even on a foundation licence, let alone an intermediate, unless you cause interference locally. And that's from the President of the RSGB.

Mark Gilger <mgilger@...> wrote :

>
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>
> Robert,
> Check out Kenwood Service Bulletin #2, dated 10-01-75 located here:
>
>
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>
>
> Recent Activity:
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40483. Re: [TS-520_820_530_830] Re: TS-520 - heater ON, then loud "POP!"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 19:04:10 UTC
From: Lyon1066
Topic: 40422 Message: 40483

Mark,

One item to look at for the 6146's is the solder joints for the tube sockets. I have had a few solder joints form cracks on my 830. The self-heating of the tubes will age the solder over time.

73's.....de NU8M....John

Sent from my iPad

On Jan 5, 2013, at 12:08 PM, "Mark L. Hammond" <marklhammond@...> wrote:

> Thanks, Don.
>
> My skill level with the tube radios is very low (beginner), but I'm trying. Thanks for the high voltage reminder!!
>
> I have combed through both sites and been reading things off and on for the past year. I did buy a complete recap kit from JIm S. and also got the "resistor kit for final section." Last night when replacing those two broken resistors, I was pretty sure the 10 ohm resistors in the resistor kit were the right ones, but I chickened out because there were SO small, and decided to use the old style resistors on hand because they more closely resembled what I was replacing.
>
> I see the "resistor kit" includes the necessary screen resistors; now I have to find them ;) I'm really struggling with matching up what I see in the radio with what is in the circuit diagrams and small schematics. Guess that's part of the process...
>
> What is setting me back is my reluctance to "jump right in" due to all the wires with little slack in them, and without any connectors or headers. I'm being a chicken I guess.
>
> I am aware I could send it off for a full restore/recap, but that amounts to about $500-600! Not sure I like the rig that much..hi hi.
>
> Thanks again for the safety reminder and pointers to info.
>
> 73,
>
> Mark N8MH
>
> At 04:50 PM 1/5/2013 +0000, you wrote:
> >
> >
> >Hello Mark,
> >
> >Sorry I missed your post. A bunch od us check this each day but somehow I missed your

post.
> >
> >First of all I would suggest you check on K4EAA's website or Jim Showkers web site for a lot of info on these Hybrids.
> >
> >The Res you describe is most likely the cathode resistors. they are 1 watt. You should also check and most likely replace the screen resistors as well and do not forget the one on the rectifier board. If you check on K4EAA's website there are several explanations and photos that will help you get a piture in you mind. It may be a good idea to go thru the HV circuit and make sure all your voltages are correct. Do not forget to discharge the HV caps before playing in that area. I do not know your skill level or experience with these Hybrids but it is a good idea to read all you can before jumping in. May save some components and prevent sparking out of the Ham community early. I think the 2 websites will be a great help. Jim's website is hybridrestore
> >73 and have fun with the 520. Don K5HFG
> >
> >
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

40484. Re: [TS-520_820_530_830] Re: TS-520 - heater ON, then loud "POP!"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 19:42:45 UTC
From: Mark L. Hammond
Topic: 40422 Message: 40484

Thanks, John. I'll put this on my "check" list...

73!

Mark N8MH

At 02:04 PM 1/5/2013 -0500, you wrote:
>
>
>Mark,
>
>One item to look at for the 6146's is the solder joints for the tube sockets. I have had a few solder joints form cracks on my 830. The self-heating of the tubes will age the solder over time.
>
>73's.....de NU8M....John
>
>Sent from my iPad
>
>On Jan 5, 2013, at 12:08 PM, "Mark L. Hammond" <mailto:marklhammond%40gmail.com>marklhammond@...> wrote:
>
>> Thanks, Don.
>>
>> My skill level with the tube radios is very low (beginner), but I'm trying. Thanks for the high voltage reminder!!
>>
>> I have combed through both sites and been reading things off and on for the past year. I did buy a complete recap kit from JIm S. and also got the "resistor kit for final section." Last night when replacing those two broken resistors, I was pretty sure the 10 ohm resistors in the resistor kit were the right ones, but I chickened out because there were SO small, and decided to use the old style resistors on hand because they more closely resembled what I was replacing.
>>
>> I see the "resistor kit" includes the necessary screen resistors; now I have to find them ;) I'm really struggling with matching up what I see in the radio with what is in the circuit diagrams and small schematics. Guess that's part of the process...
>>
>> What is setting me back is my reluctance to "jump right in" due to all the wires with little slack in them, and without any connectors or headers. I'm being a chicken I guess.
>>
>> I am aware I could send it off for a full restore/recap, but that amounts to about $500-600! Not sure I like the rig that much..hi hi.
>>
>> Thanks again for the safety reminder and pointers to info.
>>

>> 73,
>>
>> Mark N8MH
>>
>> At 04:50 PM 1/5/2013 +0000, you wrote:
>> >
>> >
>> >Hello Mark,
>> >
>> >Sorry I missed your post. A bunch od us check this each day but somehow I missed your post.
>> >
>> >First of all I would suggest you check on K4EAA's website or Jim Showkers web site for a lot of info on these Hybrids.
>> >
>> >The Res you describe is most likely the cathode resistors. they are 1 watt. You should also check and most likely replace the screen resistors as well and do not forget the one on the rectifier board. If you check on K4EAA's website there are several explanations and photos that will help you get a piture in you mind. It may be a good idea to go thru the HV circuit and make sure all your voltages are correct. Do not forget to discharge the HV caps before playing in that area. I do not know your skill level or experience with these Hybrids but it is a good idea to read all you can before jumping in. May save some components and prevent sparking out of the Ham community early. I think the 2 websites will be a great help. Jim's website is hybridrestore
>> >73 and have fun with the 520. Don K5HFG
>> >
>> >
>>
>> [Non-text portions of this message have been removed]
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>

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40485. Re: [TS-520_820_530_830] TS-520 - heater ON, then loud "POP!"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 20:33:29 UTC
From: Mike
Topic: 40422 Message: 40485

Mark,

The BASIC RADIO COURSE by John T. Frye is about the best, easy to understand, book on basic and intro to advanced electronics I have found. It's written in easy to understand text.

The ARRL handbooks are good but the current editions are written, in my opinion, in text that might be a bit more difficult to understand. That's why I recommended the earlier editions, mid 60s.

What you can do is purchase a VTVM on eBay, most are inexpensive and most of them work. In many cases all that's needed is to replace the 1.5VDC battery and clean it up. Some VTVMs don't come with the probes but the probes are easy to make. You can purchase some resistors and a 9 volt battery and perform some of the simple experiments using ohms law, calculating current (I), voltage (E), and Resistance (R). You will use that VTVM more than you think, especially during alignment where an analog meter performs much better than a DVM.

73s
Mike
W5RKL

On 1/5/2013 1:21 PM, Mark L. Hammond wrote:
>
> Mike,
>
> Thanks for the sage advice. Indeed, I'm at the reading stage. The
> specific resources mentioned should prove useful.
>
> 73,
>
> Mark N8MH
>
> At 01:08 PM 1/5/2013 -0600, you wrote:
> >
> >
> >The "Heater" switch has nothing to do with the HV filter capacitors
> >failing.The sole purpose of the "Heater" switch is to apply filament
> >voltage to the driver and both final tubes.
> >
> >Improper tuning, abuse by a previous owner(s), aging capacitor, or all 3
> >most likely have contributed to the failure of the HV filter capacitors,
> >not by simply turning the HEATER switch ON.
> >
> >You said your skill level for tube radios is low (beginner). Based on

> >that information Irecommend you do some studying first before you
> >attempt any service on your 520. I recommend you obtain an early edition
> >of the ARRL Handbook, mid 60's for example, and study Vacuum Tube and
> >Amplifier Class topics. You can find the handbooks on eBay or your local
> >library. You can't successfully service vacuum tube circuits if you do
> >not understand how vacuum tubes and amplifier classes workand that
> >information is contained in the ARRL Handbook.
> >
> >I also recommend obtaining the book
> >
> >BASIC RADIO COURSE
> >Author: John T. Frye
> >
> >and study it from cover to cover. This book is out of print but quite
> >often can be found on Amazon.com (used), at used book stores, or eBay.
> >Amazon.com currently has one (used) available for $4.99 plus shipping.
> >This book is written in simple text withpictorial examples of subjects
> >covered along with a few questions at the end of each chapter to ensure
> >you understand the chapter's subject matter.
> >
> >These books contain an wealth of information.
> >
> >Also, if you don't have it, download the TS-520's Service Manual from
> >Gordon's website
> >
> >www.n6wk.com/kenwood/
> >
> >Once you download the service manual, take some time and study the
> >"Circuit Description" sectionand block diagram so you get an idea of how
> >the 520 works. You can't successfully service the 520 if you do not
> >know/understand how it works inside.
> >
> >Once you have these books, take some time and studybefore you attempt to
> >service your 520.
> >
> >73s
> >Mike
> >W5RKL
> >
> >On 1/5/2013 10:27 AM, Mark L. Hammond wrote:
> >>
> >> Hello Again,
> >>
> >> Well, so far, only 1 reply off list. I'll try again, with some updated
> >> information about my TS-520.
> >>
> >> Last night I did another visual inspection of the radio and saw that
> >> two 10 ohm resistors (pretty hefty--a watt or two rating?) were
> >> cracked and needed replacing; one literally fell in half with a gentle
> >> touch. Each final tube socket had one 10 ohm resistor connected to

> >> ground. I replaced them both with even larger old style 10 ohm
> >> resistors (it's what I had on hand).
> >>
> >> In testing the rig, it appears to "tune" up OK, and all appears normal
> >> except that it's only putting out a fraction of a watt or so. I double
> >> checked the SG switch on the back and it is UP. High voltage looks OK
> >> (about 900V as a I recall) and drops a bit when the heater switch is
> >> turned ON; no more popping has been heard.
> >>
> >> So based on the single loud POP when I turned the heater switch ON--is
> >> likely to be the high voltage caps? Or any other suggestions on what
> >> to inspect/test/replace next? I can tell that getting th0se out of
> >> this old rig is going to be a real challenge...if it was really easy,
> >> I'd have done it already...hi hi.
> >>
> >> I have spare tubes (driver and finals) but don't want to just swap
> >> them out...my hunch is that it's something else.
> >>
> >> Again, I'll appreciate some advice :)
> >>
> >> 73,
> >>
> >> Mark N8MH
> >>
> >> At 12:27 AM 1/3/2013 +0000, you wrote:
> >> >
> >> >
> >> >Hi All,
> >> >
> >> >I have a TS-520 that I bought over a year ago. It was in great
> >> operational condition until recently. After a month or two of
> >> inactivity (had just been using it as a receiver, heaters off), I
> >> turned the heaters ON and soon after (few seconds??) a single loud POP
> >> sound was heard. I turned it off and it's been sitting there for
> weeks...
> >> >
> >> >I know---I need to get brave and plug it back in to see if I can see
> >> any HV on the meter, etc. I didn't look before shutting it down. But
> >> for now, I'm wanting a bit more info before I power it back up...
> >> >
> >> >At first I thought maybe a capacitor had exploded, but I can't see
> >> that with a visual inspection (and the spaghetti wiring makes me
> >> nervous about poking around too much). I did a bit of searching on the
> >> group here, and saw mention of "cathode resistor" but honestly, I
> >> don't even know where to look for that (even after looking over the
> >> service manual).
> >> >
> >> >Any suggestions on what is the "likely suspect?" The old rigs aren't
> >> my forte, but maybe I can fix it with a bit of guidance from this
> >> informed group!

> >> >
> >> >Thanks in advance,
> >> >
> >> >Mark N8MH
> >> >
> >> >
> >>
> >> [Non-text portions of this message have been removed]
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40486. Re: Kenwood TS-820 Transmit Problem

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 21:12:52 UTC
From: kc2mru
Topic: 40386 Message: 40486

sorry I didn't reply right away ... I had got this rig from another operator , and when we were talking about making the deal he said that it received fine , but it's transmit wasn't very good at all . So I made this post while I was waiting for the radio to get here. The radio just arrived , it's extremely cold from riding in the delivery truck all day ... but I took a look inside to see what I could find out , and this is what I found (so far) : I found a batch of wires that appear to be coming from the digital frequency counter that was unplugged ... and then after looking around a bit more , I found that the 12BY7A driver tube wasn't plugged into it's socket .

--- In TS-520_820_530_830@yahoogroups.com, John Davidson wrote:
>
> Tell us what it does ?
> Â
>
>
> _____
> From: John Davidson
> To: "TS-520_820_530_830@yahoogroups.com"
> Sent: Saturday, December 29, 2012 5:37 PM
> Subject: Re: [TS-520_820_530_830] Kenwood TS-820 Transmit Problem
>
> Â
> With the information provided I would look somewhere between the mic or key jack and antenna relay.
>
> _____
> From: kc2mru
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Saturday, December 29, 2012 4:27 PM
> Subject: [TS-520_820_530_830] Kenwood TS-820 Transmit Problem
>
> Â
> Hey Everyone ,
> I just recently acquired a Kenwood TS-820 that receives just fine & has new tubes in it , but it has a little transmitting problem and I was wondering if any of you might have any suggestions as to where to start poking around at to try and fix it's transmit ... I'd really love to get this old timer back on the air again . :)
>
> [Non-text portions of this message have been removed]
>
>
>
>
> [Non-text portions of this message have been removed]
>

40487. Re: TS520 VOX unit transistor 2SA562Y

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-05 23:08:30 UTC
From: zl3ha
Topic: 40454 Message: 40487

Hi Jimmy
Thanks for this information. I will replace the diode at the same time. I just checked Mouser and they are not selling the NTE290A via web orders at this time. If anyone else has found a suitable substitute I would be pleased to hear from you.
Best 73
Grant, ZL3HA

--- In TS-520_820_530_830@yahoogroups.com, "jimlamanteer" wrote:
>
>
> GRANT I JUST RECENTLY REPLACED MY Q-8 ON THE VOX BOARD WITH AN NTE290A ITS A SUB FOR THE 2SA562 AND IT WILL DO JUST FINE BUT U SHOULD ALSO REPLACE YOUR D-8 DIODE AS WELL USUALLY IT GOES MAKING THE Q-8 FAIL. I BOUGHT SOME REPLACEMENT DIODES OFF OF KEN K4EAA THEY SUB FOR THE N16263 DIODES. THE NTE Q-8 I GOT FROM MOUSER. HOPE THIS HELPS 73`S JIMMY WB2KNR
>
> --- In TS-520_820_530_830@yahoogroups.com, "zl3ha" wrote:
> >
> > Hi all and HNY
> > I've just had this transistor (Q8) literally blow apart in my TS520. Has anyone had experience of finding a suitable and readily available replacement; and what might be the most likely cause of the failure?
> > Best 73
> > Grant, ZL3HA
> >
>

40488. Re: TS520 VOX unit transistor 2SA562Y

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 00:17:14 UTC
From: zl3ha
Topic: 40454 Message: 40488

Further to my last post I think I have found a supply of NTE290A and the diodes in this part of the world - I wont be sure until tomorrow (monday here).
73, Grant

--- In TS-520_820_530_830@yahoogroups.com, "zl3ha" wrote:
>
> Hi Jimmy
> Thanks for this information. I will replace the diode at the same time. I just checked Mouser and they are not selling the NTE290A via web orders at this time. If anyone else has found a suitable substitute I would be pleased to hear from you.
> Best 73
> Grant, ZL3HA
>
> --- In TS-520_820_530_830@yahoogroups.com, "jimlamanteer" wrote:
> >
> >
> > GRANT I JUST RECENTLY REPLACED MY Q-8 ON THE VOX BOARD WITH AN NTE290A ITS A SUB FOR THE 2SA562 AND IT WILL DO JUST FINE BUT U SHOULD ALSO REPLACE YOUR D-8 DIODE AS WELL USUALLY IT GOES MAKING THE Q-8 FAIL. I BOUGHT SOME REPLACEMENT DIODES OFF OF KEN K4EAA THEY SUB FOR THE N16263 DIODES. THE NTE Q-8 I GOT FROM MOUSER. HOPE THIS HELPS 73`S JIMMY WB2KNR
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "zl3ha" wrote:
> > >
> > > Hi all and HNY
> > > I've just had this transistor (Q8) literally blow apart in my TS520. Has anyone had experience of finding a suitable and readily available replacement; and what might be the most likely cause of the failure?
> > > Best 73
> > > Grant, ZL3HA
> > >
> >
>

40489. Re: Kenwood R-820 Rx

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 01:01:47 UTC
From: eoxer
Topic: 40236 Message: 40489

Hello again,

I took a second trip into my basement flea market and this time I came up with a copy of the John T. Frye, Basic Radio Course. I also was lucky enough to find a second Frye book, Radio Receiver Servicing dated 1955. Frye also wrote the Carl and Jerry short story series (a little like the Hardy Boys or the Radio Boys) for Popular Electronics in the 1950's. Thanks for all the help in locating a copy of the book as well as the support for retirement goals.

Happy New Year de W8EO.

73,

Ed, W8EO

--- In TS-520_820_530_830@yahoogroups.com, "David Burt, W4OFO" wrote:
>
> Also, emailing you links to the frye book. It's on my Dropbox account, so it is going to be multiple emails as I can't figure out how to email a folder from my ipad.
>
> Merry Christmas!
>
> David
>
> On Dec 26, 2012, at 7:45 PM, "eoxer" wrote:
>
> > Hi Mike,
> >
> > One of my retirement projects is to improve my understanding of electronics, analog and digital, beyond being able to pass a license exam. Taking the R-820 apart, reading about it and help from this user group provided a great learning experience.
> >
> > I couldn't find the Frye book in my basement so I'll have to be on the lookout for it at local swaps. My own swap meet in the basement is a good first place to look. Mostly I found Marcus and Levy texts and a recently acquired Grob, Basic Electronics.
> >
> > I also recently came across a website with a community college course. Here's the link. The videos are very good and I'm slowly working my way through.
> >
> > http://www.allaboutcircuits.com/
> >
> > I don't know if this is the place for this kind of discussion but I'd be interested in other recommendations for continuing education. Maybe there is a place on the Web where this goes on and any kind general electronics questions get answered and discussed. Tnx again.
> >

> > 73,
> >
> > Ed, W8EO
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Mike wrote:
> > >
> > > Ed,
> > >
> > > As a learning tool suggestion, take some time and read the R-820's
> > > Circuit Description section and study the block diagram starting on page
> > > 25 in the operator's manual. Doing so will give you a better
> > > perspective on what's going on in your R-820. If all this is a bit
> > > overwhelming and you don't understand what's going on, may I recommend a
> > > book to read. This book is used and out of print but quite often can be
> > > found at your local library, at used book stores, or on the web. I found
> > > my copy at a used book store for $2.00.
> > >
> > > BASIC RADIO COURSE
> > > by JOHN T. FRYE
> > >
> > > and
> > >
> > > ARRL HANDBOOK (early editions)
> > >
> > > Both are excellent learning tools for those who want to learn. ARRL
> > > Handbook early editions for example such as mid 60s and earlier, but
> > > it's up to you which edition you use.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > >
> > > On 12/26/2012 9:53 AM, eoxer wrote:
> > > >
> > > > Hello agoin,
> > > >
> > > > VFO capacitor shaft has now been cleaned and the diodes are holding
> > > > up. The R-820 is now a working radio. Tnx again for all the guidance
> > > > on the internet and the net on 7.235.
> > > >
> > > > 73 and Happy Holidays,
> > > >
> > > > Ed, W8EO
> > > > East Lansing MI
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> > > > , "eoxer" wrote:
> > > > >

> > > > > Jim and Mike,
> > > > >
> > > > > Tnx for the quick reply. I will research the info provided and start
> > > > looking under the "hood". This group is very helpful and it is
> > > > appreciated. I'll be back with an update.
> > > > >
> > > > > 73,
> > > > >
> > > > > Ed, W8EO
> > > > >
> > > > >
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com
> > > > , Mike wrote:
> > > > > >
> > > > > > The digital display going dark is caused by the R-820's PLL Unit
> > > > > > changing into an "Unlock" state.
> > > > > > This occurs when one or more "required" signals applied to the PLL
> > > > Unit
> > > > > > are missing or unuseable.
> > > > > > An unuseable signal can be any signal that it's level is too low, not
> > > > > > within the frequency range required,
> > > > > > or the signal is simply missing at appropriate pin on the PLL
> > > > Unit. In
> > > > > > this case it appears to be the
> > > > > > R-820 analog VFO signal is the possible culprit.
> > > > > >
> > > > > > Based on the information provided in the original post, the
> > > > instability
> > > > > > in the R-820's analog VFO,
> > > > > > I agree with Jim KE7OAY suggestion referring to a dirty VFO variable
> > > > > > capacitor shaft to frame
> > > > > > connection point inside the R-820's VFO. There are many response
> > > > > > discussion about how to
> > > > > > clean this VFO shaft/frame connection so take some time to search the
> > > > > > message data base
> > > > > > for VFO instability issues.
> > > > > >
> > > > > > The R-820 does not have a tuning knob attached to an "digital
> > > > encoder"
> > > > > > behind the front panel that is tied
> > > > > > to or connected to a sophisticated microprocessor digitally
> > > > controlled
> > > > > > frequency generating system as some
> > > > > > may think. The frequency controlling device/circuit that's
> > > > connected to
> > > > > > the R-820 tuning knob is the same
> > > > > > "analog VFO" used in the TS-820/820S and VFO-820 remote VFO.
> > > > > >
> > > > > > 73s

> > > > > > Mike
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > > On 12/20/2012 6:08 PM, Jim Showker wrote:
> > > > > > > >
> > > > > > > > I haven't worked on one of those, but if it has a similar VFO
> > > > inside as
> > > > > > > > the TS820, there may be an easy fix. Take the inspection cover
> > > > off the
> > > > > > > > VFO can, and on the back of the variable capacitor there is a wiper.
> > > > > > > > Apply some DeOxit, Corrosion X, whatever you use, on that wiper and
> > > > > > > > exercise the shaft by tuning up and down several times. It works
> > > > a lot
> > > > > > > > of the time. Jim KE7OAY
> > > > > > > > >
> > > > > > > > On 12/20/2012 12:13 PM, eoxer wrote:
> > > > > > > > >
> > > > > > > > The R-820 has its power supply working well but has developed
> > > > a new
> > > > > > > > set of issues. In addition to what I mentioned below, the rx
> > > > is now
> > > > > > > > rolling and skipping frequencies on the readout. Once the readout
> > > > > > > > settles down the rx works fine. The readout also goes dark
> > > > when the
> > > > > > > > dial is rotated above 200. It seems as though the is a defective
> > > > > > > > control between the dial knob and the electronics of changing
> > > > > > > > frequency. When it works the rx is fine but there are alot of
> > > > > > > > unpredictable things going on before it works. I hope this
> > > > description
> > > > > > > > is clear enough to make some sense out of what might be the
> > > > problem.
> > > > > > > > Tnx agn.
> > > > > > > > >
> > > > > > > > 73,
> > > > > > > > >
> > > > > > > > Ed, W8EO
> > > > > > > > >
> > > > > > > > --- In TS-520_820_530_830@yahoogroups.com
> > > > > >
> > > > > > > > >
> > > > > > > > , "eoxer"
> > > > > > > > wrote:
> > > > > > > > >
> > > > > > > > --- In TS-520_820_530_830@yahoogroups.com
> > > > > >
> > > > > > > > >
> > > > > > > > , "eoxer" wrote:
> > > > > > > > >
> > > > > > > > Hello all,

> > > > > > > > >
> > > > > > > > > > I having a non working R-820. I get nothing when I try to
> > > > power it up.
> > > > > > > > > > The transformer appears to be ok but one of the B+ lines
> > > > seems to
> > > > > > > > > have a very low resistance to ground, about 20 ohms. The other
> > > > line is
> > > > > > > > > much higher at about 40,000 ohms. Can't get to the diodes. I
> > > > have the
> > > > > > > > > service manual but it looks pretty complex in there. I can't
> > > > really
> > > > > > > > > follow the wires as they go into the harness. It's not like
> > > > working on
> > > > > > > > > tube equipment. Any thoughts?
> > > > > > > > > > 73, Ed, W8EO
> > > > > > > > >
> > > > > > > > > > Terry, Wally and Mike,
> > > > > > > > >
> > > > > > > > > > Tnx for all the suggestions. I now have a working (if not
> > > > perfectly)
> > > > > > > > > > R-820. The diodes did the trick. Four new 1N4004's and off
> > > > it went.
> > > > > > > > > > I checked the caps and they were fine. It took some waking up with
> > > > > > > > > > some dirty switches and a little contact cleaner. It doesn't
> > > > > > > > > > consistently go into the am position. I had it working nicely last
> > > > > > > > > > night on the sw bands but today it's refusing. Works fine on
> > > > all the
> > > > > > > > > > ham bands, SSB and CW. The diodes are running hot but according to
> > > > > > > > > > specs the rig draws .25 amp and with four diodes dividing the
> > > > current
> > > > > > > > > > they should hold up for a while. I did find two of the old diodes
> > > > > > > > > > burnt and falling apart. Only one diode was good. The fourth
> > > > one was a
> > > > > > > > > short.
> > > > > > > > > > tnx agn.
> > > > > > > > >
> > > > > > > > > > 73,
> > > > > > > > >
> > > > > > > > > > Ed, W8EO
> > > > > > > > >
> > > > > > > > >
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40490. Re: [TS-520_820_530_830] Re: reducing the power output of the ts-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 01:38:17 UTC
From: Dave & Loraine
Topic: 40482 Message: 40490

"Frankly, I wouldn't worry. No one is going to care much if you are tx'ing on 100w, even on a foundation licence, let alone an intermediate, unless you cause interference locally. And that's from the President of the RSGB."
zen18531@...

Please don't give bad advice to ignore the regs that have been developed over many years.
Are you the President of RSGB? What's your call?
Dave f4eyk

40491. yk-88s1 filter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 02:35:53 UTC
From: va3ied
Topic: 40491 Message: 40491

I just purchased the above noted filter on spec...will it work with my 820s ?

cheers
scott va3ied

40492. Re: [TS-520_820_530_830] TS 830S Faulty on 10 Metre Band

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 03:38:56 UTC
From: John Elvy
Topic: 40420 Message: 40492

Hi Mike,
Thanks for your suggestion I have disconnected the lead from the RF Board aand connected my freq counter onto the end of the lead and with the band switch set to 10m (28.800mhz) i recorded a RX freq of 37.6315 Mhz and 37.6307 Mhz on TX.
I don't have a scope so as best i could determine with my multimeter the level was similar to that on 14mhz.

There are two quite solid white wires leading into the PA cage, the one coming from the near the driver tube has in the order of 4.6v (using my MM) on both 14mhz and 28mhz when the send switch is activated.

My eyesight is not flash, but looking into the PA cage i noted that several capacitors have been replaced reasonably recently, it also appears that the PA bandswith assembly may have been removed and possibly dismantled?

There is limited vision available to inspect the PA wafer switch but I suspect that this is the problem area. Perhaps it's a faulty wafer, a shorted terminal, or wrong reasembly like a reversed wafer?

I have checked the switch alignment on 10Mhz as suggested within the files section and this was correct.

I would like to get the 830 going on 10m if possible if for no other reason than to neutralise the tubes properly as per the manual....

If indeed i have to dismantle the PA section then i would like to have all the info i can to hand along with a spare switch or wafers if i can locate the same.

Do you know if the PA wafer switches are the same in all the kenwood hybrid series?

I think my next move will be to get a schematic of the PA section blown up and printed so i can work my way systematically through this section.

I may be barking completely up the wrong tree but i'm sure the problem lies in the PA switching area possibly a result of repair work?

Any help/advice from any source would be gratefully received..

Regards,
John ZL2BH

From: Mike
Sent: Friday, January 04, 2013 8:58 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS 830S Faulty on 10 Metre Band

Have you verified the presence of the 10 meter VCO signal at the RF
Unit's VCO terminal in transmit? It's possible the 10 meter VCO signal

is there but it's level at the transmit mixer is unusable.

73s
Mike
W5RKL

On 1/3/2013 12:34 AM, John Elvy wrote:
>
> Hi Dave,
> Thanks for the advice.
> I have wriggled the bandswitch while on 10m but no joy i'm afraid.
> I will check the file file section as you suggest and If i have any
> issues
> locating the info I'll come back to you..
> Regards
> John. ZL2BH
>
> -----Original Message-----
> From: fpath fpath
> Sent: Thursday, January 03, 2013 11:38 AM
> To: mailto:ts-520_820_530_830%40yahoogroups.com
>
> Subject: RE: [TS-520_820_530_830] TS 830S Faulty on 10 Metre Band
>
> John,
>
> Congrats on your new buy. If your having doubts about the bandswtich
> alignment, have a look at the phots in the file section. If you have any
> trouble accessing I can sent direct to you.Have you tried to wiggle
> the band
> switch when on 10?
>
> Dave
> VK5PDL
>
> To: mailto:TS-520_820_530_830%40yahoogroups.com
>
> From: mailto:johnelvy%40gmail.com
> Date: Wed, 2 Jan 2013 22:45:34 +1300
> Subject: [TS-520_820_530_830] TS 830S Faulty on 10 Metre Band
>
> Hello Fellow Members, Happy New Year to you all.
>
> I have recently acquired a Kenwood TS 830s Hybrid which is in reasonable
> working condition except that all the 10m
> Band is completely dead on TX. None of the controls work on this band at
> all, but when I connected my signal Generator to the Antenna connector
> the
> set appears to have
> quite acceptable RX levels on all segments of the 10m Band.
> Prior to me diving into the set I thought I would post a message seeking

> advice from fellow members.
> I note the plastic shaft coupler on the band switch has been replaced,
> It is
> possibly a re alignment problem?
> Any comments/help would be appreciated.
> Does anyone know of a source of 830S bandswitch wafers? (New or pre
> owned)
> just in case I require them.
> John.. ZL2BH
>
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> Yahoo! Groups Links
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40493. Re: [TS-520_820_530_830] Re: reducing the power output of the ts-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 03:50:17 UTC
From: John Elvy
Topic: 40439 Message: 40493

Hello Robert,
Welcome to the Group.
I am a new member as well.
I have found the “files Section” well worth the time to investigate, it improved my knowledge on aspects of these ‘Hybrid Rigs” no end.
I recall seeing information about power reduction but from memory it was down to QRP level but perhaps the basic principal is the same?
I have found members to be very helpful, I’m sure you will receive the help/advice you require...
Regards,
John.. ZL2BH

From: Robert George Nelson
Sent: Saturday, January 05, 2013 11:29 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: reducing the power output of the ts-520

Hello, I have just joined the group, My name is Robert Nelson, 2I0RCN, from Northern Ireland, Iam currently restricted to an RF output of 50Watts, I have just bought a ts-520 and Iam looking advice on how I could reduce the power of the rig to this level, any advice will be most welcome.

cheers and 73,

de Robert. 2I0RCN.
From: Joseph Stiles mailto:stilesjoseph%40yahoo.com>
To: "mailto:TS-520_820_530_830%40yahoogroups.com"
mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Friday, 4 January 2013, 22:00
Subject: Re: [TS-520_820_530_830] Re: Question regarding Final Drive Tubes.???

Dave,

No problem. However, there is NO reason to use "matched set" final tubes here...they are not necessary and you pay a premium price. There has been lots of
"discussion" regarding this subject...and most seem to agree that it's a waste.

Again, due to inflation....my 10 cents worth.

73 Joe
WB7UQU

_____
From: w9cac mailto:cosmocyb%40yahoo.com>
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Friday, January 4, 2013 12:26 PM
Subject: [TS-520_820_530_830] Re: Question regarding Final Drive Tubes.???

Joe,
Thanks for the advice. We used a general commercial type watt meter my son has, it could be off in itself, don't know the last time it was calibrated. We followed the tuning instructions and avoid over-driving the processor. We are being as conservative as we can. We plan on this rig lasting a long time. We also plan on spending the money for a good matched set of "American Labeled" tubes just to be sure we have good stock in the event we need them. We do not foresee a breakdown problem for these tubes any time soon though.

73's Dave
W9CAC

--- In mailto:TS-520_820_530_830%40yahoogroups.com, Joseph Stiles wrote:
>
> Greetings group...well Happy New Year....
>
> Â Â I have used 6146B's & 6146W's for replacing the 2001A's...I have NOT used the "A's" Â Both the "B's" & the "W's" have worked well for me. There is a good document in the "files section" of this board regarding the final amplifier tubes.Â Must make sure to neutralize per OP or Service manual. 110 watts on SSB is just a bit high...except MAYBE on the lower bands. I think that using a known calibrated meter you would see100 watts. For proper SSB power out reading...the meter has to be able to "read" the average RF envelope. If you are jacking up the mic gain or jacking up the processor...you may indicate 110 watts..but causing splatter. IF the 2001A's are putting out rated power out...there is no need to replace them...I have an 820S that still has its original 2001A's. PLEASE be careful...I have not had good luck with the "ASIAN" market tubes...I used a set once...one or both arced over..popping the cathode resistors...not much of a
problem on the
> 520/820 series to replace....but on the 530/830...a real pain the the *&$@.
>
> Due to inflation....that's my 10 cents worth
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: Bill Kuhn
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Friday, January 4, 2013 10:34 AM
> Subject: RE: [TS-520_820_530_830] Question regarding Final Drive Tubes.???
>
>
> Â
> The S2001/A are japanese variants of the 6146B.
>
> Replace with either S2001/A or 6146B. Make sure to check/set neutralization when you replace.
> _____
>
> Bill Kuhn - MCSE, MCP+I, MCTS

> President
> The Kuhn Group, Inc.
>
> EMail: bkuhn@...
> Web: http://www.kuhngroup.com/ http://www.kuhngroup.com/>
> Office: 785.437.3277
>
> We hate CenturyLink - The worst ISP in the business.
>
> _____
>
> In God We Trust
>
>
> _____
>
> From: mailto:TS-520_820_530_830%40yahoogroups.com on behalf of w9cac
> Sent: Fri 1/4/2013 11:45 AM
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Subject: [TS-520_820_530_830] Question regarding Final Drive Tubes.???
>
> Having recently acquired a TS-520, my son and I decided to give the unit a thorough once over. Upon removing the cover over the final drive tubes, we noticed that there were a pair of S2001/A tubes in the sockets. Currently, we are getting about 110 watts out on SSB. The radio tunes up beautifully.
> However, after some checking, we are still seriously confused as to what their replacements would be if we were ever to need them.
> I have found sites that say it is ok to replace those tubes with 6146B's, other sites say that they need to be just 6146's, still other sites have stated that either 6146B's or 6146W's would be just fine.
> Since our operational learning curve is still pretty high, I would really like some input here, so as to not equip our shack with the wrong tubes.
>
> 73"s Dave
> W9CAC
> P.S. Even data sheets show all three as a replacement. I understand that while the W's are military equivalents, they can be hard on the radio. Our application for the rig is as a base station, not mobile
>
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40494. Re: [TS-520_820_530_830] Re: reducing the power output of the ts-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 04:37:52 UTC
From: Cliff White
Topic: 40439 Message: 40494

I remember reading in the TS-820S manual how to change one of the tubes with a "dummy" to reduce the output to U.S. novice levels (which I believe was also 50w). I'm not sure how the dummy tube was wired, or if it would be something to easily make, but it might be worth looking into. You could probably try looking online for info.

On the other hand, if your licensing is anything like ours is here in the U.S., it might be easier to upgrade to a higher power license than to modify your radio. :)

-Cliff

40495. Re: [TS-520_820_530_830] TS-520 - heater ON, then loud "POP!"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 04:58:35 UTC
From: Joseph Stiles
Topic: 40422 Message: 40495

Mark,

  Your final tubes may have totally failed. Is what ever watt meter you are using is it KNOWN good/accurate? IF as you say it "tunes up ok but only puts out a fraction of a watt" do you have good HV AND proper Ip at key down? And YES, the newer resistors are really physically smaller than the "old style." Take a look a modern capacitors!You should always stick with the correct ohm value AND watt rating when dealing with the resistors in the HV, rectifier, and the final amplifier tube circuit board. They "act" as a fuse...hopefully "popping" and protecting the tubes..and some other stuff. Ken Kemski.. k4eaa.com has a good section on this.
One of the main reasons that the cathode resistors fail is due to one or both final amp tubes failing for what ever reason. I suggest that you obtain a known good set of finals and a good driver to keep for testing/diagnostic purposes. I still think you are going to need new final amp tubes.

73 Joe
WB7UQU

From: Mark L. Hammond <marklhammond@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, January 5, 2013 8:27 AM
Subject: Re: [TS-520_820_530_830] TS-520 - heater ON, then loud "POP!"

Hello Again,

Well, so far, only 1 reply off list. I'll try again, with some updated information about my TS-520.

Last night I did another visual inspection of the radio and saw that two 10 ohm resistors (pretty hefty--a watt or two rating?) were cracked and needed replacing; one literally fell in half with a gentle touch. Each final tube socket had one 10 ohm resistor connected to ground. I replaced them both with even larger old style 10 ohm resistors (it's what I had on hand).

In testing the rig, it appears to "tune" up OK, and all appears normal except that it's only putting out a fraction of a watt or so. I double checked the SG switch on the back and it is UP. High voltage looks OK (about 900V as a I recall) and drops a bit when the heater switch is turned ON; no more popping has been heard.

So based on the single loud POP when I turned the heater switch ON--is likely to be the high voltage caps? Or any other suggestions on what to inspect/test/replace next? I can tell that getting th0se out of this old rig is going to be a real challenge...if it was really easy, I'd have done it already...hi hi.

I have spare tubes (driver and finals) but don't want to just swap them out...my hunch is that it's something else.

Again, I'll appreciate some advice :)

73,

Mark N8MH

At 12:27 AM 1/3/2013 +0000, you wrote:
>
>
>Hi All,
>
>I have a TS-520 that I bought over a year ago. It was in great operational condition until recently. After a month or two of inactivity (had just been using it as a receiver, heaters off), I turned the heaters ON and soon after (few seconds??) a single loud POP sound was heard. I turned it off and it's been sitting there for weeks...
>
>I know---I need to get brave and plug it back in to see if I can see any HV on the meter, etc. I didn't look before shutting it down. But for now, I'm wanting a bit more info before I power it back up...
>
>At first I thought maybe a capacitor had exploded, but I can't see that with a visual inspection (and the spaghetti wiring makes me nervous about poking around too much). I did a bit of searching on the group here, and saw mention of "cathode resistor" but honestly, I don't even know where to look for that (even after looking over the service manual).
>
>Any suggestions on what is the "likely suspect?" The old rigs aren't my forte, but maybe I can fix it with a bit of guidance from this informed group!
>
>Thanks in advance,
>
>Mark N8MH
>
>

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40496. Re: [TS-520_820_530_830] TS830S: RF output meter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 05:03:51 UTC
From: Joseph Stiles
Topic: 40465 Message: 40496

Peter,

   Try cleaning the meter switch also...and also the RF VOLT control as Ken stated. It is not unheard of...but the small diode in the final cage that is soldered on the terminal strip may have failed....it is used to detect the RF output for the meter...its hard to see...but if you remove the fan it makes it easier.

73 Joe
WB7UQU

From: Ken Winterling <wa2lbi@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, January 5, 2013 7:50 AM
Subject: Re: [TS-520_820_530_830] TS830S: RF output meter

Peter,

Check the RF VOLT CONTROL adjustment on the rear panel.

Ken
WA2LBI

On Sat, Jan 5, 2013 at 10:35 AM, ravnpeter@... fasan5@...>wrote:

> **
>
>
> The needle on the RF ouput meter on my new TS830S doesn,t move in spite of
> fact that there is full output on all bands and the meter works in all
> other positions. A burnt resistor or diode?
> Thanks.
> OZ8CTH, Peter
>
>
>

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40497. Re: [TS-520_820_530_830] Re: ts-820 if board question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 05:12:04 UTC
From: Joseph Stiles
Topic: 40458 Message: 40497

Scott,

  No problem. Those boards can get kind of "busy" huh?....I have found myself taking hi-res digital pictures of boards and connectors...and making a printed copy to keep with my op/service manual(s) I just happened to have an 820 in front of me with the covers off when you posted your question.

  But do yourself a favor...keep any liquid away from the top of that rig! You spill, and it's going to run right into the DG-1 (digital readout) unit (if installed) and your
 IF board and make your life crappy.

73 Joe
WB7UQU

From: scooterb31 <kc0ozc@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, January 4, 2013 10:02 PM
Subject: [TS-520_820_530_830] Re: ts-820 if board question

Joe,

Thanks for the response. I now understand my mistake, and thanks for pointing out the reference in the manual that I obviously missed.

73
Scott
KCØOZC
>
>
>
>
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[Non-text portions of this message have been removed]

40498. Re: [TS-520_820_530_830] Re: ts-820 if board question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 05:19:51 UTC
From: Joseph Stiles
Topic: 40458 Message: 40498

Scott,

I made an error regarding one connector...it thought it right...but typed it wrong....to many email to go through.....

the connector with the small grey colored cable....the small center conductor should go to the furthest LEFT pin...which is the RIF...not right as first posted.

SORRY...hope you caught my error

73 Joe
WB7UQU

From: Joseph Stiles <stilesjoseph@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Saturday, January 5, 2013 9:12 PM
Subject: Re: [TS-520_820_530_830] Re: ts-820 if board question

Scott,

No problem. Those boards can get kind of "busy" huh?....I have found myself taking hi-res digital pictures of boards and connectors...and making a printed copy to keep with my op/service manual(s) I just happened to have an 820 in front of me with the covers off when you posted your question.

But do yourself a favor...keep any liquid away from the top of that rig! You spill, and it's going to run right into the DG-1 (digital readout) unit (if installed) and your IF board and make your life crappy.

73 Joe
WB7UQU

From: scooterb31 kc0ozc@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, January 4, 2013 10:02 PM
Subject: [TS-520_820_530_830] Re: ts-820 if board question

Joe,

Thanks for the response. I now understand my mistake, and thanks for pointing out the reference in the manual that I obviously missed.

73
Scott
KCØOZC
>

>
>
>
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40499. Re: [TS-520_820_530_830] Re: reducing the power output of the ts-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 05:31:03 UTC
From: Mike
Topic: 40439 Message: 40499

I do not recommend doing that, dummy tube or not. Removing one of the final tubes will change the plate resistance of the circuit. The final amplifier circuit is designed around 2 final tubes not just one..

Although not mentioned, I do not recommend adjusting the LOAD control to reduce power input/output. If the LOAD control is adjusted to lower power input/output then the PI Network's output impedance is no longer a close match to the load present (antenna tuner, antenna, or dummy load) at the antenna connector.

73s
Mike
W5RKL

On 1/5/2013 10:37 PM, Cliff White wrote:
>
> I remember reading in the TS-820S manual how to change one of the tubes
> with a "dummy" to reduce the output to U.S. novice levels (which I
> believe was also 50w). I'm not sure how the dummy tube was wired, or if
> it would be something to easily make, but it might be worth looking
> into. You could probably try looking online for info.
>
> On the other hand, if your licensing is anything like ours is here in
> the U.S., it might be easier to upgrade to a higher power license than
> to modify your radio. :)
>
> -Cliff
>
>

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40500. Re: [TS-520_820_530_830] Re: reducing the power output of the ts-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 05:47:17 UTC
From: John Davidson
Topic: 40439 Message: 40500

As far as I recall it was a simulated filament load resistor because the 6V final filaments were in siries across the 12 V source..

From: Cliff White <cn.white@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, January 5, 2013 11:37 PM
Subject: Re: [TS-520_820_530_830] Re: reducing the power output of the ts-520

I remember reading in the TS-820S manual how to change one of the tubes with a "dummy" to reduce the output to U.S. novice levels (which I believe was also 50w). I'm not sure how the dummy tube was wired, or if it would be something to easily make, but it might be worth looking into. You could probably try looking online for info.

On the other hand, if your licensing is anything like ours is here in the U.S., it might be easier to upgrade to a higher power license than to modify your radio. :)

-Cliff

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40501. RE: [TS-520_820_530_830] TS 830S Faulty on 10 Metre Band

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 11:16:33 UTC
From: fpath fpath
Topic: 40420 Message: 40501

John,

If you can advise on which caps have been changed on S22 wafer switch in PA. I have experience with those caps. But again make sure you discharge the HV first
Dave
VK5PDL

To: TS-520_820_530_830@...m
From: johnelvy@...
Date: Sun, 6 Jan 2013 16:38:56 +1300
Subject: Re: [TS-520_820_530_830] TS 830S Faulty on 10 Metre Band

Hi Mike,
Thanks for your suggestion I have disconnected the lead from the RF Board aand connected my freq counter onto the end of the lead and with the band switch set to 10m (28.800mhz) i recorded a RX freq of 37.6315 Mhz and 37.6307 Mhz on TX.
I don?t have a scope so as best i could determine with my multimeter the level was similar to that on 14mhz.

There are two quite solid white wires leading into the PA cage, the one coming from the near the driver tube has in the order of 4.6v (using my MM) on both 14mhz and 28mhz when the send switch is activated.

My eyesight is not flash, but looking into the PA cage i noted that several capacitors have been replaced reasonably recently, it also appears that the PA bandswith assembly may have been removed and possibly dismantled?

There is limited vision available to inspect the PA wafer switch but I suspect that this is the problem area. Perhaps it?s a faulty wafer, a shorted terminal, or wrong reasembly like a reversed wafer?

I have checked the switch alignment on 10Mhz as suggested within the files section and this was correct.

I would like to get the 830 going on 10m if possible if for no other reason than to neutralise the tubes properly as per the manual....

If indeed i have to dismantle the PA section then i would like to have all the info i can to hand along with a spare switch or wafers if i can locate the same.

Do you know if the PA wafer switches are the same in all the kenwood hybrid series?

I think my next move will be to get a schematic of the PA section blown up and printed so i can work my way systematically through this section.

I may be barking completely up the wrong tree but i?m sure the problem lies in the PA switching area possibly a result of repair work?

Any help/advice from any source would be gratefully received..

Regards,
John ZL2BH

From: Mike
Sent: Friday, January 04, 2013 8:58 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS 830S Faulty on 10 Metre Band

Have you verified the presence of the 10 meter VCO signal at the RF
Unit's VCO terminal in transmit? It's possible the 10 meter VCO signal
is there but it's level at the transmit mixer is unusable.

73s
Mike
W5RKL

On 1/3/2013 12:34 AM, John Elvy wrote:
>
> Hi Dave,
> Thanks for the advice.
> I have wriggled the bandswitch while on 10m but no joy i'm afraid.
> I will check the file file section as you suggest and If i have any
> issues
> locating the info I'll come back to you..
> Regards
> John. ZL2BH
>
> -----Original Message-----
> From: fpath fpath
> Sent: Thursday, January 03, 2013 11:38 AM
> To: mailto:ts-520_820_530_830%40yahoogroups.com
>
> Subject: RE: [TS-520_820_530_830] TS 830S Faulty on 10 Metre Band
>
> John,
>
> Congrats on your new buy. If your having doubts about the bandswtich
> alignment, have a look at the phots in the file section. If you have any
> trouble accessing I can sent direct to you.Have you tried to wiggle
> the band
> switch when on 10?
>
> Dave
> VK5PDL
>
> To: mailto:TS-520_820_530_830%40yahoogroups.com
>
> From: mailto:johnelvy%40gmail.com
> Date: Wed, 2 Jan 2013 22:45:34 +1300
> Subject: [TS-520_820_530_830] TS 830S Faulty on 10 Metre Band

>
> Hello Fellow Members, Happy New Year to you all.
>
> I have recently acquired a Kenwood TS 830s Hybrid which is in reasonable
> working condition except that all the 10m
> Band is completely dead on TX. None of the controls work on this band at
> all, but when I connected my signal Generator to the Antenna connector
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> I note the plastic shaft coupler on the band switch has been replaced,
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> Does anyone know of a source of 830S bandswitch wafers? (New or pre
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> just in case I require them.
> John.. ZL2BH
>
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> [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

40502. RE: [TS-520_820_530_830] TS 830S Faulty on 10 Metre Band

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 11:32:35 UTC
From: fpath fpath
Topic: 40420 Message: 40502

John,

You can give the s22 and all of the wafer switches a good blast of deoxit and then a good blow out with compressed air. Have a close look at the wafer switches on the RF board and as you roatae through each position on the band switch see if the little brass fingers are connecting, if they are ben out, simple matter of using a plastic screw driver to push back in. This is done with the radio off and HV discharged

Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: johnelvy@...
Date: Sun, 6 Jan 2013 16:38:56 +1300
Subject: Re: [TS-520_820_530_830] TS 830S Faulty on 10 Metre Band

Hi Mike,
Thanks for your suggestion I have disconnected the lead from the RF Board aand connected my freq counter onto the end of the lead and with the band switch set to 10m (28.800mhz) i recorded a RX freq of 37.6315 Mhz and 37.6307 Mhz on TX.
I don?t have a scope so as best i could determine with my multimeter the level was similar to that on 14mhz.

There are two quite solid white wires leading into the PA cage, the one coming from the near the driver tube has in the order of 4.6v (using my MM) on both 14mhz and 28mhz when the send switch is activated.

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> John. ZL2BH
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> To: mailto:TS-520_820_530_830%40yahoogroups.com
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> Subject: [TS-520_820_530_830] TS 830S Faulty on 10 Metre Band
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40503. Re: [TS-520_820_530_830] TS-520 - heater ON, then loud "POP!"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 13:50:47 UTC
From: Mark L. Hammond
Topic: 40422 Message: 40503

Thanks for the reply, Joe.

I'm using a Diamond SX-1000 meter. While not a Bird, I do have reasonable faith in it, even at the 5W full scale setting. I can see a something like 100-200mW or so that peaks and dips when the rig is tuned. It's less than 1W, anyhow...

Further, I can monitor the signal on my TS-2000x. It too shows a transmitted signal that is on frequency, stable, that peaks and dips when tuning up the rig (did that on 20M into a matched antenna). The audio even sounds just fine SSB.

As I recall,when toggling the transmit switch, the HV reads just under 900V (close to that). Idle Ip is set to 60mA per manual. Really, other than the tiny power output, as an operator I would think all is well!

So, in my rather uninformed opinion, it "acts like" the final tubes are bad. I printed off lots of pages last night, from the files section. One of them walks through how to check the tubes with an ohm meter. That is on my to-do list today.

What I clearly don't want to do is swap tubes and hear a loud POP again ;)

I appreciate everybody's help!

73,

Mark N8MH

At 08:58 PM 1/5/2013 -0800, you wrote:
>
>
>Mark,
>
>Â Your final tubes may have totally failed. Is what ever watt meter you are using is it KNOWN good/accurate? IF as you say it "tunes up ok but only puts out a fraction
>of a watt" do you have good HV AND proper Ip at key down? And YES, the newer resistors are really physically smaller than the "old style." Take a look a modern capacitors!You should always stick with the correct ohm valueÂ AND watt rating when dealing with the resistors in the HV, rectifier, and the final amplifier tube circuit board. They "act" as a fuse...hopefully "popping" and protecting the tubes..and some other stuff. Â Ken Kemski..Â k4eaa.com Â Â has a good section on this.
>One of the main reasons that the cathode resistors fail is due to one or both final amp tubes failing for what ever reason. I suggest that you obtain a known good set of finals and a good driver to keep for testing/diagnostic purposes. I still think you are going to need new final amp tubes.
>
>Â
>73Â Joe
>WB7UQU

>
>_____
>From: Mark L. Hammond <mailto:marklhammond%40gmail.com>marklhammond@...>
>To: <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>Sent: Saturday, January 5, 2013 8:27 AM
>Subject: Re: [TS-520_820_530_830] TS-520 - heater ON, then loud "POP!"
>
>
>Â
>Hello Again,
>
>Well, so far, only 1 reply off list. I'll try again, with some updated information about my TS-520.
>
>Last night I did another visual inspection of the radio and saw that two 10 ohm resistors (pretty hefty--a watt or two rating?) were cracked and needed replacing; one literally fell in half with a gentle touch. Each final tube socket had one 10 ohm resistor connected to ground. I replaced them both with even larger old style 10 ohm resistors (it's what I had on hand).
>
>In testing the rig, it appears to "tune" up OK, and all appears normal except that it's only putting out a fraction of a watt or so. I double checked the SG switch on the back and it is UP. High voltage looks OK (about 900V as a I recall) and drops a bit when the heater switch is turned ON; no more popping has been heard.
>
>So based on the single loud POP when I turned the heater switch ON--is likely to be the high voltage caps? Or any other suggestions on what to inspect/test/replace next? I can tell that getting th0se out of this old rig is going to be a real challenge...if it was really easy, I'd have done it already...hi hi.
>
>I have spare tubes (driver and finals) but don't want to just swap them out...my hunch is that it's something else.
>
>Again, I'll appreciate some advice :)
>
>73,
>
>Mark N8MH
>
>At 12:27 AM 1/3/2013 +0000, you wrote:
>>
>>
>>Hi All,
>>
>>I have a TS-520 that I bought over a year ago. It was in great operational condition until recently. After a month or two of inactivity (had just been using it as a receiver, heaters off), I turned the heaters ON and soon after (few seconds??) a single loud POP sound was heard. I turned it off and it's been sitting there for weeks...
>>
>>I know---I need to get brave and plug it back in to see if I can see any HV on the meter,

etc. I didn't look before shutting it down. But for now, I'm wanting a bit more info before I power it back up...
>>
>>At first I thought maybe a capacitor had exploded, but I can't see that with a visual inspection (and the spaghetti wiring makes me nervous about poking around too much). I did a bit of searching on the group here, and saw mention of "cathode resistor" but honestly, I don't even know where to look for that (even after looking over the service manual).
>>
>>Any suggestions on what is the "likely suspect?" The old rigs aren't my forte, but maybe I can fix it with a bit of guidance from this informed group!
>>
>>Thanks in advance,
>>
>>Mark N8MH
>>
>>
>
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>

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40504. WTB : Matched pair of New 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 05:06:35 UTC
From: raysdz
Topic: 40504 Message: 40504

Hello, I am in need of a fresh matched pair of finals. TS-830S 6146B

Thanks

Ray WB8VDS

40505. Re: [TS-520_820_530_830] Re: reducing the power output of the ts-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 11:42:01 UTC
From: zen18531@zen.co.uk
Topic: 40482 Message: 40505

Warning, long post.

Dave, these 'regs' were not developed over may years, they were introduced just a few years ago in the UK. And in the case of the licence class power restrictions, they largely ignore the real world.

In broad terms, the Foundation (novice) licence is limited to 10W, Intermediate to 50W, Advanced to 400W.

There is no requirement to produce a licence to purchase/own radio equipment capable of output in excess of the class of licence. There is no restriction on the power output of any marketed device.

The power restrictions are concerned with the power at the RF output. If you have a huge feed loss and an inefficient antenna, it matters not. Conversely, if you have a high gain antenna system, and can thus increase your ERP, you can legally transmit 'in excess' of the licence limit...

The licence classes have virtually no emphasis on operating procedure; the bulk of the exam/teaching being electronic theory, then a mash of callsign allocation (and the madness of UK regional identifiers and confusing maritime, mobile, and portable suffixes), TVI, and licence conditions. Even dafter is the concept of changing callsign identifiers to reflect the licence class, whilst callsigns are issued 'for life'. Thus, someone will always be M3xxx or M6xxx on a foundation licence, then 2Exxx as an Intermediate licencee, then M0 or M1xxx when advanced. Even dafter, if, as an advanced licence holder, I wished to use my M3/M6 callsign, I would have to restrict my power to 10W... go figure.

Under the licence, if I CAN use a Advanced licence holders equipment 'under supervision'. But guess what, there is NO reasoning or explanation as to WHY, or what is expected of the Adv licencee. It can't be 'better operating procedure' as there is no difference in procedure between the licence classes. It cant be to reduce TVI, as this would be already present in the Adv holders system and present regardless of whom was operating.

The reasoning behind restricting the power output of a novice licencee I /DO/ understand; to minimise the possibility and impact of interference. However, the exam/syllabus does not follow through with this concept. The licence system 'lives in the past' and the focus is on 'construction' (reflecting the historical 'furthering radio experiments' ethos of UK HAM radio), as opposed to 'operation'. "Health and Safety" of the operator is often held up as a further reason, which again ignores the real world; by this logic I need to be supervised to build a 25W radio, in case I hurt myself, whilst blythely ignoring the fact that if I wished to buy a 1250W PSU and install it in a PC, I need neither licence nor supervision. And if I wished to prod about inside my powered-on PC with a screwdriver, there is nothing to stop me, on paper... :-)

As regards power, OFCOM is not unduly bothered about an M3/6/2E0 operator using 100W. There no mobile detector vans randomly checking. They are concerned with ANY licence holder causing interference, such as to local TV reception, regardless of power output. Obviously,

if one had an OFCOM engineer investigating local TVI one would restrict power output to licence conditions.

And finally, no, I am not the President of the RSGB.

Apologies for the hugely off-topic post, but whilst doing so would be against the terms of the licence, no one is going to get hot and bothered about an Intermediate licencee transmitting on 100W. Assuming that after 30+ years the rig is still operating at peak efficiency...

-- Original Message --
From: Dave & Loraine <dave.crooks@...>
To: TS-520_820_530_830@yahoogroups.com
Send: Sun, 6 Jan 2013 02:38:17 +0100
Subject: Re: [TS-520_820_530_830] Re: reducing the power output of the ts-520

Please don't give bad advice to ignore the regs that have been developed over many years. Are you the President of RSGB? What's your call?
Dave f4eyk "

"Frankly, I wouldn't worry. No one is going to care much if you are tx'ing on 100w, even on a foundation licence, let alone an intermediate, unless you cause interference locally. And that's from the President of the RSGB."

40506. RE: [TS-520_820_530_830] WTB : Matched pair of New 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 16:35:31 UTC
From: Rick Klinge
Topic: 40504 Message: 40506

http://www.rfparts.com/6146w.html

AC0TT
Rick

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of raysdz
Sent: Saturday, January 05, 2013 11:07 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] WTB : Matched pair of New 6146B

Hello, I am in need of a fresh matched pair of finals. TS-830S 6146B

Thanks

Ray WB8VDS

40507. Re: [TS-520_820_530_830] WTB : Matched pair of New 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 17:34:31 UTC
From: KA4AQM
Topic: 40504 Message: 40507

Got mine from Tube Depot...no regrets!
Randy
Ka4aqm
----- Original Message -----
From: Rick Klinge
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, January 06, 2013 11:35 AM
Subject: RE: [TS-520_820_530_830] WTB : Matched pair of New 6146B

http://www.rfparts.com/6146w.html

AC0TT
Rick

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of raysdz
Sent: Saturday, January 05, 2013 11:07 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] WTB : Matched pair of New 6146B

Hello, I am in need of a fresh matched pair of finals. TS-830S 6146B

Thanks

Ray WB8VDS

[Non-text portions of this message have been removed]

40508. Re: ts-820 if board question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 16:24:29 UTC
From: scooterb31
Topic: 40458 Message: 40508

Joe,

Thanks again. I had caught the error, but thanks for the update just in case. The radio is a TS-820 so no digital display. Seller thought it was broken (hi, hi). I am know waiting for a L15-0002-15 coil. This one is black and melted. Wonder if you might have an idea of why, or something to look for before installing replacement and possibly having same thing happen.

Scott
KCØOZC

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles wrote:
>
> Scott,
>
> Â Â IÂ made an error regarding one connector...it thought it right...but typed it wrong....to many email to go through.....
>
> Â Â the connector with the small grey colored cable....the small center conductor should go to the furthest LEFT pin...which is the RIF...not right as first posted.
>
> Â Â Â SORRY...hope you caught my error
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: Joseph Stiles
> To: "TS-520_820_530_830@yahoogroups.com"
> Sent: Saturday, January 5, 2013 9:12 PM
> Subject: Re: [TS-520_820_530_830] Re: ts-820 if board question
>
>
> Â
> Scott,
>
> Â No problem. Those boards can get kind of "busy" huh?....I have found myself taking hi-res digital pictures of boards and connectors...and makingÂ a printed copy to keep with my op/service manual(s) I just happened to have an 820 in front of me with the covers off when you posted your question.
>
> Â But do yourself a favor...keep any liquid away from the top of that rig!Â You spill, and it's going to run right into the

DG-1 (digital readout) unit (if installed) and your
> Â IF board and make your life crappy.
>
> Â
> 73Â Joe
> WB7UQU
>
> _____
> From: scooterb31 kc0ozc@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Friday, January 4, 2013 10:02 PM
> Subject: [TS-520_820_530_830] Re: ts-820 if board question
>
>
> Â
> Joe,
>
> Thanks for the response. I now understand my mistake, and thanks for pointing out the reference in the manual that I obviously missed.
>
> 73
> Scott
> KCÃ□OZC
> >
> >
> >
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40509. reducing power on ts-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 16:53:29 UTC
From: Robert George Nelson
Topic: 40509 Message: 40509

hi to all, since i joined the group and asked my question, i have had a great number of messages from members on the subject question,, infact more than i could possibly answer,, so i will take a short cut and say thank you to all members who have offered me advice. I have not gone onair with the rig yet, iam takeing it to my local club so the guys there can check that everything is working with the rig before i try any of the ideas that you guys have sent me,, if all is in order i hope to be on the air soon,, thanks again and a Happy New year to you all.

cheers, 73.

De Robert, 2I0RCN.

[Non-text portions of this message have been removed]

40511. Re: [TS-520_820_530_830] Turner Super Sidekick to a TS-820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 19:33:40 UTC
From: Ken Winterling
Topic: 40510 Message: 40511

KC2MRU,

Google is your friend. Look here: http://www.qsl.net/g4wpw/sidekick.html

Based on that diagram put the switch on the bottom of the Turner Super Sidekick into the RELAY position and connect the wires as follows:

mic WHITE to 820 PIN 1 (mic hi)
mic RED to 820 PIN 2 (PTT)
mic BLACK to 820 PIN 3 (PTT ground)
mic SHIELD to 820 PIN 4 PIN 4 (mic lo)

Ken
WA2LBI

On Sun, Jan 6, 2013 at 1:44 PM, kc2mru <KC2MRU@...> wrote:

> **
>
>
> Does anyone know what color wires get soldered to what pin numbers to wire
> a Turner Super Sidekick to a Kenwood TS-820 ? I have one of these hanging
> around the house , and I've read that they sound good on the TS-820 ... so
> I thought I'd try it out , but I can't find any wiring codes on line for it
> .
>
> Thanks
>

[Non-text portions of this message have been removed]

40512. KENWOOD HYBRID USER NET (January 7th, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 19:35:03 UTC
From: mvgilger
Topic: 40512 Message: 40512

The Saturday's net on 40 meter we had 20 stations checking with good band conditions. Out of those, there was 6 running TS-520(x), 4 running TS-530(x), 5 running TS-820(x), 1 running TS-830S. I was running a TS830. The rest were running non hybrids of one model or another.

The Sunday 20 meter net we had 19 stations checking in under good band conditions. Out of those, there were 4 running TS-520(x), 1 running TS-530(x), 2 running TS-820(x), 2 running TS-830S and 1 running 599 twins. I was running a non hybrid TS-830s. The rest were running non hybrids of one model or another.

We have been having several people checking in regularly with their TS-430, TS-440, and TS-940's, which of course is not a hybrid, although over 30+ years old.

If anyone would be interested in filling in as a net control station, please send me an email. Currently it's just myself, WB2KNR and WB0SGA. I would like to get several more. If we do, we can alternate so everyone might be on a 3-4 week rotation. It's a lot of fun and a good way to make sure you station is optimized.

For anyone that has not heard, we have a new web site that WB4HFN is hosting. He currently has a very nice site for Drake, Collins and Heathkit and now Kenwood Hybrids. Good quality manuals plus sale flyers and brochures will be found here, along with user supplied information for all Hybrids.

His URL is:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754 check-ins, Sunday total 563 check-ins

November 2012, Saturday's, net total = 47, Sundays total = 20
December 2012, Saturday's, net total = 74, Sunday's total = 70
January 2013, Saturday's, net total = 20, Sunday's total = 19 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

40513. Re: [TS-520_820_530_830] Re: ts-820 if board question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 19:39:59 UTC
From: Joseph Stiles
Topic: 40458 Message: 40513

Scott,

  Very good. What board is the coil in question on, and what is it listed as...there are silk screened markings...sometimes hard to see due to
     component placement.......ie: "what ever board" L-??

73 Joe
WB7UQU

From: scooterb31 <kc0ozc@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, January 6, 2013 8:24 AM
Subject: [TS-520_820_530_830] Re: ts-820 if board question

Joe,

Thanks again. I had caught the error, but thanks for the update just in case. The radio is a TS-820 so no digital display. Seller thought it was broken (hi, hi). I am know waiting for a L15-0002-15 coil. This one is black and melted. Wonder if you might have an idea of why, or something to look for before installing replacement and possibly having same thing happen.

Scott
KCØOZC

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles wrote:
>
> Scott,
>
> Â Â IÂ made an error regarding one connector...it thought it right...but typed it wrong....to many email to go through.....
>
> Â Â the connector with the small grey colored cable....the small center conductor should go to the furthest LEFT pin...which is the RIF...not right as first posted.
>
> Â Â Â SORRY...hope you caught my error
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> ---
> From: Joseph Stiles

> To: "TS-520_820_530_830@yahoogroups.com"
> Sent: Saturday, January 5, 2013 9:12 PM
> Subject: Re: [TS-520_820_530_830] Re: ts-820 if board question
>
>
> Â
> Scott,
>
> Â No problem. Those boards can get kind of "busy" huh?....I have found myself taking hi-res digital pictures of boards and connectors...and makingÂ a printed copy to keep with my op/service manual(s) I just happened to have an 820 in front of me with the covers off when you posted your question.
>
> Â But do yourself a favor...keep any liquid away from the top of that rig!Â You spill, and it's going to run right into the DG-1 (digital readout) unit (if installed) and your
> Â IF board and make your life crappy.
>
> Â
> 73Â Joe
> WB7UQU
>
> _____
> From: scooterb31 kc0ozc@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Friday, January 4, 2013 10:02 PM
> Subject: [TS-520_820_530_830] Re: ts-820 if board question
>
>
> Â
> Joe,
>
> Thanks for the response. I now understand my mistake, and thanks for pointing out the reference in the manual that I obviously missed.
>
> 73
> Scott
> KCÃ˜OZC
> >
> >
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40514. Re: [TS-520_820_530_830] TS-520 - heater ON, then loud "POP!"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 19:47:21 UTC
From: Joseph Stiles
Topic: 40422 Message: 40514

Mark,

Even with "bad" tubes, you will be able to set the "idle Ip." When you tune-up to full power...however small...what is the plate current? Set meter switch to Ip...and in CW mode...key rig... take reading. Sometimes you can get a rather high reading of the plate current...I have found that the cathode resistors could be out of value(high) as it is from these that the plate current that is indicate on the meter comes from. Ball-park...800+ volts and ABOUT 225-260mA of plate current at 100W output.

73 Joe
WB7UQU

_____
From: Mark L. Hammond <marklhammond@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, January 6, 2013 5:50 AM
Subject: Re: [TS-520_820_530_830] TS-520 - heater ON, then loud "POP!"

Thanks for the reply, Joe.

I'm using a Diamond SX-1000 meter. While not a Bird, I do have reasonable faith in it, even at the 5W full scale setting. I can see a something like 100-200mW or so that peaks and dips when the rig is tuned. It's less than 1W, anyhow...

Further, I can monitor the signal on my TS-2000x. It too shows a transmitted signal that is on frequency, stable, that peaks and dips when tuning up the rig (did that on 20M into a matched antenna). The audio even sounds just fine SSB.

As I recall,when toggling the transmit switch, the HV reads just under 900V (close to that). Idle Ip is set to 60mA per manual. Really, other than the tiny power output, as an operator I would think all is well!

So, in my rather uninformed opinion, it "acts like" the final tubes are bad. I printed off lots of pages last night, from the files section. One of them walks through how to check the tubes with an ohm meter. That is on my to-do list today.

What I clearly don't want to do is swap tubes and hear a loud POP again ;)

I appreciate everybody's help!

73,

Mark N8MH

At 08:58 PM 1/5/2013 -0800, you wrote:
>
>
>Mark,

>
>Â Your final tubes may have totally failed. Is what ever watt meter you are using is it KNOWN good/accurate? IF as you say it "tunes up ok but only puts out a fraction
>of a watt" do you have good HV AND proper Ip at key down? And YES, the newer resistors are really physically smaller than the "old style." Take a look a modern capacitors!You should always stick with the correct ohm valueÂ AND watt rating when dealing with the resistors in the HV, rectifier, and the final amplifier tube circuit board. They "act" as a fuse...hopefully "popping" and protecting the tubes..and some other stuff. Â Ken Kemski..Â k4eaa.com Â Â has a good section on this.
>One of the main reasons that the cathode resistors fail is due to one or both final amp tubes failing for what ever reason. I suggest that you obtain a known good set of finals and a good driver to keep for testing/diagnostic purposes. I still think you are going to need new final amp tubes.
>
>Â
>73Â Joe
>WB7UQU
>
>_____
>From: Mark L. Hammond marklhammond@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Saturday, January 5, 2013 8:27 AM
>Subject: Re: [TS-520_820_530_830] TS-520 - heater ON, then loud "POP!"
>
>
>Â
>Hello Again,
>
>Well, so far, only 1 reply off list. I'll try again, with some updated information about my TS-520.
>
>Last night I did another visual inspection of the radio and saw that two 10 ohm resistors (pretty hefty--a watt or two rating?) were cracked and needed replacing; one literally fell in half with a gentle touch. Each final tube socket had one 10 ohm resistor connected to ground. I replaced them both with even larger old style 10 ohm resistors (it's what I had on hand).
>
>In testing the rig, it appears to "tune" up OK, and all appears normal except that it's only putting out a fraction of a watt or so. I double checked the SG switch on the back and it is UP. High voltage looks OK (about 900V as a I recall) and drops a bit when the heater switch is turned ON; no more popping has been heard.
>
>So based on the single loud POP when I turned the heater switch ON--is likely to be the high voltage caps? Or any other suggestions on what to inspect/test/replace next? I can tell that getting th0se out of this old rig is going to be a real challenge...if it was really easy, I'd have done it already...hi hi.
>
>I have spare tubes (driver and finals) but don't want to just swap them out...my hunch is that it's something else.
>

>Again, I'll appreciate some advice :)
>
>73,
>
>Mark N8MH
>
>At 12:27 AM 1/3/2013 +0000, you wrote:
>>
>>
>>Hi All,
>>
>>I have a TS-520 that I bought over a year ago. It was in great operational condition until recently. After a month or two of inactivity (had just been using it as a receiver, heaters off), I turned the heaters ON and soon after (few seconds??) a single loud POP sound was heard. I turned it off and it's been sitting there for weeks...
>>
>>I know---I need to get brave and plug it back in to see if I can see any HV on the meter, etc. I didn't look before shutting it down. But for now, I'm wanting a bit more info before I power it back up...
>>
>>At first I thought maybe a capacitor had exploded, but I can't see that with a visual inspection (and the spaghetti wiring makes me nervous about poking around too much). I did a bit of searching on the group here, and saw mention of "cathode resistor" but honestly, I don't even know where to look for that (even after looking over the service manual).
>>
>>Any suggestions on what is the "likely suspect?" The old rigs aren't my forte, but maybe I can fix it with a bit of guidance from this informed group!
>>
>>Thanks in advance,
>>
>>Mark N8MH
>>
>>
>
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40516. Re: [TS-520_820_530_830] Re: Turner Super Sidekick to a TS-820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 20:14:42 UTC
From: Ken Winterling
Topic: 40510 Message: 40516

Excellent!

Ken
WA2LBI

On Sun, Jan 6, 2013 at 3:07 PM, kc2mru <KC2MRU@...> wrote:

> **
>
>
> Thank you Ken ... that seemed to do the trick :)
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Ken Winterling wrote:
> >
> > KC2MRU,
> >
> > Google is your friend. Look here: http://www.qsl.net/g4wpw/sidekick.html
> >
> > Based on that diagram put the switch on the bottom of the Turner Super
> > Sidekick into the RELAY position and connect the wires as follows:
> >
> > mic WHITE to 820 PIN 1 (mic hi)
> > mic RED to 820 PIN 2 (PTT)
> > mic BLACK to 820 PIN 3 (PTT ground)
> > mic SHIELD to 820 PIN 4 PIN 4 (mic lo)
> >
> > Ken
> > WA2LBI
> >
> >
> > On Sun, Jan 6, 2013 at 1:44 PM, kc2mru wrote:
> >
> > > **
>
> > >
> > >
> > > Does anyone know what color wires get soldered to what pin numbers to
> wire
> > > a Turner Super Sidekick to a Kenwood TS-820 ? I have one of these
> hanging
> > > around the house , and I've read that they sound good on the TS-820
> ... so
> > > I thought I'd try it out , but I can't find any wiring codes on line
> for it
> > > >

> > > Thanks
>

[Non-text portions of this message have been removed]

40517. Re: KENWOOD HYBRID USER NET (January 7th, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 20:55:29 UTC
From: Brian Allen
Topic: 40512 Message: 40517

This is the second saturday in a row that I have attempted to check in with no success. Everything seems to be working ok, Mark just never hears me. One time I was running an amp. Maybe will get in next time.

Brian nc

[Non-text portions of this message have been removed]

40518. Re: ts-820 if board question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 20:49:54 UTC
From: scooterb31
Topic: 40458 Message: 40518

Joe,

Sorry, I should have been more specific.

It's listed in the main parts list as part number L15-0002-15, Choke coil (low frequency). The number is also silk screened on the coil itself. It is mounted directly to the chassis, top side, behind DG-1 unit (if installed) and ahead of C23 and C24 (topside, left and rear when looking from front of unit). When I searched the number on internet I get references to the TS-520 power supply choke. Just wondering if you have any thoughts on this.

Thanks again,
Scott
KCØOZC

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles wrote:
>
> Scott,
>
> Â Very good. What board is the coil in question on, and what is it listed as...there are silk screened markings...sometimes hard to see due to
> Â Â Â Â component placement.....ie: "what ever board" L-??
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: scooterb31
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sunday, January 6, 2013 8:24 AM
> Subject: [TS-520_820_530_830] Re: ts-820 if board question
>
>
> Â
> Joe,
>
> Thanks again. I had caught the error, but thanks for the update just in case. The radio is a TS-820 so no digital display. Seller thought it was broken (hi, hi). I am know waiting for a L15-0002-15 coil. This one is black and melted. Wonder if you might have an idea of why, or something to look for before installing replacement and possibly having same thing happen.
>
> Scott

> KCÃ□OZC
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles wrote:
> >
> > Scott,
> >
> > Ã□Â Ã□Â IÃ□Â made an error regarding one connector...it thought it right...but typed it wrong....to many email to go through.....
> >
> > Ã□Â Ã□Â the connector with the small grey colored cable....the small center conductor should go to the furthest LEFT pin...which is the RIF...not right as first posted.
> >
> > Ã□Â Ã□Â Ã□Â SORRY...hope you caught my error
> >
> >
> > Ã□Â
> > 73Ã□Â Joe
> > WB7UQU
> >
> >
> >
> > _____
> > From: Joseph Stiles
> > To: "TS-520_820_530_830@yahoogroups.com"
> > Sent: Saturday, January 5, 2013 9:12 PM
> > Subject: Re: [TS-520_820_530_830] Re: ts-820 if board question
> >
> >
> > Ã□Â
> > Scott,
> >
> > Ã□Â No problem. Those boards can get kind of "busy" huh?....I have found myself taking hi-res digital pictures of boards and connectors...and makingÃ□Â a printed copy to keep with my op/service manual(s) I just happened to have an 820 in front of me with the covers off when you posted your question.
> >
> > Ã□Â But do yourself a favor...keep any liquid away from the top of that rig!Ã□Â You spill, and it's going to run right into the DG-1 (digital readout) unit (if installed) and your
> > Ã□Â IF board and make your life crappy.
> >
> > Ã□Â
> > 73Ã□Â Joe
> > WB7UQU
> >
> > _____
> > From: scooterb31 kc0ozc@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Friday, January 4, 2013 10:02 PM
> > Subject: [TS-520_820_530_830] Re: ts-820 if board question
> >

> >
> > Ã□Â
> > Joe,
> >
> > Thanks for the response. I now understand my mistake, and thanks for pointing out the reference in the manual that I obviously missed.
> >
> > 73
> > Scott
> > KCÃ□Ë□OZC
> > >
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40519. Re: [TS-520_820_530_830] TS-520 - heater ON, then loud "POP!"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 22:27:50 UTC
From: zen18531@zen.co.uk
Topic: 40422 Message: 40519

The Basic Radio Course 1951 book can be bought in soft copy (.pdf) format from seller Ke3gk on ebay.com for $8.99 USD.

item number 200692897318

The seller sends on CD ROM for nominal postage, or will provide via web download. I bought one today, and had it within minutes. Highly recommended.

I also found a couple of sellers for the ARRL handbook, I bought the 1960 and 1965 (off top of head) copies, from different sellers, both willing to ship internationally.

Hope this helps
Alan

-- Original Message --
From: Mike <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Send: Sat, 05 Jan 2013 14:33:29 -0600
Subject: Re: [TS-520_820_530_830] TS-520 - heater ON, then loud "POP!"

Mark,

The BASIC RADIO COURSE by John T. Frye is about the best, easy to
understand, book on basic and intro to advanced electronics I have
found. It's written in easy to understand text.

> >I also recommend obtaining the book
> >
> >BASIC RADIO COURSE
> >Author: John T. Frye
> >
> >and study it from cover to cover. This book is out of print but quite
> >often can be found on Amazon.com (used), at used book stores, or eBay.
> >Amazon.com currently has one (used) available for $4.99 plus shipping.
> >This book is written in simple text withpictorial examples of subjects
> >covered along with a few questions at the end of each chapter to ensure
> >you understand the chapter's subject matter.
> >
> >These books contain an wealth of information.

40520. Re: [TS-520_820_530_830] Re: ts-820 if board question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-06 23:37:34 UTC
From: Joseph Stiles
Topic: 40458 Message: 40520

Mark,

No problem. I know what you speak of. I do not have much expertise regarding this choke. I'll take a look at my schematic. Maybe Mike...w5rkl....can lend a hand
  with this one...he and others have more knowledge on this than I. I can say, that it is part of the 5 volt stable power supply for the "digital display" & I think also for the "counter assembly unit" I can not say why it may be discolored...unless there was a DG-1 installed at one time...and this failed. I have seen a non "S" model have the DG-1 installed by owner/shop post production...Is this possible?

73 Joe
WB7UQU

From: scooterb31 <kc0ozc@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, January 6, 2013 12:49 PM
Subject: [TS-520_820_530_830] Re: ts-820 if board question

Joe,

Sorry, I should have been more specific.

It's listed in the main parts list as part number L15-0002-15, Choke coil (low frequency). The number is also silk screened on the coil itself. It is mounted directly to the chassis, top side, behind DG-1 unit (if installed) and ahead of C23 and C24 (topside, left and rear when looking from front of unit). When I searched the number on internet I get references to the TS-520 power supply choke. Just wondering if you have any thoughts on this.

Thanks again,
Scott
KCØOZC

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles wrote:
>
> Scott,
>
> Â Very good. What board is the coil in question on, and what is it listed as...there are silk screened markings...sometimes hard to see due to
> Â Â Â Â component placement.......ie: "what ever board" L-??
>
>
> Â
> 73Â Joe
> WB7UQU
>
>

>
> _____
> From: scooterb31
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sunday, January 6, 2013 8:24 AM
> Subject: [TS-520_820_530_830] Re: ts-820 if board question
>
>
> Â
> Joe,
>
> Thanks again. I had caught the error, but thanks for the update just in case. The radio is a TS-820 so no digital display. Seller thought it was broken (hi, hi). I am know waiting for a L15-0002-15 coil. This one is black and melted. Wonder if you might have an idea of why, or something to look for before installing replacement and possibly having same thing happen.
>
> Scott
> KCÃ˜OZC
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles wrote:
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> > Scott,
> >
> > Ã‚Â Ã‚Â IÃ‚Â made an error regarding one connector...it thought it right...but typed it wrong....to many email to go through.....
> >
> > Ã‚Â Ã‚Â the connector with the small grey colored cable....the small center conductor should go to the furthest LEFT pin...which is the RIF...not right as first posted.
> >
> > Ã‚Â Ã‚Â Ã‚Â SORRY...hope you caught my error
> >
> >
> > Ã‚Â
> > 73Ã‚Â Joe
> > WB7UQU
> >
> >
> >
> > _____
> > From: Joseph Stiles
> > To: "TS-520_820_530_830@yahoogroups.com"
> > Sent: Saturday, January 5, 2013 9:12 PM
> > Subject: Re: [TS-520_820_530_830] Re: ts-820 if board question
> >
> >
> > Ã‚Â
> > Scott,
> >
> > Ã‚Â No problem. Those boards can get kind of "busy" huh?....I have found myself taking

hi-res digital pictures of boards and connectors...and makingÃ‚Â a printed copy to keep with my op/service manual(s) I just happened to have an 820 in front of me with the covers off when you posted your question.
> >
> > Ã‚Â But do yourself a favor...keep any liquid away from the top of that rig!Ã‚Â You spill, and it's going to run right into the DG-1 (digital readout) unit (if installed) and your
> > Ã‚Â IF board and make your life crappy.
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> > 73Ã‚Â Joe
> > WB7UQU
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> > _____
> > From: scooterb31 kc0ozc@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Friday, January 4, 2013 10:02 PM
> > Subject: [TS-520_820_530_830] Re: ts-820 if board question
> >
> >
> > Ã‚Â
> > Joe,
> >
> > Thanks for the response. I now understand my mistake, and thanks for pointing out the reference in the manual that I obviously missed.
> >
> > 73
> > Scott
> > KCÃƒËœOZC
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40521. Re: [TS-520_820_530_830] Re: KENWOOD HYBRID USER NET (January 7th, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-07 02:20:03 UTC
From: Jim Lamanteer
Topic: 40512 Message: 40521

BRIAN IF U WANT SEND ME AN E-MAIL OFF LINE ILL SET A TIME WITH U WE CAN TRY TO HAVE A QSO SEE HOW YOUR STUFF IS WORKING ILL USE MY NEW 830. JIMMY 73`S

From: Brian Allen <bsa0791@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, January 6, 2013 3:55 PM
Subject: [TS-520_820_530_830] Re: KENWOOD HYBRID USER NET (January 7th, update)

This is the second saturday in a row that I have attempted to check in with no success. Everything seems to be working ok, Mark just never hears me. One time I was running an amp. Maybe will get in next time.

Brian nc

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[Non-text portions of this message have been removed]

40522. Re: yk-88s1 filter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-07 03:14:24 UTC
From: MountainMike
Topic: 40491 Message: 40522

It will probably "work", but what advantage will it give you? The 820s already has a YK-88s filter installed!

Have you read the manual yet?

73,
Mike wb6csh

--- In TS-520_820_530_830@yahoogroups.com, "va3ied" wrote:
>
> I just purchased the above noted filter on spec...will it work with my 820s ?
>
> cheers
> scott va3ied
>

40523. Re: WTB : Matched pair of New 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-07 03:32:55 UTC
From: MountainMike
Topic: 40504 Message: 40523

Hello Ray,

Regardless of what some people say or think, you do NOT need a set of "matched" 6146Bs for your hybrid. The finals are connected in PARALLEL, not push-pull. Just be certain to install the same version of the 6146 in BOTH final sockets. That is, do NOT mix 6146A with 6146B with 6146W versions at the same time!

I have found a small difference between RCA, ECG-Philips, and Matsushita (original 2001 version of 6146B) brands during neutralization. That difference has caused me no problems up to the present.

I bought my 6146B tubes online from various sellers on eBay for less than $20.00 per pair, delivered. All operate fine with no "light show" of any kind. Power out is conservative at 90-115 watts, depending upon the band and tube set I have in at the time. So far, the original Matsushitas have the best power out, but that difference is NOT significant.

73,
Mike wb6csh

--- In TS-520_820_530_830@yahoogroups.com, "raysdz" wrote:
>
> Hello, I am in need of a fresh matched pair of finals. TS-830S 6146B
>
> Thanks
>
> Ray WB8VDS
>

40524. RE: [TS-520_820_530_830] TS830 with no output on 10m

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-07 08:12:31 UTC
From: fpath fpath
Topic: 40439 Message: 40524

G'day,

Trouble shooting the 830s with no output on 10m

After having done all the basic checks of relay tapping, bandswitch wiggling, molex connector wiggling is measuring RF drive levels.
When the radio has low or now RF power, it should be standard practice to run TX Level Diagram. If you do not have approx 48 rf volts at the control grids of the 6146 finals it makes no difference what is connected to the other side of the plate blocking capacitor. S22 and padder caps can be in perfect condition and will have no RF output if there is no RF drive at 6146 control grids

The more important parameter is a minimum VCO RF level of approx 1.0 rf volts. VCO is the LO signal applied along with the TIF signal to Transmit Mixer to produce the Transmit output RF drive signal. Measure TP-4 with a standard RF probe and VTVM and see if you have approx 3.0 RF volts of transmit drive. If you do, then you know VCO signal level is adequate on 10 meters. No need to lift any leads?

As Mike suggested you need to measure VCO signal level at TP-3 on RF board.

At this stage I would reland leads and measure VCO signal level at TP-3 to ensure there is 1.0 rf volts as Mike directed. I suspect it is fine. Use a RF Probe (must have 3 diodes) or O-scope and measure RF drive at 6146 finals control grids. 48 rms volts = 48 x 2.82 = 135 rf volts peak to peak on scope. Caution: You cannot use a standard single germanium diode Rf probe to measure Plate of Driver tube or grids of finals. Voltage level will burn out his diode!

If you have good drive at finals control grids (which is doubtful then you have no ALC indication) then we will start looking at S22, padder capacitors and other PA components.

Hopefully this will help

73s
Dave
VK5PDL

[Non-text portions of this message have been removed]

40525. Re: TS-520 - heater ON, then loud "POP!"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-07 13:38:22 UTC
From: john
Topic: 40422 Message: 40525

Mike refers to the BASIC RADIO COURSE book. You can get it for free to look at/study by getting your library to do a out of the library system loan from another library system. Granted you won"t get to keep the book forever but will beat the high prices I saw on Amazon this morning. I use this way of looking at books that are not available in our library system with great success all the time. Hope this will be of help. John K5IRK
--- In TS-520_820_530_830@yahoogroups.com, Mike wrote:
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> > >and study it from cover to cover. This book is out of print but quite
> > >often can be found on Amazon.com (used), at used book stores, or eBay.
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> > >> Again, I'll appreciate some advice :)
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40526. Manual Typo

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-07 14:22:33 UTC
From: roberteleazer@rocketmail.com
Topic: 40526 Message: 40526

I have been working on a TS-520 that has some serious power supply problems - as in smoke coming from the rectifier unit board. I am replacing the entire rectifier unit board including new caps and some nerw resistors, all of the resistors and caps on the HV board, and all of the power supply capacitors on the chassis

In this process I became aware of a significant typo in the TS-520 Service Manual. Two of the less obvious caps are C27 and C28, which are in a back bottom corner of the chassis and are entirely enclosed by other boards. They are two section 22uf caps that are described in the parts list as "45WV."

But examination of the schematic reveals that those caps are actually 450V caps, not 45V!

Good Luck!

Robert
WB5WSV

40527. Re: [TS-520_820_530_830] Re: TS-520 - heater ON, then loud "POP!"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-07 15:56:23 UTC
From: Mike
Topic: 40422 Message: 40527

John,

I wasn't aware of this. It sounds like an excellent avenue to look for books not held at a local library.

The last used hard copy Amazon had showed a price of $4.99 being sold by "saveontextbooks1". I just checked it again and it's still available at Amazon.com.

http://www.amazon.com/gp/offer-listing/B001KUOQOU/ref=dp_olp_used/175-5516546-9988234?ie=UTF8&condition=used

I also recommend those who plan on servicing their hybrids to obtain some test equipment. Quite often hams only have a DVM and while a DVM will work to measure voltages and resistance, it won't work very well when performing alignment. A few suggestions on test gear are:

/*VTVM *//*s*/
Heathkt IM-11, IM-18, Knightkit 232 will work well for servicing the hybrids and other gear.

For portable work, where power is not available, I use the Heathkit IM-17 solid state VTVM. The IM-17 requires 2 batteries, a 1.5VDC battery for measuring resistance and a 8.4VDC battery for the rest of the meter circuitry. The 8.4VDC battery I use is the /*Duracell PROCELL DA146G*/ 8.4 volt battery. They are currently available on eBay under #290759131468 for $1.49 (Buy it now) plus $1.69 shipping (new) or at various other websites. I bought 2 of them. As long as the seal container is not broken the battery has a long shelf life. I don't recommend using a 9 volt battery unless the "measured" battery voltage is less than 9 volts or equal to 8.4 volt. I have no affiliation with the eBay seller's ad (#290759131468) mentioned above. It's only mentioned as a source for the 8.4 volt battery.

/*VTVM probes
*/If the probes not included with the VTVM, they can be constructed rather easily and that includes the RF Probe.

/*AC VTVM*/
Heathkit AV2, AV3 (the AV3 is basically the same as the AV2 except for cosmetics), IM-21 is another AC meter that's similar to the AV2 and AV3.

/*Frequency Counter */
Heathkit IM-4100 (up to 30Mhz), IM-2410 (10Hz to 225Mhz, Sinometer VC-2000 (2 separate input sockets, one from 10Hz to 50Mhz and the other from 50mhz to 2.4Ghz) are good choices. I use both, IM-4100 and Sinometer VC-2000. The Sinometer is also sold under "Victor VC-2000".

The "Victor" name is the exact same counter as the "Sinometer". The VC-2000 has a crystal testing feature the others don't have. The VC-2000 will test and display the frequency of "Fundamental" frequency crystals. Fundamental crystals are typically crystals with a frequency of 20Mhz or less. Overtone crystals can be tested but the counter will only display the "Fundmental" frequency of the crystal. There are some DDS counter kits, especially those that come from China, that may appear to be okay but many, not all of them, have a low maximum input signal level.

/*Oscilloscope*/
E&L INSTRUMENTS is a dual trace scope for monitoring signals at 20Mhz or less. I use mine quite a bit. If you want a 50Mhz dual trace scope then the price will be significantly higher. There are other scopes that are available for cheap prices but you should pay attention to the condition. A scope that's USED and the seller says it powers up okay, may not work properly. Unless you know for sure whether the scope is working properly, not just that it powers up, I would not recommend buying a used scope. Scope probes quite often do not come with used scopes but they can be found on eBay and other website depending on the quality of the probe. Don't buy cheap $10 scope probes, they typically don't last very long. The $10 probe will work but quite often I have found the probe's body construction is cheap and falls apart quickly. I recently replaced both of the $10 probes with higher quality probes, so be careful when buying probes.

/*Signal Generator*/
Heathkit IG-8 and the IG-102 both work well at lower HF frequency but I recommend a frequency counter be connected in parallel with the generator's output to keep the generator on frequency. The Heathkit IG-42 is the "Laboratory" version which may be okay, I haven't owned or use one so I can't comment on it. The military AN/URM-25 is an excellent generator but those in very good to excellent condition can be expensive. I bought mine from Fair Radio Sales in Lima Ohio. I think I paid $135 for it plus shipping. The URM-25 is big and heavy so shipping cost will be expensive. I recommend a frequency counter be used in parallel with the output to ensure the counter's on frequency. The URM-25 was in use by the Navy when I first joined back in April of 1967 so it's an old signal generator. It does not have a sweep feature. If your servicing requires a sweep generator then the URM-25 and Heathkit generators mentioned here are not for you, they don't sweep. You can "manually" sweep the frequency using these generators.

There are some inexpensive DDS generators, some contain the "sweep" feature, being sold on eBay by sellers from China. I have a few non-sweep versions here I purchased just to evaluate them. Most of them operate on voltages between 9VDC and 12VDC. Most have digital displays and some even have an input to allow the generator to function as a frequency counter. Their prices vary quite a bit and if the seller is from China it could take as much as 3 weeks to a month or more to get the item.

/*Function Generator*/
They are similar to an RF signal generator mentioned above but include different output wave forms such as Sine, Square, and Saw Tooth wave forms. Many have a frequency upper limit between 4 and 5Mhz. Some may have a digital display but if the one you are considering doesn't have a digital display, I recommend a frequency counter be connected in parallel with the output so you set the generator to the correct frequency. The Function Generator is a good item to have when troubleshooting "audio" circuits.

Sorry for being long but thought I would provide some suggestions on test gear hams may consider obtaining in order to service their hybrids and other ham gear. Whether you purchase or use any of the suggestions above is entirely up to you. Yes there are higher quality, more expensive, items you can buy. Again, it's entirely up to you what brand and price you are willing to pay for test gear.

73s
Mike
W5RKL

On 1/7/2013 7:38 AM, john wrote:
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40528. Re: [TS-520_820_530_830] WTB : Matched pair of New 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-07 17:06:44 UTC
From: John Davidson
Topic: 40504 Message: 40528

You don't need "MATCHED", indicating same emission curent test results etc.
All a parallel tube circuit needs is the same letter suffix and tubes that work.

From: raysdz <raysdz@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, January 6, 2013 12:06 AM
Subject: [TS-520_820_530_830] WTB : Matched pair of New 6146B

Hello, I am in need of a fresh matched pair of finals. TS-830S 6146B

Thanks

Ray WB8VDS

[Non-text portions of this message have been removed]

40529. Re: [TS-520_820_530_830] WTB : Matched pair of New 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-07 20:40:01 UTC
From: Mike
Topic: 40504 Message: 40529

Ray,

What makes you think you need "matched pair of finals?" Were you told by
someone you should use matched tubes or did you read it somewhere?

73s
Mike
W5RKL

On 1/7/2013 11:06 AM, John Davidson wrote:
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> etc.
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> _____
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40530. Re: [TS-520_820_530_830] WTB : Matched pair of New 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-07 21:39:55 UTC
From: John Davidson
Topic: 40504 Message: 40530

If he read it on lthe internet , it must be true :D :D

From: Mike <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, January 7, 2013 3:40 PM
Subject: Re: [TS-520_820_530_830] WTB : Matched pair of New 6146B

Ray,

What makes you think you need "matched pair of finals?" Were you told by
someone you should use matched tubes or did you read it somewhere?

73s
Mike
W5RKL

On 1/7/2013 11:06 AM, John Davidson wrote:
>
> You don't need "MATCHED", indicating same emission curent test results
> etc.
> All a parallel tube circuit needs is the same letter suffix and tubes
> that work.
>
> ---
> From: raysdz mailto:raysdz%40yahoo.com >
> To: mailto:TS-520_820_530_830%40yahoogroups.com
>
> Sent: Sunday, January 6, 2013 12:06 AM
> Subject: [TS-520_820_530_830] WTB : Matched pair of New 6146B
>
>
> Hello, I am in need of a fresh matched pair of finals. TS-830S 6146B
>
> Thanks
>
> Ray WB8VDS
>
> [Non-text portions of this message have been removed]
>
>

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40531. Re: [TS-520_820_530_830] WTB : Matched pair of New 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-07 22:34:28 UTC
From: Mike
Topic: 40504 Message: 40531

Yep, we all know they can't post anything on the Internet unless it's
true...hehehe
On 1/7/2013 3:39 PM, John Davidson wrote:
>
> If he read it on lthe internet , it must be true :D :D
>
> _____
> From: Mike w5rkl@... <mailto:w5rkl%40yahoo.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Monday, January 7, 2013 3:40 PM
> Subject: Re: [TS-520_820_530_830] WTB : Matched pair of New 6146B
>
>
> Ray,
>
> What makes you think you need "matched pair of finals?" Were you told by
> someone you should use matched tubes or did you read it somewhere?
>
> 73s
> Mike
> W5RKL
>
> On 1/7/2013 11:06 AM, John Davidson wrote:
> >
> > You don't need "MATCHED", indicating same emission curent test results
> > etc.
> > All a parallel tube circuit needs is the same letter suffix and tubes
> > that work.
> >
> > _____
> > From: raysdz mailto:raysdz%40yahoo.com >
> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> >
> > Sent: Sunday, January 6, 2013 12:06 AM
> > Subject: [TS-520_820_530_830] WTB : Matched pair of New 6146B
> >
> >
> > Hello, I am in need of a fresh matched pair of finals. TS-830S 6146B
> >
> > Thanks
> >
> > Ray WB8VDS
> >
> > [Non-text portions of this message have been removed]

> >
> >
>
> [Non-text portions of this message have been removed]
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

40532. Re: [TS-520_820_530_830] Re: TS-520 - heater ON, then loud "POP!"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-07 22:53:07 UTC
From: Mark L. Hammond
Topic: 40422 Message: 40532

More great information--thanks John and Mike. I ordered the book below :)

More good information about TS-520 in the next post!

73,

Mark N8MH

At 09:56 AM 1/7/2013 -0600, you wrote:
>
>
>John,
>
>I wasn't aware of this. It sounds like an excellent avenue to look for
>books not held at a local library.
>
>The last used hard copy Amazon had showed a price of $4.99 being sold by
>"saveontextbooks1". I just checked it again and it's still available at
>Amazon.com.
>
><http://www.amazon.com/gp/offer-listing/B001KUOQOU/ref=dp_olp_used/175-5516546-9988234?ie
=UTF8&condition=used>http://www.amazon.com/gp/offer-listing/B001KUOQOU/ref=dp_olp_used/175
-5516546-9988234?ie=UTF8&condition=used
>
>I also recommend those who plan on servicing their hybrids to obtain
>some test equipment. Quite often hams only have a DVM and while a DVM
>will work to measure voltages and resistance, it won't work very well
>when performing alignment. A few suggestions on test gear are:
>
>/*VTVM *//*s*/
>Heathkt IM-11, IM-18, Knightkit 232 will work well for servicing the
>hybrids and other gear.
>
>For portable work, where power is not available, I use the Heathkit
>IM-17 solid state VTVM. The IM-17 requires 2 batteries, a 1.5VDC battery
>for measuring resistance and a 8.4VDC battery for the rest of the meter
>circuitry. The 8.4VDC battery I use is the /*Duracell PROCELL DA146G*/
>8.4 volt battery. They are currently available on eBay under
>#290759131468 for $1.49 (Buy it now) plus $1.69 shipping (new) or at
>various other websites. I bought 2 of them. As long as the seal
>container is not broken the battery has a long shelf life. I don't
>recommend using a 9 volt battery unless the "measured" battery voltage
>is less than 9 volts or equal to 8.4 volt. I have no affiliation with
>the eBay seller's ad (#290759131468) mentioned above. It's only
>mentioned as a source for the 8.4 volt battery.
>

>/*VTVM probes
>*/If the probes not included with the VTVM, they can be constructed
>rather easily and that includes the RF Probe.
>
>/*AC VTVM*/
>Heathkit AV2, AV3 (the AV3 is basically the same as the AV2 except for
>cosmetics), IM-21 is another AC meter that's similar to the AV2 and AV3.
>
>/*Frequency Counter */
>Heathkit IM-4100 (up to 30Mhz), IM-2410 (10Hz to 225Mhz, Sinometer
>VC-2000 (2 separate input sockets, one from 10Hz to 50Mhz and the other
>from 50mhz to 2.4Ghz) are good choices. I use both, IM-4100 and
>Sinometer VC-2000. The Sinometer is also sold under "Victor VC-2000".
>The "Victor" name is the exact same counter as the "Sinometer". The
>VC-2000 has a crystal testing feature the others don't have. The VC-2000
>will test and display the frequency of "Fundamental" frequency crystals.
>Fundamental crystals are typically crystals with a frequency of 20Mhz or
>less. Overtone crystals can be tested but the counter will only display
>the "Fundmental" frequency of the crystal. There are some DDS counter
>kits, especially those that come from China, that may appear to be okay
>but many, not all of them, have a low maximum input signal level.
>
>/*Oscilloscope*/
>E&L INSTRUMENTS is a dual trace scope for monitoring signals at 20Mhz or
>less. I use mine quite a bit. If you want a 50Mhz dual trace scope then
>the price will be significantly higher. There are other scopes that are
>available for cheap prices but you should pay attention to the
>condition. A scope that's USED and the seller says it powers up okay,
>may not work properly. Unless you know for sure whether the scope is
>working properly, not just that it powers up, I would not recommend
>buying a used scope. Scope probes quite often do not come with used
>scopes but they can be found on eBay and other website depending on the
>quality of the probe. Don't buy cheap $10 scope probes, they typically
>don't last very long. The $10 probe will work but quite often I have
>found the probe's body construction is cheap and falls apart quickly. I
>recently replaced both of the $10 probes with higher quality probes, so
>be careful when buying probes.
>
>/*Signal Generator*/
>Heathkit IG-8 and the IG-102 both work well at lower HF frequency but I
>recommend a frequency counter be connected in parallel with the
>generator's output to keep the generator on frequency. The Heathkit
>IG-42 is the "Laboratory" version which may be okay, I haven't owned or
>use one so I can't comment on it. The military AN/URM-25 is an excellent
>generator but those in very good to excellent condition can be
>expensive. I bought mine from Fair Radio Sales in Lima Ohio. I think I
>paid $135 for it plus shipping. The URM-25 is big and heavy so shipping
>cost will be expensive. I recommend a frequency counter be used in
>parallel with the output to ensure the counter's on frequency. The
>URM-25 was in use by the Navy when I first joined back in April of 1967

>so it's an old signal generator. It does not have a sweep feature. If
>your servicing requires a sweep generator then the URM-25 and Heathkit
>generators mentioned here are not for you, they don't sweep. You can
>"manually" sweep the frequency using these generators.
>
>There are some inexpensive DDS generators, some contain the "sweep"
>feature, being sold on eBay by sellers from China. I have a few
>non-sweep versions here I purchased just to evaluate them. Most of them
>operate on voltages between 9VDC and 12VDC. Most have digital displays
>and some even have an input to allow the generator to function as a
>frequency counter. Their prices vary quite a bit and if the seller is
>from China it could take as much as 3 weeks to a month or more to get
>the item.
>
>/*Function Generator*/
>They are similar to an RF signal generator mentioned above but include
>different output wave forms such as Sine, Square, and Saw Tooth wave
>forms. Many have a frequency upper limit between 4 and 5Mhz. Some may
>have a digital display but if the one you are considering doesn't have a
>digital display, I recommend a frequency counter be connected in
>parallel with the output so you set the generator to the correct
>frequency. The Function Generator is a good item to have when
>troubleshooting "audio" circuits.
>
>Sorry for being long but thought I would provide some suggestions on
>test gear hams may consider obtaining in order to service their hybrids
>and other ham gear. Whether you purchase or use any of the suggestions
>above is entirely up to you. Yes there are higher quality, more
>expensive, items you can buy. Again, it's entirely up to you what brand
>and price you are willing to pay for test gear.
>
>73s
>Mike
>W5RKL
>
>On 1/7/2013 7:38 AM, john wrote:
>>
>>
>> Mike refers to the BASIC RADIO COURSE book. You can get it for free to
>> look at/study by getting your library to do a out of the library
>> system loan from another library system. Granted you won"t get to keep
>> the book forever but will beat the high prices I saw on Amazon this
>> morning. I use this way of looking at books that are not available in
>> our library system with great success all the time. Hope this will be
>> of help. John K5IRK
>> --- In <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>> , Mike wrote:
>> >
>> > Mark,
>> >

>> > The BASIC RADIO COURSE by John T. Frye is about the best, easy to
>> > understand, book on basic and intro to advanced electronics I have
>> > found. It's written in easy to understand text.
>> >
>> > The ARRL handbooks are good but the current editions are written, in my
>> > opinion, in text that might be a bit more difficult to understand.
>> > That's why I recommended the earlier editions, mid 60s.
>> >
>> > What you can do is purchase a VTVM on eBay, most are inexpensive and
>> > most of them work. In many cases all that's needed is to replace the
>> > 1.5VDC battery and clean it up. Some VTVMs don't come with the probes
>> > but the probes are easy to make. You can purchase some resistors and
>> a 9
>> > volt battery and perform some of the simple experiments using ohms law,
>> > calculating current (I), voltage (E), and Resistance (R). You will use
>> > that VTVM more than you think, especially during alignment where an
>> > analog meter performs much better than a DVM.
>> >
>> >
>> >
>> > 73s
>> > Mike
>> > W5RKL
>> >
>> >
>> >
>> >
>> >
>> >
>> >
>> > On 1/5/2013 1:21 PM, Mark L. Hammond wrote:
>> > >
>> > > Mike,
>> > >
>> > > Thanks for the sage advice. Indeed, I'm at the reading stage. The
>> > > specific resources mentioned should prove useful.
>> > >
>> > > 73,
>> > >
>> > > Mark N8MH
>> > >
>> > > At 01:08 PM 1/5/2013 -0600, you wrote:
>> > > >
>> > > >
>> > > >The "Heater" switch has nothing to do with the HV filter capacitors
>> > > >failing.The sole purpose of the "Heater" switch is to apply filament
>> > > >voltage to the driver and both final tubes.
>> > > >
>> > > >Improper tuning, abuse by a previous owner(s), aging capacitor,
>> or all 3

>> > > >most likely have contributed to the failure of the HV filter
>> capacitors,
>> > > >not by simply turning the HEATER switch ON.
>> > > >
>> > > >You said your skill level for tube radios is low (beginner). Based on
>> > > >that information Irecommend you do some studying first before you
>> > > >attempt any service on your 520. I recommend you obtain an early
>> edition
>> > > >of the ARRL Handbook, mid 60's for example, and study Vacuum Tube and
>> > > >Amplifier Class topics. You can find the handbooks on eBay or
>> your local
>> > > >library. You can't successfully service vacuum tube circuits if
>> you do
>> > > >not understand how vacuum tubes and amplifier classes workand that
>> > > >information is contained in the ARRL Handbook.
>> > > >
>> > > >I also recommend obtaining the book
>> > > >
>> > > >BASIC RADIO COURSE
>> > > >Author: John T. Frye
>> > > >
>> > > >and study it from cover to cover. This book is out of print but quite
>> > > >often can be found on Amazon.com (used), at used book stores, or
>> eBay.
>> > > >Amazon.com currently has one (used) available for $4.99 plus
>> shipping.
>> > > >This book is written in simple text withpictorial examples of
>> subjects
>> > > >covered along with a few questions at the end of each chapter to
>> ensure
>> > > >you understand the chapter's subject matter.
>> > > >
>> > > >These books contain an wealth of information.
>> > > >
>> > > >Also, if you don't have it, download the TS-520's Service Manual from
>> > > >Gordon's website
>> > > >
>> > > >www.n6wk.com/kenwood/
>> > > >
>> > > >Once you download the service manual, take some time and study the
>> > > >"Circuit Description" sectionand block diagram so you get an idea
>> of how
>> > > >the 520 works. You can't successfully service the 520 if you do not
>> > > >know/understand how it works inside.
>> > > >
>> > > >Once you have these books, take some time and studybefore you
>> attempt to
>> > > >service your 520.
>> > > >
>> > > >73s

>> > > >Mike
>> > > >W5RKL
>> > > >
>> > > >On 1/5/2013 10:27 AM, Mark L. Hammond wrote:
>> > > >>
>> > > >> Hello Again,
>> > > >>
>> > > >> Well, so far, only 1 reply off list. I'll try again, with some
>> updated
>> > > >> information about my TS-520.
>> > > >>
>> > > >> Last night I did another visual inspection of the radio and saw
>> that
>> > > >> two 10 ohm resistors (pretty hefty--a watt or two rating?) were
>> > > >> cracked and needed replacing; one literally fell in half with a
>> gentle
>> > > >> touch. Each final tube socket had one 10 ohm resistor connected to
>> > > >> ground. I replaced them both with even larger old style 10 ohm
>> > > >> resistors (it's what I had on hand).
>> > > >>
>> > > >> In testing the rig, it appears to "tune" up OK, and all appears
>> normal
>> > > >> except that it's only putting out a fraction of a watt or so. I
>> double
>> > > >> checked the SG switch on the back and it is UP. High voltage
>> looks OK
>> > > >> (about 900V as a I recall) and drops a bit when the heater
>> switch is
>> > > >> turned ON; no more popping has been heard.
>> > > >>
>> > > >> So based on the single loud POP when I turned the heater switch
>> ON--is
>> > > >> likely to be the high voltage caps? Or any other suggestions on
>> what
>> > > >> to inspect/test/replace next? I can tell that getting th0se out of
>> > > >> this old rig is going to be a real challenge...if it was really
>> easy,
>> > > >> I'd have done it already...hi hi.
>> > > >>
>> > > >> I have spare tubes (driver and finals) but don't want to just swap
>> > > >> them out...my hunch is that it's something else.
>> > > >>
>> > > >> Again, I'll appreciate some advice :)
>> > > >>
>> > > >> 73,
>> > > >>
>> > > >> Mark N8MH
>> > > >>
>> > > >> At 12:27 AM 1/3/2013 +0000, you wrote:
>> > > >> >

>> > > >> >
>> > > >> >Hi All,
>> > > >> >
>> > > >> >I have a TS-520 that I bought over a year ago. It was in great
>> > > >> operational condition until recently. After a month or two of
>> > > >> inactivity (had just been using it as a receiver, heaters off), I
>> > > >> turned the heaters ON and soon after (few seconds??) a single
>> loud POP
>> > > >> sound was heard. I turned it off and it's been sitting there for
>> > > weeks...
>> > > >> >
>> > > >> >I know---I need to get brave and plug it back in to see if I
>> can see
>> > > >> any HV on the meter, etc. I didn't look before shutting it
>> down. But
>> > > >> for now, I'm wanting a bit more info before I power it back up...
>> > > >> >
>> > > >> >At first I thought maybe a capacitor had exploded, but I can't see
>> > > >> that with a visual inspection (and the spaghetti wiring makes me
>> > > >> nervous about poking around too much). I did a bit of searching
>> on the
>> > > >> group here, and saw mention of "cathode resistor" but honestly, I
>> > > >> don't even know where to look for that (even after looking over the
>> > > >> service manual).
>> > > >> >
>> > > >> >Any suggestions on what is the "likely suspect?" The old rigs
>> aren't
>> > > >> my forte, but maybe I can fix it with a bit of guidance from this
>> > > >> informed group!
>> > > >> >
>> > > >> >Thanks in advance,
>> > > >> >
>> > > >> >Mark N8MH
>> > > >> >
>> > > >> >
>> > > >>
>> > > >> [Non-text portions of this message have been removed]
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>> > > [Non-text portions of this message have been removed]
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40533. Apparently Fixed! Re: [TS-520_820_530_830] TS-520 - heater ON, then loud "POP!"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-07 23:13:42 UTC
From: Mark L. Hammond
Topic: 40533 Message: 40533

Okay Joe, you win ;) My SX-1000 power meter was broken!

I decided to look over the rig again. I used the ohm meter testing method (file section) on the two final tubes, and they tested OK on all pins. I noted it mentioned that when warm, there might actually be a short. So, having spare tubes on hand, I decided to change out the driver and the two final tubes. Also cleaned the wafers and pots out with some Deoxit while in there; hadn't done that before.

With the new tubes, I powered the radio up, and went through the tuning. It was indeed showing about 225-230mA of plate current, but the broken power meter was showing only a few milliwatts, as before. I admit I felt defeated and set it aside. Did some more reading. Thought again about you mentioning the possibility of a bad power meter. Hooked up my TS-2000X, and it showed the same low power on the SX-1000! I know better, since it has a built in PWR/SWR of course. So much for the HF side of the SX-1000. Have to check the upper bands too...bleh. That's a $200 meter that had been serving me well.

Today I went to Rat Shack and bought their SWR/Power meter. The TS-520 shows a bit over 100W on the 200W meter range (under 100W on the 2kW range, but close enough!!). Next step was to neutralize the new tubes. Fortunately I had a capacitor tuning tool, so that helped. I used my TS-2000X as the receiver to adjust for minimum signal, as per the Kenwood manual (SG switch DOWN). I was able to see the signal drop and then come back up (small adjustments at a time). Left at lowest spot, best I could detect with this method.

Nice to know it's actually OK. One of these days, I'll get curious and put the old tubes back in, but for now, it has a "new old stock" pair of 6146W finals and a new old stock GE driver tube.

I know I read somewhere about "breaking in" new tubes, but I can't put my eyes on it. I'll dig harder in the files section. That info was very helpful.

Hope to try some on the air tests tonight with a local bud.

Thanks for all for the suggestions and help. It was very beneficial!

73,

Mark N8MH

At 11:47 AM 1/6/2013 -0800, you wrote:
>
>
>Mark,
>
>Â Â Even with "bad" tubes, you will be able to set the "idle Ip." When you tune-up to full power...however small...what is the plate current? Set meter switch to Ip...and in CW mode...key rig... take reading. Sometimes you can get a rather high reading of the plate current...I have found that the cathode resistors could be out of value(high) as it is from these

that the plate current that is indicate on the meter comes from. Ball-park...800+ volts and ABOUT 225-260mA of plate current at 100W output.
>
>Â
>73Â Joe
>WB7UQU
>
>_____
>From: Mark L. Hammond <mailto:marklhammond%40gmail.com>marklhammond@...>
>To: <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>Sent: Sunday, January 6, 2013 5:50 AM
>Subject: Re: [TS-520_820_530_830] TS-520 - heater ON, then loud "POP!"
>
>
>Â
>Thanks for the reply, Joe.
>
>I'm using a Diamond SX-1000 meter. While not a Bird, I do have reasonable faith in it, even at the 5W full scale setting. I can see a something like 100-200mW or so that peaks and dips when the rig is tuned. It's less than 1W, anyhow...
>
>Further, I can monitor the signal on my TS-2000x. It too shows a transmitted signal that is on frequency, stable, that peaks and dips when tuning up the rig (did that on 20M into a matched antenna). The audio even sounds just fine SSB.
>
>As I recall,when toggling the transmit switch, the HV reads just under 900V (close to that). Idle Ip is set to 60mA per manual. Really, other than the tiny power output, as an operator I would think all is well!
>
>So, in my rather uninformed opinion, it "acts like" the final tubes are bad. I printed off lots of pages last night, from the files section. One of them walks through how to check the tubes with an ohm meter. That is on my to-do list today.
>
>What I clearly don't want to do is swap tubes and hear a loud POP again ;)
>
>I appreciate everybody's help!
>
>73,
>
>Mark N8MH
>
>At 08:58 PM 1/5/2013 -0800, you wrote:
>>
>>
>>Mark,
>>
>>Ã Your final tubes may have totally failed. Is what ever watt meter you are using is it KNOWN good/accurate? IF as you say it "tunes up ok but only puts out a fraction
>>of a watt" do you have good HV AND proper Ip at key down? And YES, the newer resistors are really physically smaller than the "old style." Take a look a modern capacitors!You should always stick with the correct ohm valueÃ AND watt rating when dealing with the resistors in the HV, rectifier, and the final amplifier tube circuit board. They "act" as a fuse...hopefully "popping" and protecting the tubes..and some other stuff. Ã Ken Kemski..Ã k4eaa.com Ã Ã has a good section on this.

>>One of the main reasons that the cathode resistors fail is due to one or both final amp tubes failing for what ever reason. I suggest that you obtain a known good set of finals and a good driver to keep for testing/diagnostic purposes. I still think you are going to need new final amp tubes.
>>
>>Ã☐
>>73Ã☐ Joe
>>WB7UQU
>>
>>_____
>>From: Mark L. Hammond <mailto:marklhammond%40gmail.com>marklhammond@...>
>>To: <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>>Sent: Saturday, January 5, 2013 8:27 AM
>>Subject: Re: [TS-520_820_530_830] TS-520 - heater ON, then loud "POP!"
>>
>>
>>Ã☐
>>Hello Again,
>>
>>Well, so far, only 1 reply off list. I'll try again, with some updated information about my TS-520.
>>
>>Last night I did another visual inspection of the radio and saw that two 10 ohm resistors (pretty hefty--a watt or two rating?) were cracked and needed replacing; one literally fell in half with a gentle touch. Each final tube socket had one 10 ohm resistor connected to ground. I replaced them both with even larger old style 10 ohm resistors (it's what I had on hand).
>>
>>In testing the rig, it appears to "tune" up OK, and all appears normal except that it's only putting out a fraction of a watt or so. I double checked the SG switch on the back and it is UP. High voltage looks OK (about 900V as a I recall) and drops a bit when the heater switch is turned ON; no more popping has been heard.
>>
>>So based on the single loud POP when I turned the heater switch ON--is likely to be the high voltage caps? Or any other suggestions on what to inspect/test/replace next? I can tell that getting th0se out of this old rig is going to be a real challenge...if it was really easy, I'd have done it already...hi hi.
>>
>>I have spare tubes (driver and finals) but don't want to just swap them out...my hunch is that it's something else.
>>
>>Again, I'll appreciate some advice :)
>>
>>73,
>>
>>Mark N8MH
>>
>>At 12:27 AM 1/3/2013 +0000, you wrote:
>>>
>>>
>>>Hi All,
>>>
>>>I have a TS-520 that I bought over a year ago. It was in great operational condition until recently. After a month or two of inactivity (had just been using it as a receiver, heaters off), I turned the heaters ON and soon after (few seconds??) a single loud POP sound was heard. I turned it off and it's been sitting there for weeks...

>>>
>>>I know---I need to get brave and plug it back in to see if I can see any HV on the meter, etc. I didn't look before shutting it down. But for now, I'm wanting a bit more info before I power it back up...
>>>
>>>At first I thought maybe a capacitor had exploded, but I can't see that with a visual inspection (and the spaghetti wiring makes me nervous about poking around too much). I did a bit of searching on the group here, and saw mention of "cathode resistor" but honestly, I don't even know where to look for that (even after looking over the service manual).
>>>
>>>Any suggestions on what is the "likely suspect?" The old rigs aren't my forte, but maybe I can fix it with a bit of guidance from this informed group!
>>>
>>>Thanks in advance,
>>>
>>>Mark N8MH
>>>
>>>
>>
>>[Non-text portions of this message have been removed]
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>>[Non-text portions of this message have been removed]
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40534. Broken SX1000

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-07 23:26:54 UTC
From: Lou Blasco
Topic: 40533 Message: 40534

Did you consider fixing your power meter? There's not much in them, a
couple of diodes and some trimpots. It should be an easy fix.

Lou
VK3ALB

At 10:13 08/01/2013, you wrote:
>Okay Joe, you win ;) My SX-1000 power meter was broken!
>
>I decided to look over the rig again. I used the ohm meter testing
>method (file section) on the two final tubes, and they tested OK on
>all pins. I noted it mentioned that when warm, there might actually
>be a short. So, having spare tubes on hand, I decided to change
>out the driver and the two final tubes. Also cleaned the wafers
>and pots out with some Deoxit while in there; hadn't done that before.
>
>With the new tubes, I powered the radio up, and went through the
>tuning. It was indeed showing about 225-230mA of plate current, but
>the broken power meter was showing only a few milliwatts, as
>before. I admit I felt defeated and set it aside. Did some more
>reading. Thought again about you mentioning the possibility of a
>bad power meter. Hooked up my TS-2000X, and it showed the same low
>power on the SX-1000! I know better, since it has a built in
>PWR/SWR of course. So much for the HF side of the SX-1000. Have
>to check the upper bands too...bleh. That's a $200 meter that had
>been serving me well.
>
>Today I went to Rat Shack and bought their SWR/Power meter. The
>TS-520 shows a bit over 100W on the 200W meter range (under 100W on
>the 2kW range, but close enough!!). Next step was to neutralize
>the new tubes. Fortunately I had a capacitor tuning tool, so that
>helped. I used my TS-2000X as the receiver to adjust for minimum
>signal, as per the Kenwood manual (SG switch DOWN). I was able to
>see the signal drop and then come back up (small adjustments at a
>time). Left at lowest spot, best I could detect with this method.
>
>Nice to know it's actually OK. One of these days, I'll get curious
>and put the old tubes back in, but for now, it has a "new old stock"
>pair of 6146W finals and a new old stock GE driver tube.
>
>I know I read somewhere about "breaking in" new tubes, but I can't
>put my eyes on it. I'll dig harder in the files section. That info
>was very helpful.
>
>Hope to try some on the air tests tonight with a local bud.

>
>Thanks for all for the suggestions and help. It was very beneficial!
>
>73,
>
>Mark N8MH

40535. Re: [TS-520_820_530_830] Broken SX1000

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-08 00:28:59 UTC
From: Mark L. Hammond
Topic: 40533 Message: 40535

Hi Lou,

Indeed, that's on my to-do list now. I needed another SWR regardless. The SX-1000 is a $200US meter, so indeed I'm hoping to fix it!

Mark N8MH

At 10:26 AM 1/8/2013 +1100, you wrote:
>
>
>Did you consider fixing your power meter? There's not much in them, a
>couple of diodes and some trimpots. It should be an easy fix.
>
>Lou
>VK3ALB
>
>At 10:13 08/01/2013, you wrote:
>>Okay Joe, you win ;) My SX-1000 power meter was broken!
>>
>>I decided to look over the rig again. I used the ohm meter testing
>>method (file section) on the two final tubes, and they tested OK on
>>all pins. I noted it mentioned that when warm, there might actually
>>be a short. So, having spare tubes on hand, I decided to change
>>out the driver and the two final tubes. Also cleaned the wafers
>>and pots out with some Deoxit while in there; hadn't done that before.
>>
>>With the new tubes, I powered the radio up, and went through the
>>tuning. It was indeed showing about 225-230mA of plate current, but
>>the broken power meter was showing only a few milliwatts, as
>>before. I admit I felt defeated and set it aside. Did some more
>>reading. Thought again about you mentioning the possibility of a
>>bad power meter. Hooked up my TS-2000X, and it showed the same low
>>power on the SX-1000! I know better, since it has a built in
>>PWR/SWR of course. So much for the HF side of the SX-1000. Have
>>to check the upper bands too...bleh. That's a $200 meter that had
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>>TS-520 shows a bit over 100W on the 200W meter range (under 100W on
>>the 2kW range, but close enough!!). Next step was to neutralize
>>the new tubes. Fortunately I had a capacitor tuning tool, so that
>>helped. I used my TS-2000X as the receiver to adjust for minimum
>>signal, as per the Kenwood manual (SG switch DOWN). I was able to
>>see the signal drop and then come back up (small adjustments at a
>>time). Left at lowest spot, best I could detect with this method.
>>

>>Nice to know it's actually OK. One of these days, I'll get curious
>>and put the old tubes back in, but for now, it has a "new old stock"
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>>
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>>
>>73,
>>
>>Mark N8MH
>
>

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40536. Re: Apparently Fixed! Re: [TS-520_820_530_830] TS-520 - heater ON, then loud "POP!"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-08 04:23:42 UTC
From: Joseph Stiles
Topic: 40533 Message: 40536

Mark,

Glad I could help you out. I have gotten much help from other members over the past few years...trying now to return the favor.
I am far from an expert here...but sometimes...it takes another person to sometimes point out the obvious...try me on that one!
Enjoy your newly operating rig.

73 Joe
WB7UQU

From: Mark L. Hammond <marklhammond@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, January 7, 2013 3:13 PM
Subject: Apparently Fixed! Re: [TS-520_820_530_830] TS-520 - heater ON, then loud "POP!"

Okay Joe, you win ;) My SX-1000 power meter was broken!

I decided to look over the rig again. I used the ohm meter testing method (file section) on the two final tubes, and they tested OK on all pins. I noted it mentioned that when warm, there might actually be a short. So, having spare tubes on hand, I decided to change out the driver and the two final tubes. Also cleaned the wafers and pots out with some Deoxit while in there; hadn't done that before.

With the new tubes, I powered the radio up, and went through the tuning. It was indeed showing about 225-230mA of plate current, but the broken power meter was showing only a few milliwatts, as before. I admit I felt defeated and set it aside. Did some more reading. Thought again about you mentioning the possibility of a bad power meter. Hooked up my TS-2000X, and it showed the same low power on the SX-1000! I know better, since it has a built in PWR/SWR of course. So much for the HF side of the SX-1000. Have to check the upper bands too...bleh. That's a $200 meter that had been serving me well.

Today I went to Rat Shack and bought their SWR/Power meter. The TS-520 shows a bit over 100W on the 200W meter range (under 100W on the 2kW range, but close enough!!). Next step was to neutralize the new tubes. Fortunately I had a capacitor tuning tool, so that helped. I used my TS-2000X as the receiver to adjust for minimum signal, as per the Kenwood manual (SG switch DOWN). I was able to see the signal drop and then come back up (small adjustments at a time). Left at lowest spot, best I could detect with this method.

Nice to know it's actually OK. One of these days, I'll get curious and put the old tubes back in, but for now, it has a "new old stock" pair of 6146W finals and a new old stock GE driver tube.

I know I read somewhere about "breaking in" new tubes, but I can't put my eyes on it. I'll dig harder in the files section. That info was very helpful.

Hope to try some on the air tests tonight with a local bud.

Thanks for all for the suggestions and help. It was very beneficial!

73,

Mark N8MH

At 11:47 AM 1/6/2013 -0800, you wrote:
>
>
>Mark,
>
>Â Â Even with "bad" tubes, you will be able to set the "idle Ip." When you tune-up to full power...however small...what is the plate current? Set meter switch to Ip...and in CW mode...key rig... take reading. Sometimes you can get a rather high reading of the plate current...I have found that the cathode resistors could be out of value(high) as it is from these that the plate current that is indicate on the meter comes from. Ball-park...800+ volts and ABOUT 225-260mA of plate current at 100W output.
>
>Â
>73Â Joe
>WB7UQU
>
>_____
>From: Mark L. Hammond marklhammond@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Sunday, January 6, 2013 5:50 AM
>Subject: Re: [TS-520_820_530_830] TS-520 - heater ON, then loud "POP!"
>
>
>Â
>Thanks for the reply, Joe.
>
>I'm using a Diamond SX-1000 meter. While not a Bird, I do have reasonable faith in it, even at the 5W full scale setting. I can see a something like 100-200mW or so that peaks and dips when the rig is tuned. It's less than 1W, anyhow...
>
>Further, I can monitor the signal on my TS-2000x. It too shows a transmitted signal that is on frequency, stable, that peaks and dips when tuning up the rig (did that on 20M into a matched antenna). The audio even sounds just fine SSB.
>
>As I recall,when toggling the transmit switch, the HV reads just under 900V (close to that). Idle Ip is set to 60mA per manual. Really, other than the tiny power output, as an operator I would think all is well!
>
>So, in my rather uninformed opinion, it "acts like" the final tubes are bad. I printed off lots of pages last night, from the files section. One of them walks through how to check the tubes with an ohm meter. That is on my to-do list today.
>
>What I clearly don't want to do is swap tubes and hear a loud POP again ;)
>

>I appreciate everybody's help!
>
>73,
>
>Mark N8MH
>
>At 08:58 PM 1/5/2013 -0800, you wrote:
>>
>>
>>Mark,
>>
>>Ã, Your final tubes may have totally failed. Is what ever watt meter you are using is it KNOWN good/accurate? IF as you say it "tunes up ok but only puts out a fraction
>>of a watt" do you have good HV AND proper Ip at key down? And YES, the newer resistors are really physically smaller than the "old style." Take a look a modern capacitors!You should always stick with the correct ohm valueÃ, AND watt rating when dealing with the resistors in the HV, rectifier, and the final amplifier tube circuit board. They "act" as a fuse...hopefully "popping" and protecting the tubes..and some other stuff. Ã, Ken Kemski..Ã, k4eaa.com Ã, Ã, has a good section on this.
>>One of the main reasons that the cathode resistors fail is due to one or both final amp tubes failing for what ever reason. I suggest that you obtain a known good set of finals and a good driver to keep for testing/diagnostic purposes. I still think you are going to need new final amp tubes.
>>
>>Ã,
>>73Ã, Joe
>>WB7UQU
>>
>>_________________________________
>>From: Mark L. Hammond marklhammond@gmail.com>
>>To: TS-520_820_530_830@yahoogroups.com
>>Sent: Saturday, January 5, 2013 8:27 AM
>>Subject: Re: [TS-520_820_530_830] TS-520 - heater ON, then loud "POP!"
>>
>>
>>Ã,
>>Hello Again,
>>
>>Well, so far, only 1 reply off list. I'll try again, with some updated information about my TS-520.
>>
>>Last night I did another visual inspection of the radio and saw that two 10 ohm resistors (pretty hefty--a watt or two rating?) were cracked and needed replacing; one literally fell in half with a gentle touch. Each final tube socket had one 10 ohm resistor connected to ground. I replaced them both with even larger old style 10 ohm resistors (it's what I had on hand).
>>
>>In testing the rig, it appears to "tune" up OK, and all appears normal except that it's only putting out a fraction of a watt or so. I double checked the SG switch on the back and it is UP. High voltage looks OK (about 900V as a I recall) and drops a bit when the heater

switch is turned ON; no more popping has been heard.
>>
>>So based on the single loud POP when I turned the heater switch ON--is likely to be the high voltage caps? Or any other suggestions on what to inspect/test/replace next? I can tell that getting th0se out of this old rig is going to be a real challenge...if it was really easy, I'd have done it already...hi hi.
>>
>>I have spare tubes (driver and finals) but don't want to just swap them out...my hunch is that it's something else.
>>
>>Again, I'll appreciate some advice :)
>>
>>73,
>>
>>Mark N8MH
>>
>>At 12:27 AM 1/3/2013 +0000, you wrote:
>>>
>>>
>>>Hi All,
>>>
>>>I have a TS-520 that I bought over a year ago. It was in great operational condition until recently. After a month or two of inactivity (had just been using it as a receiver, heaters off), I turned the heaters ON and soon after (few seconds??) a single loud POP sound was heard. I turned it off and it's been sitting there for weeks...
>>>
>>>I know---I need to get brave and plug it back in to see if I can see any HV on the meter, etc. I didn't look before shutting it down. But for now, I'm wanting a bit more info before I power it back up...
>>>
>>>At first I thought maybe a capacitor had exploded, but I can't see that with a visual inspection (and the spaghetti wiring makes me nervous about poking around too much). I did a bit of searching on the group here, and saw mention of "cathode resistor" but honestly, I don't even know where to look for that (even after looking over the service manual).
>>>
>>>Any suggestions on what is the "likely suspect?" The old rigs aren't my forte, but maybe I can fix it with a bit of guidance from this informed group!
>>>
>>>Thanks in advance,
>>>
>>>Mark N8MH
>>>
>>>
>>
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40537. Re: TS-520 - heater ON, then loud "POP!"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-08 15:33:29 UTC
From: john
Topic: 40422 Message: 40537

Mike, good morning, thanks for the reply and the additional information. It should be helpful to a bunch of folks trying to get their feet wet on test gear. Have a good week, 73, John K5IRK

--- In TS-520_820_530_830@yahoogroups.com, Mike wrote:
>
> John,
>
> I wasn't aware of this. It sounds like an excellent avenue to look for
> books not held at a local library.
>
> The last used hard copy Amazon had showed a price of $4.99 being sold by
> "saveontextbooks1". I just checked it again and it's still available at
> Amazon.com.
>
> http://www.amazon.com/gp/offer-listing/B001KUOQOU/ref=dp_olp_used/175-5516546-9988234?ie=UTF8&condition=used
>
> I also recommend those who plan on servicing their hybrids to obtain
> some test equipment. Quite often hams only have a DVM and while a DVM
> will work to measure voltages and resistance, it won't work very well
> when performing alignment. A few suggestions on test gear are:
>
> /*VTVM *//*s*/
> Heathkt IM-11, IM-18, Knightkit 232 will work well for servicing the
> hybrids and other gear.
>
> For portable work, where power is not available, I use the Heathkit
> IM-17 solid state VTVM. The IM-17 requires 2 batteries, a 1.5VDC battery
> for measuring resistance and a 8.4VDC battery for the rest of the meter
> circuitry. The 8.4VDC battery I use is the /*Duracell PROCELL DA146G*/
> 8.4 volt battery. They are currently available on eBay under
> #290759131468 for $1.49 (Buy it now) plus $1.69 shipping (new) or at
> various other websites. I bought 2 of them. As long as the seal
> container is not broken the battery has a long shelf life. I don't
> recommend using a 9 volt battery unless the "measured" battery voltage
> is less than 9 volts or equal to 8.4 volt. I have no affiliation with
> the eBay seller's ad (#290759131468) mentioned above. It's only
> mentioned as a source for the 8.4 volt battery.
>
> /*VTVM probes
> */If the probes not included with the VTVM, they can be constructed
> rather easily and that includes the RF Probe.
>
> /*AC VTVM*/

> Heathkit AV2, AV3 (the AV3 is basically the same as the AV2 except for
> cosmetics), IM-21 is another AC meter that's similar to the AV2 and AV3.
>
> /*Frequency Counter */
> Heathkit IM-4100 (up to 30Mhz), IM-2410 (10Hz to 225Mhz, Sinometer
> VC-2000 (2 separate input sockets, one from 10Hz to 50Mhz and the other
> from 50mhz to 2.4Ghz) are good choices. I use both, IM-4100 and
> Sinometer VC-2000. The Sinometer is also sold under "Victor VC-2000".
> The "Victor" name is the exact same counter as the "Sinometer". The
> VC-2000 has a crystal testing feature the others don't have. The VC-2000
> will test and display the frequency of "Fundamental" frequency crystals.
> Fundamental crystals are typically crystals with a frequency of 20Mhz or
> less. Overtone crystals can be tested but the counter will only display
> the "Fundmental" frequency of the crystal. There are some DDS counter
> kits, especially those that come from China, that may appear to be okay
> but many, not all of them, have a low maximum input signal level.
>
> /*Oscilloscope*/
> E&L INSTRUMENTS is a dual trace scope for monitoring signals at 20Mhz or
> less. I use mine quite a bit. If you want a 50Mhz dual trace scope then
> the price will be significantly higher. There are other scopes that are
> available for cheap prices but you should pay attention to the
> condition. A scope that's USED and the seller says it powers up okay,
> may not work properly. Unless you know for sure whether the scope is
> working properly, not just that it powers up, I would not recommend
> buying a used scope. Scope probes quite often do not come with used
> scopes but they can be found on eBay and other website depending on the
> quality of the probe. Don't buy cheap $10 scope probes, they typically
> don't last very long. The $10 probe will work but quite often I have
> found the probe's body construction is cheap and falls apart quickly. I
> recently replaced both of the $10 probes with higher quality probes, so
> be careful when buying probes.
>
>
> /*Signal Generator*/
> Heathkit IG-8 and the IG-102 both work well at lower HF frequency but I
> recommend a frequency counter be connected in parallel with the
> generator's output to keep the generator on frequency. The Heathkit
> IG-42 is the "Laboratory" version which may be okay, I haven't owned or
> use one so I can't comment on it. The military AN/URM-25 is an excellent
> generator but those in very good to excellent condition can be
> expensive. I bought mine from Fair Radio Sales in Lima Ohio. I think I
> paid $135 for it plus shipping. The URM-25 is big and heavy so shipping
> cost will be expensive. I recommend a frequency counter be used in
> parallel with the output to ensure the counter's on frequency. The
> URM-25 was in use by the Navy when I first joined back in April of 1967
> so it's an old signal generator. It does not have a sweep feature. If
> your servicing requires a sweep generator then the URM-25 and Heathkit
> generators mentioned here are not for you, they don't sweep. You can
> "manually" sweep the frequency using these generators.

>
> There are some inexpensive DDS generators, some contain the "sweep"
> feature, being sold on eBay by sellers from China. I have a few
> non-sweep versions here I purchased just to evaluate them. Most of them
> operate on voltages between 9VDC and 12VDC. Most have digital displays
> and some even have an input to allow the generator to function as a
> frequency counter. Their prices vary quite a bit and if the seller is
> from China it could take as much as 3 weeks to a month or more to get
> the item.
>
> /*Function Generator*/
> They are similar to an RF signal generator mentioned above but include
> different output wave forms such as Sine, Square, and Saw Tooth wave
> forms. Many have a frequency upper limit between 4 and 5Mhz. Some may
> have a digital display but if the one you are considering doesn't have a
> digital display, I recommend a frequency counter be connected in
> parallel with the output so you set the generator to the correct
> frequency. The Function Generator is a good item to have when
> troubleshooting "audio" circuits.
>
> Sorry for being long but thought I would provide some suggestions on
> test gear hams may consider obtaining in order to service their hybrids
> and other ham gear. Whether you purchase or use any of the suggestions
> above is entirely up to you. Yes there are higher quality, more
> expensive, items you can buy. Again, it's entirely up to you what brand
> and price you are willing to pay for test gear.
>
> 73s
> Mike
> W5RKL
>
> On 1/7/2013 7:38 AM, john wrote:
> >
> >
> > Mike refers to the BASIC RADIO COURSE book. You can get it for free to
> > look at/study by getting your library to do a out of the library
> > system loan from another library system. Granted you won"t get to keep
> > the book forever but will beat the high prices I saw on Amazon this
> > morning. I use this way of looking at books that are not available in
> > our library system with great success all the time. Hope this will be
> > of help. John K5IRK
> > --- In TS-520_820_530_830@yahoogroups.com
> > , Mike wrote:
> > >
> > > Mark,
> > >
> > > The BASIC RADIO COURSE by John T. Frye is about the best, easy to
> > > understand, book on basic and intro to advanced electronics I have
> > > found. It's written in easy to understand text.
> > >

> > > The ARRL handbooks are good but the current editions are written, in my
> > > opinion, in text that might be a bit more difficult to understand.
> > > That's why I recommended the earlier editions, mid 60s.
> > >
> > > What you can do is purchase a VTVM on eBay, most are inexpensive and
> > > most of them work. In many cases all that's needed is to replace the
> > > 1.5VDC battery and clean it up. Some VTVMs don't come with the probes
> > > but the probes are easy to make. You can purchase some resistors and
> > a 9
> > > volt battery and perform some of the simple experiments using ohms law,
> > > calculating current (I), voltage (E), and Resistance (R). You will use
> > > that VTVM more than you think, especially during alignment where an
> > > analog meter performs much better than a DVM.
> > >
> > >
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > >
> > >
> > >
> > >
> > >
> > > On 1/5/2013 1:21 PM, Mark L. Hammond wrote:
> > > >
> > > > Mike,
> > > >
> > > > Thanks for the sage advice. Indeed, I'm at the reading stage. The
> > > > specific resources mentioned should prove useful.
> > > >
> > > > 73,
> > > >
> > > > Mark N8MH
> > > >
> > > > At 01:08 PM 1/5/2013 -0600, you wrote:
> > > > >
> > > > >
> > > > >The "Heater" switch has nothing to do with the HV filter capacitors
> > > > >failing.The sole purpose of the "Heater" switch is to apply filament
> > > > >voltage to the driver and both final tubes.
> > > > >
> > > > >Improper tuning, abuse by a previous owner(s), aging capacitor,
> > or all 3
> > > > >most likely have contributed to the failure of the HV filter
> > capacitors,
> > > > >not by simply turning the HEATER switch ON.
> > > > >

> > > > >You said your skill level for tube radios is low (beginner). Based on
> > > > >that information Irecommend you do some studying first before you
> > > > >attempt any service on your 520. I recommend you obtain an early
> > edition
> > > > >of the ARRL Handbook, mid 60's for example, and study Vacuum Tube and
> > > > >Amplifier Class topics. You can find the handbooks on eBay or
> > your local
> > > > >library. You can't successfully service vacuum tube circuits if
> > you do
> > > > >not understand how vacuum tubes and amplifier classes workand that
> > > > >information is contained in the ARRL Handbook.
> > > > >
> > > > >I also recommend obtaining the book
> > > > >
> > > > >BASIC RADIO COURSE
> > > > >Author: John T. Frye
> > > > >
> > > > >and study it from cover to cover. This book is out of print but quite
> > > > >often can be found on Amazon.com (used), at used book stores, or
> > eBay.
> > > > >Amazon.com currently has one (used) available for $4.99 plus
> > shipping.
> > > > >This book is written in simple text withpictorial examples of
> > subjects
> > > > >covered along with a few questions at the end of each chapter to
> > ensure
> > > > >you understand the chapter's subject matter.
> > > > >
> > > > >These books contain an wealth of information.
> > > > >
> > > > >Also, if you don't have it, download the TS-520's Service Manual from
> > > > >Gordon's website
> > > > >
> > > > >www.n6wk.com/kenwood/
> > > > >
> > > > >Once you download the service manual, take some time and study the
> > > > >"Circuit Description" sectionand block diagram so you get an idea
> > of how
> > > > >the 520 works. You can't successfully service the 520 if you do not
> > > > >know/understand how it works inside.
> > > > >
> > > > >Once you have these books, take some time and studybefore you
> > attempt to
> > > > >service your 520.
> > > > >
> > > > >73s
> > > > >Mike
> > > > >W5RKL
> > > > >
> > > > >On 1/5/2013 10:27 AM, Mark L. Hammond wrote:

> > > > >>
> > > > >> Hello Again,
> > > > >>
> > > > >> Well, so far, only 1 reply off list. I'll try again, with some
> > updated
> > > > >> information about my TS-520.
> > > > >>
> > > > >> Last night I did another visual inspection of the radio and saw
> > that
> > > > >> two 10 ohm resistors (pretty hefty--a watt or two rating?) were
> > > > >> cracked and needed replacing; one literally fell in half with a
> > gentle
> > > > >> touch. Each final tube socket had one 10 ohm resistor connected to
> > > > >> ground. I replaced them both with even larger old style 10 ohm
> > > > >> resistors (it's what I had on hand).
> > > > >>
> > > > >> In testing the rig, it appears to "tune" up OK, and all appears
> > normal
> > > > >> except that it's only putting out a fraction of a watt or so. I
> > double
> > > > >> checked the SG switch on the back and it is UP. High voltage
> > looks OK
> > > > >> (about 900V as a I recall) and drops a bit when the heater
> > switch is
> > > > >> turned ON; no more popping has been heard.
> > > > >>
> > > > >> So based on the single loud POP when I turned the heater switch
> > ON--is
> > > > >> likely to be the high voltage caps? Or any other suggestions on
> > what
> > > > >> to inspect/test/replace next? I can tell that getting th0se out of
> > > > >> this old rig is going to be a real challenge...if it was really
> > easy,
> > > > >> I'd have done it already...hi hi.
> > > > >>
> > > > >> I have spare tubes (driver and finals) but don't want to just swap
> > > > >> them out...my hunch is that it's something else.
> > > > >>
> > > > >> Again, I'll appreciate some advice :)
> > > > >>
> > > > >> 73,
> > > > >>
> > > > >> Mark N8MH
> > > > >>
> > > > >> At 12:27 AM 1/3/2013 +0000, you wrote:
> > > > >> >
> > > > >> >
> > > > >> >Hi All,
> > > > >> >
> > > > >> >I have a TS-520 that I bought over a year ago. It was in great

> > > > >> operational condition until recently. After a month or two of
> > > > >> inactivity (had just been using it as a receiver, heaters off), I
> > > > >> turned the heaters ON and soon after (few seconds??) a single
> > loud POP
> > > > >> sound was heard. I turned it off and it's been sitting there for
> > > > > weeks...
> > > > > >> >
> > > > > >> >I know---I need to get brave and plug it back in to see if I
> > can see
> > > > > >> any HV on the meter, etc. I didn't look before shutting it
> > down. But
> > > > > >> for now, I'm wanting a bit more info before I power it back up...
> > > > > >> >
> > > > > >> >At first I thought maybe a capacitor had exploded, but I can't see
> > > > > >> that with a visual inspection (and the spaghetti wiring makes me
> > > > > >> nervous about poking around too much). I did a bit of searching
> > on the
> > > > > >> group here, and saw mention of "cathode resistor" but honestly, I
> > > > > >> don't even know where to look for that (even after looking over the
> > > > > >> service manual).
> > > > > >> >
> > > > > >> >Any suggestions on what is the "likely suspect?" The old rigs
> > aren't
> > > > > >> my forte, but maybe I can fix it with a bit of guidance from this
> > > > > >> informed group!
> > > > > >> >
> > > > > >> >Thanks in advance,
> > > > > >> >
> > > > > >> >Mark N8MH
> > > > > >> >
> > > > > >> >
> > > > > >>
> > > > > >> [Non-text portions of this message have been removed]
> > > > > >>
> > > > > >>
> > > > > >
> > > > > >[Non-text portions of this message have been removed]
> > > > > >
> > > > > >
> > > > > > [Non-text portions of this message have been removed]
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>
>
>
> [Non-text portions of this message have been removed]
>

40538. Re: TS520 VOX unit transistor 2SA562Y

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-08 04:45:46 UTC
From: zl3ha
Topic: 40454 Message: 40538

I have replaced Q8 and D8 but have not solved the problem. The Tx relay still will not function and instead on key up R13 and R16 started to smoke where there was no previous visual evidence of those resistors being under stress. Guess I've partly dealt with the symptoms but not the cause.. any ideas welcome.
Cheers
Grant

--- In TS-520_820_530_830@yahoogroups.com, "jimlamanteer" wrote:
>
>
> GRANT I JUST RECENTLY REPLACED MY Q-8 ON THE VOX BOARD WITH AN NTE290A ITS A SUB FOR THE 2SA562 AND IT WILL DO JUST FINE BUT U SHOULD ALSO REPLACE YOUR D-8 DIODE AS WELL USUALLY IT GOES MAKING THE Q-8 FAIL. I BOUGHT SOME REPLACEMENT DIODES OFF OF KEN K4EAA THEY SUB FOR THE N16263 DIODES. THE NTE Q-8 I GOT FROM MOUSER. HOPE THIS HELPS 73`S JIMMY WB2KNR
>
> --- In TS-520_820_530_830@yahoogroups.com, "zl3ha" wrote:
> >
> > Hi all and HNY
> > I've just had this transistor (Q8) literally blow apart in my TS520. Has anyone had experience of finding a suitable and readily available replacement; and what might be the most likely cause of the failure?
> > Best 73
> > Grant, ZL3HA
> >
>

40539. Headset for 830S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-08 20:54:31 UTC
From: rkersey tds.net
Topic: 40539 Message: 40539

Hello All,

Does anyone have a recommendation for a headset with mic
that I would use with the TS-830S? I assume if I set the radio
to Vox I wouldn't need to wire up a PTT switch, but how do I
wire up the headset (earphones) and mic on one of these?
I'm figuring a headset will work better with my hearing aides
than the speaker. Come to think of it, the mic would be nice
and convenient, but optional, as I have a Shure mic.

TIA & 73,
Roy
KI4HAG

[Non-text portions of this message have been removed]

40540. Re: WTB : Matched pair of New 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-08 23:44:13 UTC
From: james27613
Topic: 40504 Message: 40540

Hi Ray,

I got several sets from this seller,
new old stock military JAN GE Tubes
6146W $22 ea or the more expensive 6146B $47.50 ea
and the 12BY7A driver tube $10 ea.

http://www.surplussales.com/Tubes-Sock-Acc/TubeSpecials.html

73 james ke4drn

40541. Re: TS520 VOX unit transistor 2SA562Y

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-09 02:08:48 UTC
From: Bob
Topic: 40454 Message: 40541

I have a VOX board (X54-0001-00) for the 520...
Would sell it for $15 plus $2.00 to mail...
Bob
****

--- In TS-520_820_530_830@yahoogroups.com, "zl3ha" wrote:
>
> I have replaced Q8 and D8 but have not solved the problem. The Tx relay still will not function and instead on key up R13 and R16 started to smoke where there was no previous visual evidence of those resistors being under stress. Guess I've partly dealt with the symptoms but not the cause.. any ideas welcome.
> Cheers
> Grant
>
> --- In TS-520_820_530_830@yahoogroups.com, "jimlamanteer" wrote:
> >
> >
> > GRANT I JUST RECENTLY REPLACED MY Q-8 ON THE VOX BOARD WITH AN NTE290A ITS A SUB FOR THE 2SA562 AND IT WILL DO JUST FINE BUT U SHOULD ALSO REPLACE YOUR D-8 DIODE AS WELL USUALLY IT GOES MAKING THE Q-8 FAIL. I BOUGHT SOME REPLACEMENT DIODES OFF OF KEN K4EAA THEY SUB FOR THE N16263 DIODES. THE NTE Q-8 I GOT FROM MOUSER. HOPE THIS HELPS 73`S JIMMY WB2KNR
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "zl3ha" wrote:
> > >
> > > Hi all and HNY
> > > I've just had this transistor (Q8) literally blow apart in my TS520. Has anyone had experience of finding a suitable and readily available replacement; and what might be the most likely cause of the failure?
> > > Best 73
> > > Grant, ZL3HA
> > >
> >
>

40542. Re: TS520 VOX unit transistor 2SA562Y

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-09 04:02:45 UTC
From: zl3ha
Topic: 40454 Message: 40542

Bob
thanks for your offer which I will keep in mind (I would give you much more than $2 for postage to ZL). I am a little worried that the fault may not be on the VOX board at all so I hope to find the cause before deciding on replacing the board. If anyone has any ideas I would be pleased to hear from you. I have tried following the circuit diagram in the hope of pinpointing some areas to check but until I can get it printed out large scale its too difficult for these eyes scrolling around a PC screen!
73 Grant

--- In TS-520_820_530_830@yahoogroups.com, "Bob" wrote:
>
> I have a VOX board (X54-0001-00) for the 520...
> Would sell it for $15 plus $2.00 to mail...
> Bob
> **********
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "zl3ha" wrote:
> >
> > I have replaced Q8 and D8 but have not solved the problem. The Tx relay still will not function and instead on key up R13 and R16 started to smoke where there was no previous visual evidence of those resistors being under stress. Guess I've partly dealt with the symptoms but not the cause.. any ideas welcome.
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> > Grant
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> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "zl3ha" wrote:
> > > >
> > > > Hi all and HNY
> > > > I've just had this transistor (Q8) literally blow apart in my TS520. Has anyone had experience of finding a suitable and readily available replacement; and what might be the most likely cause of the failure?
> > > > Best 73
> > > > Grant, ZL3HA
> > > >
> > >

> >
>

40543. Re: WTB : Matched pair of New 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-09 11:31:01 UTC
From: Brian Allen
Topic: 40504 Message: 40543

Thanks for posting that source! They state the 6146W can replace the 6146, 6146 A and B. Is this true? I use different equipment that uses the different versions of the 6146.

Thanks

[Non-text portions of this message have been removed]

40544. Re: TS-520 - heater ON, then loud "POP!"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-09 14:27:10 UTC
From: dockscience
Topic: 40422 Message: 40544

Wow, you have listed virtually my entire electronics lab inventory except I have a TEK 465B oscope instead of the E&L.
I must have gotten it right by accident.

--- In TS-520_820_530_830@yahoogroups.com, Mike wrote:
>
> John,
>

> /*VTVM *//*s*/
> Heathkt IM-11, IM-18, Knightkit 232 will work well for servicing the
> hybrids and other gear.
>
> For portable work, where power is not available, I use the Heathkit
> IM-17 solid state VTVM.

> /*VTVM probes
> */If the probes not included with the VTVM, they can be constructed
> rather easily and that includes the RF Probe.
>
> /*AC VTVM*/
> Heathkit AV2, AV3 (the AV3 is basically the same as the AV2 except for
> cosmetics), IM-21 is another AC meter that's similar to the AV2 and AV3.
>
> /*Frequency Counter */
> Heathkit IM-4100 (up to 30Mhz), IM-2410 (10Hz to 225Mhz, Sinometer
> VC-2000 (2 separate input sockets, one from 10Hz to 50Mhz and the other
> from 50mhz to 2.4Ghz) are good choices. I use both, IM-4100 and
> Sinometer VC-2000. The Sinometer is also sold under "Victor VC-2000".
> The "Victor" name is the exact same counter as the "Sinometer". The
> VC-2000 has a crystal testing feature the others don't have. The VC-2000
> will test and display the frequency of "Fundamental" frequency crystals.
> Fundamental crystals are typically crystals with a frequency of 20Mhz or
> less. Overtone crystals can be tested but the counter will only display
> the "Fundmental" frequency of the crystal. There are some DDS counter
> kits, especially those that come from China, that may appear to be okay
> but many, not all of them, have a low maximum input signal level.
>
> /*Oscilloscope*/
> E&L INSTRUMENTS is a dual trace scope for monitoring signals at 20Mhz or
> less. I use mine quite a bit. If you want a 50Mhz dual trace scope then
> the price will be significantly higher. There are other scopes that are
> available for cheap prices but you should pay attention to the
> condition. A scope that's USED and the seller says it powers up okay,
> may not work properly. Unless you know for sure whether the scope is
> working properly, not just that it powers up, I would not recommend

> buying a used scope. Scope probes quite often do not come with used
> scopes but they can be found on eBay and other website depending on the
> quality of the probe. Don't buy cheap $10 scope probes, they typically
> don't last very long. The $10 probe will work but quite often I have
> found the probe's body construction is cheap and falls apart quickly. I
> recently replaced both of the $10 probes with higher quality probes, so
> be careful when buying probes.
>
>
> /*Signal Generator*/
> Heathkit IG-8 and the IG-102 both work well at lower HF frequency but I
> recommend a frequency counter be connected in parallel with the
> generator's output to keep the generator on frequency. The Heathkit
> IG-42 is the "Laboratory" version which may be okay, I haven't owned or
> use one so I can't comment on it. The military AN/URM-25 is an excellent
> generator but those in very good to excellent condition can be
> expensive. I bought mine from Fair Radio Sales in Lima Ohio. I think I
> paid $135 for it plus shipping. The URM-25 is big and heavy so shipping
> cost will be expensive. I recommend a frequency counter be used in
> parallel with the output to ensure the counter's on frequency. The
> URM-25 was in use by the Navy when I first joined back in April of 1967
> so it's an old signal generator. It does not have a sweep feature. If
> your servicing requires a sweep generator then the URM-25 and Heathkit
> generators mentioned here are not for you, they don't sweep. You can
> "manually" sweep the frequency using these generators.
>
> There are some inexpensive DDS generators, some contain the "sweep"
> feature, being sold on eBay by sellers from China. I have a few
> non-sweep versions here I purchased just to evaluate them. Most of them
> operate on voltages between 9VDC and 12VDC. Most have digital displays
> and some even have an input to allow the generator to function as a
> frequency counter. Their prices vary quite a bit and if the seller is
> from China it could take as much as 3 weeks to a month or more to get
> the item.
>
> /*Function Generator*/
> They are similar to an RF signal generator mentioned above but include
> different output wave forms such as Sine, Square, and Saw Tooth wave
> forms. Many have a frequency upper limit between 4 and 5Mhz. Some may
> have a digital display but if the one you are considering doesn't have a
> digital display, I recommend a frequency counter be connected in
> parallel with the output so you set the generator to the correct
> frequency. The Function Generator is a good item to have when
> troubleshooting "audio" circuits.

40545. Re: [TS-520_820_530_830] Re: TS-520 - heater ON, then loud "POP!"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-09 16:25:24 UTC
From: Bob Macklin
Topic: 40422 Message: 40545

Very similar to mine also.

My scopes are a Heath IO-4235(35MHz) and a IO-4550(10MHz) as backup.

For design work I also have a Heath Q-Meter and RLC bridge.

Heath C-3 capacitor tester and IT-28 capacitor tester.

Plus a lot of other seldom used pieces of test gear but nice to have when you need it.

What I need is a low cost microvolt meter. I may be forced to make my own. The HPs are out of my budget.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: dockscience
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, January 09, 2013 6:27 AM
Subject: [TS-520_820_530_830] Re: TS-520 - heater ON, then loud "POP!"

Wow, you have listed virtually my entire electronics lab inventory except I have a TEK 465B oscope instead of the E&L.
I must have gotten it right by accident.

--- In TS-520_820_530_830@yahoogroups.com, Mike wrote:
>
> John,
>

> /*VTVM *//*s*/
> Heathkt IM-11, IM-18, Knightkit 232 will work well for servicing the
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>
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> VC-2000 (2 separate input sockets, one from 10Hz to 50Mhz and the other
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> operate on voltages between 9VDC and 12VDC. Most have digital displays
> and some even have an input to allow the generator to function as a
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> have a digital display but if the one you are considering doesn't have a
> digital display, I recommend a frequency counter be connected in
> parallel with the output so you set the generator to the correct
> frequency. The Function Generator is a good item to have when
> troubleshooting "audio" circuits.

[Non-text portions of this message have been removed]

40546. TS830S: Overheating

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-10 13:36:58 UTC
From: ravnpeter@ymail.com
Topic: 40546 Message: 40546

Recently I acquired two TS830S, so if one fails, the other will take over. On one of them (A) I have a problem with overheating of the finals. After five minutes of transmitting the top cover turns hot, while the temperature hardly rises on the other (B) after long time of operation. The idle current on both radios is 50 mA. On tune the meter on A shows 220 mA and 770 HV, and my outputmeter indicates 100 W.
On tune on B the meter shows 200 mA and 710 HV and the output is 95 W output. On SSB the HV is about 810 HV on both radios. If A isn't keyed and remains in RX psotition, there is no heating. The 220 - 240 V switch on the rear is in the same position on both radios.

Thanks.
Peter, OZ8CTH

40547. Re: [TS-520_820_530_830] TS830S: Overheating

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-10 13:42:20 UTC
From: Allan Bear
Topic: 40546 Message: 40547

Fan not working??
Regards Allan

--- On Thu, 10/1/13, ravnpeter@... <fasan5@...> wrote:

From: ravnpeter@... <fasan5@...>
Subject: [TS-520_820_530_830] TS830S: Overheating
To: TS-520_820_530_830@yahoogroups.com
Date: Thursday, 10 January, 2013, 13:36

Recently I acquired two TS830S, so if one fails, the other will take over. On one of them (A) I have a problem with overheating of the finals. After five minutes of transmitting the top cover turns hot, while the temperature hardly rises on the other (B) after long time of operation. The idle current on both radios is 50 mA. On tune the meter on A shows 220 mA and 770 HV, and my outputmeter indicates 100 W.
On tune on B the meter shows 200 mA and 710 HV and the output is 95 W output. On SSB the HV is about 810 HV on both radios. If A isn't keyed and remains in RX psotition, there is no heating. The 220 - 240 V switch on the rear is in the same position on both radios.

Thanks.
Peter, OZ8CTH

[Non-text portions of this message have been removed]

40548. SV: [TS-520_820_530_830] TS830S: Overheating

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-10 14:26:50 UTC
From: Peter Ravn
Topic: 40546 Message: 40548

You were right, Allan. A wire in the final cage was broken, so the fan didn't work.
Thanks.
Peter

-----Oprindelig meddelelse-----
Fra: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] På vegne af Allan Bear
Sendt: 10. januar 2013 14:42
Til: TS-520_820_530_830@yahoogroups.com
Emne: Re: [TS-520_820_530_830] TS830S: Overheating

Fan not working??
Regards Allan

--- On Thu, 10/1/13, ravnpeter@... <fasan5@privat.dk> wrote:

From: ravnpeter@... <fasan5@...>
Subject: [TS-520_820_530_830] TS830S: Overheating
To: TS-520_820_530_830@yahoogroups.com
Date: Thursday, 10 January, 2013, 13:36

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On tune on B the meter shows 200 mA and 710 HV and the output is 95 W output. On SSB the HV is about 810 HV on both radios. If A isn't keyed and remains in RX psotition, there is no heating. The 220 - 240 V switch on the rear is in the same position on both radios.

Thanks.
Peter, OZ8CTH

[Non-text portions of this message have been removed]

Yahoo! Groups Links

40549. Re: SV: [TS-520_820_530_830] TS830S: Overheating

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-10 14:27:47 UTC
From: Allan Bear
Topic: 40546 Message: 40549

ah great...cheers Allan GM3VXI

--- On Thu, 10/1/13, Peter Ravn <fasan5@privat.dk> wrote:

From: Peter Ravn <fasan5@...>
Subject: SV: [TS-520_820_530_830] TS830S: Overheating
To: TS-520_820_530_830@yahoogroups.com
Date: Thursday, 10 January, 2013, 14:26

You were right, Allan. A wire in the final cage was broken, so the fan didn't work.
Thanks.
Peter

-----Oprindelig meddelelse-----
Fra: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] På vegne af Allan Bear
Sendt: 10. januar 2013 14:42
Til: TS-520_820_530_830@yahoogroups.com
Emne: Re: [TS-520_820_530_830] TS830S: Overheating

Fan not working??
Regards Allan

--- On Thu, 10/1/13, ravnpeter@... fasan5@...> wrote:

From: ravnpeter@... fasan5@...>
Subject: [TS-520_820_530_830] TS830S: Overheating
To: TS-520_820_530_830@yahoogroups.com
Date: Thursday, 10 January, 2013, 13:36

Recently I acquired two TS830S, so if one fails, the other will take over. On one of them (A) I have a problem with overheating of the finals. After five minutes of transmitting the top cover turns hot, while the temperature hardly rises on the other (B) after long time of operation. The idle current on both radios is 50 mA. On tune the meter on A shows 220 mA and 770 HV, and my outputmeter indicates 100 W.
On tune on B the meter shows 200 mA and 710 HV and the output is 95 W output. On SSB the HV is about 810 HV on both radios. If A isn't keyed and remains in RX psotition, there is no heating. The 220 - 240 V switch on the rear is in the same position on both radios.

Thanks.
Peter, OZ8CTH

[Non-text portions of this message have been removed]

Yahoo! Groups Links

[Non-text portions of this message have been removed]

40550. Re: WTB : Matched pair of New 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-10 23:45:46 UTC
From: james27613
Topic: 40504 Message: 40550

Hi,

I am not sure about the 6146A, here is the tube specs

http://www.nj7p.info/Common/Tube/SQL/Tube_query.php?Type=6146w

http://www.nj7p.info/ has large number of tube specs on file

Don't want to be a wise guy, be sure to follow the
neutralization steps when you replace the final tubes.

73 james

40551. Re: [TS-520_820_530_830] Re: WTB : Matched pair of New 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-11 01:50:36 UTC
From: Lou Blasco
Topic: 40504 Message: 40551

The files section is a wealth of information. There's a great document on the origins and differences between 6146's. Anyone who reads that should have a much better understanding of these tubes.

Also, there are service manuals, trouble shooting tips, microphone connection details, filter information and lots more. Time and time again I see the same questions come up and mostly it's already there in the files section. Many people have spent time and effort adding to the files section. Using the files section is a good way to thank those benefactors.

Lou
VK3ALB

40552. Re: WTB : Matched pair of New 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-11 05:55:54 UTC
From: David
Topic: 40504 Message: 40552

It is my understanding that the 6146W can replace the 6146B, but not the 6146A.

I tried a pair of Taylor 6146B tubes in my 830S, and they were just awful. When I contacted RF parts who sold them to me, the fellow I talked to suggested I try a pair of Phillips 6146W tubes which worked very well. They are putting out a solid 100W into a dummy load while only drawing 230 ma. This was measured on my Bird wattmeter. I am more than satisfied with them.

Regards,

David
--- In TS-520_820_530_830@yahoogroups.com, Brian Allen wrote:
>
> Thanks for posting that source! They state the 6146W can replace the 6146, 6146 A and B. Is this true? I use different equipment that uses the different versions of the 6146.
>
> Thanks
>
>
>
> [Non-text portions of this message have been removed]
>

40553. RE: [TS-520_820_530_830] Re: WTB : Matched pair of New 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-11 06:11:35 UTC
From: fpath fpath
Topic: 40504 Message: 40553

Wasn't going to get into this discussion, 30 years ago I had one faulty tube, I could only get 1x tube within VK5 at the time, it was the s2001, I've put this in and neutralize the pa, to this day (touch wood) it has been working perfectly. I know lots of people say dont do this . The original tube only had 45 minutes of power and was the glass envelope that had a fault, got the new one under warranty. I've had a number of different tubes for rebuilds over the years, I prefer and pay a little extra for RCA and GE tubes, they have only failed when the radio goes to the owner who over drives or over tunes the PA. I have a pair of matched tubes, but only beacuse they came as a spare set when I bought another radio. I put all my spare tubes on a "getter" every 3 months. Dont waste your money on matched pairs unless there the same price.

Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: davidcuttler@...
Date: Fri, 11 Jan 2013 05:55:54 +0000
Subject: [TS-520_820_530_830] Re: WTB : Matched pair of New 6146B

It is my understanding that the 6146W can replace the 6146B, but not the 6146A.

I tried a pair of Taylor 6146B tubes in my 830S, and they were just awful. When I contacted RF parts who sold them to me, the fellow I talked to suggested I try a pair of Phillips 6146W tubes which worked very well. They are putting out a solid 100W into a dummy load while only drawing 230 ma. This was measured on my Bird wattmeter. I am more than satisfied with them.

Regards,

David
--- In TS-520_820_530_830@yahoogroups.com, Brian Allen wrote:
>
> Thanks for posting that source! They state the 6146W can replace the 6146, 6146 A and B. Is this true? I use different equipment that uses the different versions of the 6146.
>
> Thanks
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

40554. MC 50

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-11 12:43:01 UTC
From: Brian
Topic: 390 Message: 40554

If you have the mc 50 microphone, minus the base, can It be used on a radio. I know there is a special connection at the rear of the handle. Is the high /low impeadence option in the microphone portion or in the base. Thanks

40555. Re: [TS-520_820_530_830] MC 50

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-11 13:12:11 UTC
From: Ken Winterling
Topic: 390 Message: 40555

Brian,

The impedance selection is made in the mic, not the base. The tough part is finding that 5 pin connector. I would like to get a couple/few. If you do not have the manual/schematic I can e-mail it to you.

Ken
WA2LBI

On Fri, Jan 11, 2013 at 7:43 AM, Brian <bsa0791@...> wrote:

> **
>
>
> If you have the mc 50 microphone, minus the base, can It be used on a
> radio. I know there is a special connection at the rear of the handle. Is
> the high /low impeadence option in the microphone portion or in the base.
> Thanks
>

[Non-text portions of this message have been removed]

40556. Re: TS520 VOX unit transistor 2SA562Y

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-11 08:38:38 UTC
From: zl3ha
Topic: 40454 Message: 40556

Just an update on my VOX board issue -
I have now replaced Q8 with an NTE290A, D8 with a 1N4148, and also replaced the overheated resistors R13 and R16 and the board is now fully serviceable. Thanks to those who helped me both on forum and by PM.
Cheers
Grant

--- In TS-520_820_530_830@yahoogroups.com, "zl3ha" wrote:
>
> Hi all and HNY
> I've just had this transistor (Q8) literally blow apart in my TS520. Has anyone had experience of finding a suitable and readily available replacement; and what might be the most likely cause of the failure?
> Best 73
> Grant, ZL3HA
>

40557. High efficiency 530S ??

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-11 22:31:04 UTC
From: Jim Showker
Topic: 40504 Message: 40557

Hi all,
I'm just finishing up a 530S today, and it is of note, because it has the most output power I have seen. It has not been QRO modded, that I can see, and puts out 126 watts on 14M and 113 on 10M, at 215-225ma. SG voltage is right on spec, and I checked all the Ip sense resistors that feed the meter. I am measuring power on my HP 8924C test set with the 60W input mod, with a padded dummy load. I use this on all my radios, and usually get exactly the numbers you expect, so I trust it. HV readings are normal also.

This radio came to me with a broken b/sw coupler, broken in half, where the guy had tuned (tried) up with the cage on the wrong band. 5 different resistors were burned up, from the ALC circuit to the SG feed resistor on the rect board. After it was all fixed and I tuned up and got 126w on 14M, I really looked for some QRO mod, but could find nothing.

This is only the 2nd 530S I have worked on. Do they put out a little more? I don't remember that.

It is slightly different in the feel of the tune up. The Ip plate dip is very sharp, and after having tuned up in the tune position (which is high also 22-27w) I have to turn the Load control down, as where it has been set from Tune, will want to give a plate Ip of 250-280ma.

It has the original cage coupling cap, and what looks to be the original bypass cap and L1. I normally change these out, but in this case I will leave well enough alone.

I plan on telling the customer to run at 105-110ma max, but is that really necessary? Could it be that much more efficient?

Am I missing something?

Jim KE7OAY

[Non-text portions of this message have been removed]

40558. RE: [TS-520_820_530_830] High efficiency 530S ??

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-11 23:19:34 UTC
From: fpath fpath
Topic: 40504 Message: 40558

Jim,

I have 2x 530s on my bench, my original is similar to the one your working on, except that 40m, 80 and 160m gives me 120w. Cant say the same for my 3x 830s they all do what they are suppose to do. I know that the 830 I had padder cap issue with, when I first put a normal cap in its place as it started to burn up and go out of spec the output went sky high until the cap finished burning. Have a look on the RF board, R37, I have seen this supersized to 10w before, same set had a 2 black wires cut that run from the front of the RF board over towards the VFO and under the counter board, but still on the RF board. Just a thought as this particluar 530 never had the QRO mod either.

Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: jshowker@...
Date: Fri, 11 Jan 2013 14:31:04 -0800
Subject: [TS-520_820_530_830] High efficiency 530S ??

Hi all,
I'm just finishing up a 530S today, and it is of note, because it has the most output power I have seen. It has not been QRO modded, that I can see, and puts out 126 watts on 14M and 113 on 10M, at 215-225ma. SG voltage is right on spec, and I checked all the Ip sense resistors that feed the meter. I am measuring power on my HP 8924C test set with the 60W input mod, with a padded dummy load. I use this on all my radios, and usually get exactly the numbers you expect, so I trust it. HV readings are normal also.

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Jim KE7OAY

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40559. Re: [TS-520_820_530_830] High efficiency 530S ??

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-11 23:42:19 UTC
From: Bob
Topic: 40504 Message: 40559

Hi Jim,

I don't have a 530S; I have a 520S, but I think they're output sections are quite similar. The most I'd ever got out of my 530S was right at 100w. It may output more, but I haven't really messed with it.

That yer get'n 126w max output may not be too unusual. What got my attention tho, was the sharp plate dip you mentioned. Could it be going into oscillation? Something you may want to check.

Also, what kind of 6146's are in yer radio? They *should* be B's. Using other types other than the B's are not recommended and can result in instabilities.

Here's a guy that is get'n 110w on 14 Mhz on his 530S...

http://www.youtube.com/watch?v=Ml06oMw_iYo

One review mentioned that the radio can be tuned up to 130 watts or even a little higher, but it's not recommended due to shortened tube life...

http://voices.yahoo.com/review-kenwood-ts-530-ham-radio-6597620.html

Hope this helps,

73,

Bob, KD5MHQ

--- On Fri, 1/11/13, Jim Showker <jshowker@...> wrote:

Hi all,
I'm just finishing up a 530S today, and it is of note, because it has
the most output power I have seen. It has not been QRO modded, that I
can see, and puts out 126 watts on 14M and 113 on 10M, at 215-225ma. SG
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and usually get exactly the numbers you expect, so I trust it. HV
readings are normal also.

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resistor on the rect board. After it was all fixed and I tuned up and
got 126w on 14M, I really looked for some QRO mod, but could find nothing.

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more? I don't remember that.

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Am I missing something?

Jim KE7OAY

40560. Re: [TS-520_820_530_830] Re: TS520 VOX unit transistor 2SA562Y

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-12 00:02:19 UTC
From: Jim Lamanteer
Topic: 40454 Message: 40560

GRANT GLAD TO HEAR IT THANKS FOR LETTING US KNOW.JIMMY WB2KNR

From: zl3ha <grant.rawstorn@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, January 11, 2013 3:38 AM
Subject: [TS-520_820_530_830] Re: TS520 VOX unit transistor 2SA562Y

Just an update on my VOX board issue -
I have now replaced Q8 with an NTE290A, D8 with a 1N4148, and also replaced the overheated resistors R13 and R16 and the board is now fully serviceable. Thanks to those who helped me both on forum and by PM.
Cheers
Grant

--- In mailto:TS-520_820_530_830%40yahoogroups.com, "zl3ha" wrote:
>
> Hi all and HNY
> I've just had this transistor (Q8) literally blow apart in my TS520. Has anyone had experience of finding a suitable and readily available replacement; and what might be the most likely cause of the failure?
> Best 73
> Grant, ZL3HA
>

[Non-text portions of this message have been removed]

40561. Re: [TS-520_820_530_830] High efficiency 530S ??

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-12 00:14:01 UTC
From: Jim Showker
Topic: 40504 Message: 40561

HI Bob,
Well, I do know that parts in the cage make a difference. Since we found and started using the ceramic doorknob .001 @10kv cap as the final coupling cap, we are getting 10-15 watts more output with no other changes. So it is possible to get more efficient. This cap changes the characteristics of the tune up on the lower bands just a little, but otherwise is just the same tune up. We are getting 110-115w pretty regularly now, but still I have not seen a single one produce over 100w on 10M til this 530S today.

The tubes on this 530S are 6146B's, GE I think, but don't remember for sure. After thinking about it, I think it should be fine, and the tubes should even last longer, if this truly is an efficiency issue, and not some metering problem or something that only had to do with the 530's. If efficiency is increased, then, by definition, less power is being dissipated at the plate and in the tube. So it would run cooler. The very sharp dip would seem to indicate a Hi Q tank circuit, which should produce more power and less loss. Also it may have to be retuned with very little freq change.

I wonder if it could be something like the big coil being wound from a different alloy or something. The caps should be pretty much the same, but lowering the R on the coil might make a difference.

Dave, I checked R38 and it looked fine. I've run it enough now, with tune up and checkout on each band, that I think if there was something unstable, it would have showed up. I'll test it one more time, but am pretty much ready to send it back to the customer.

Jim KE7OAY

40562. Re: [TS-520_820_530_830] High efficiency 530S ??

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-12 02:44:06 UTC
From: Mark L. Hammond
Topic: 40504 Message: 40562

At 04:14 PM 1/11/2013 -0800, you wrote:
>
>
>HI Bob,
>Well, I do know that parts in the cage make a difference. Since we
>found and started using the ceramic doorknob .001 @10kv cap as the final
>coupling cap, we are getting 10-15 watts more output with no other
>changes. So it is possible to get more efficient. This cap changes the
>characteristics of the tune up on the lower bands just a little, but

Hi Jim,

I just received from you one of these doorknobs for the final cage for my TS-520. Can you please elaborate what you mean when you say "This cap changes the characteristics of the tune up on the lower bands just a little"?

Oh, another thought--I also bought a set of the rubber feet for the "side" of the radio. They are very nice and a good bit bigger than the ones on my rig. In fact, they are so tall the existing screws won't thread in. Any idea what the thread is so I can try to find longer ones locally? Maybe the ones on my rig aren't typical "stock" rubber feet.

Thanks for making replacement parts available!

73,

Mark N8MH

>otherwise is just the same tune up. We are getting 110-115w pretty
>regularly now, but still I have not seen a single one produce over 100w
>on 10M til this 530S today.
>//
>Jim KE7OAY
>

[Non-text portions of this message have been removed]

40563. Re: WTB : Matched pair of New 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-12 01:47:53 UTC
From: herpsrwe
Topic: 40504 Message: 40563

Here's what all those letters and numbers mean, in a vacuum tube number
http://tubesound.com/2010/04/09/rma-tube-numbering-code/

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath wrote:
>
>
> Wasn't going to get into this discussion, 30 years ago I had one faulty tube, I could only get 1x tube within VK5 at the time, it was the s2001, I've put this in and neutralize the pa, to this day (touch wood) it has been working perfectly. I know lots of people say dont do this . The original tube only had 45 minutes of power and was the glass envelope that had a fault, got the new one under warranty. I've had a number of different tubes for rebuilds over the years, I prefer and pay a little extra for RCA and GE tubes, they have only failed when the radio goes to the owner who over drives or over tunes the PA. I have a pair of matched tubes, but only beacuse they came as a spare set when I bought another radio. I put all my spare tubes on a "getter" every 3 months. Dont waste your money on matched pairs unless there the same price.
>
> Dave
> VK5PDL
>
>
>
>
> To: TS-520_820_530_830@yahoogroups.com
> From: davidcuttler@...
> Date: Fri, 11 Jan 2013 05:55:54 +0000
> Subject: [TS-520_820_530_830] Re: WTB : Matched pair of New 6146B
>
>
>
>
>
>
> It is my understanding that the 6146W can replace the 6146B, but not the 6146A.
>
> I tried a pair of Taylor 6146B tubes in my 830S, and they were just awful. When I contacted RF parts who sold them to me, the fellow I talked to suggested I try a pair of Phillips 6146W tubes which worked very well. They are putting out a solid 100W into a dummy load while only drawing 230 ma. This was measured on my Bird wattmeter. I am more than satisfied with them.
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> Regards,
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> David
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> > Thanks for posting that source! They state the 6146W can replace the 6146, 6146 A and B. Is this true? I use different equipment that uses the different versions of the 6146.
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> > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
>

40564. 530S / Signal Link Issues

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-12 03:07:18 UTC
From: Jim
Topic: 40504 Message: 40564

I am hoping somebody has already gone through this exercise-

I added a 5 pin DIN connector to the back of the radio in one of the empty connector locations so I could connect the radio to a SignalLink USB interface.

I was thinking the high side of the AF Gain pot would be a good point for constant level RX, but it didn't work out that way. First, the signal appears to get loaded down as you can hear a change in the speaker volume when you connect this signal to the RX input of the SignalLink. And second, when I connect the SignalLink to my PC through the USB cable, I can hear AC hum on the RX audio. If you disconnect the USB cable, the hum goes away.

I can live with the reduction in audio level as this was somewhat expected as the transformer adds additional load. I was able to mitigate this somewhat by adding some additional resistance in series with the input of the transformer. The hum, however, is not acceptable.

The SignalLink uses transformers to couple the input and output audio as well as isolates the radio ground from the computer ground. I verified this by tracing out the circuitry on the SignalLink and verifying with a meter that the grounds are not common.

So, at this point I am not sure how the hum is being coupled onto the audio. Maybe the PCs chassis ground needs to be tied to chassis ground of the radio?

40565. RE: [TS-520_820_530_830] 530S / Signal Link Issues

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-12 05:00:41 UTC
From: fpath fpath
Topic: 40504 Message: 40565

Hi Jim,

The 530 is notrious for a hum in rx, some are worse than others. I spent too much time trying to reduce or eliminate but to no avail
it is a flaw in the circuit, several of the group who have outstanding knowledge gave me lots of help but it didnt go away, it was worse when using headphones. Do the standard check of molex connectors, cracked joints etc. You might be able to improve but will be time consuming checking caps and replacing if you find faulty ones. You might want to use top quality shielded cable, I know this does help along with making sure your ground it good, have you tried bonding everything together? Try re-seating the mounting screws or you can even add star washers to the mounting points, some have been able to improve their hum.

73s
Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: kc1rm@...
Date: Fri, 11 Jan 2013 22:07:18 -0500
Subject: [TS-520_820_530_830] 530S / Signal Link Issues

I am hoping somebody has already gone through this exercise-

I added a 5 pin DIN connector to the back of the radio in one of the empty connector locations so I could connect the radio to a SignalLink USB interface.

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So, at this point I am not sure how the hum is being coupled onto the audio. Maybe the PCs chassis ground needs to be tied to chassis ground

of the radio?

[Non-text portions of this message have been removed]

40566. Re: [TS-520_820_530_830] High efficiency 530S ??

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-12 08:36:57 UTC
From: Bob
Topic: 40504 Message: 40566

Hi Mark,

I think I can answer this one too. The ceramic doorknob cap are far better than the disk-type caps in the radio. I've used 'em in broadcast trannys as well -- they're small and work superb... really a hi performance cap.

The fact that the tuning characteristics change on low bands (i.e. 160m), is that the capacative reactance is a bit higher at lower freqs...that's all it means. Putting 2 .001's in parallel would technically be less reactive and may negate this effect, but it's really not worth the trouble. The .001's are very common for plate coupling caps.

Jim: Thanks for tell'n me about those 'knobys'... great idea for the 520 and the like. I think I'll upgrade my 520 with one as well.

Bob, KD5MHQ

--- On Fri, 1/11/13, Mark L. Hammond <marklhammond@...> wrote:

At 04:14 PM 1/11/2013 -0800, you wrote:

>

>

>HI Bob,

>Well, I do know that parts in the cage make a difference. Since we

>found and started using the ceramic doorknob .001 @10kv cap as the final

>coupling cap, we are getting 10-15 watts more output with no other

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Mark N8MH

>otherwise is just the same tune up. We are getting 110-115w pretty

>regularly now, but still I have not seen a single one produce over 100w

>on 10M til this 530S today.

>//

>Jim KE7OAY

40567. Re: [TS-520_820_530_830] High efficiency 530S ??

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-12 09:42:26 UTC
From: Jim Showker
Topic: 40504 Message: 40567

Bob,
Yes, correct on the low band tuning. It seems to be slightly different on 160M and 80M, Kinda like the Load control won't dip the current, or peak the power at all. It acts like a power level control (kinda like it's spose to?). At first it put me off, but when I realized that everything worked fine, it was OK.

We've tried two of them in parallel, and when you increase the size of the coupling cap, it affects the position of the Load control, and it's kind of like you run out of range for the control, so I don't recommend it. It seems like all the variables that go into making the final tank circuit work are all interrelated and can't just be changed will nilly without having unintended consequences.

And, Mark, maybe we sent you the wrong side feet, I'll send you a set of smaller ones.

73s
Jim KE7OAY

On 1/12/2013 12:36 AM, Bob wrote:
>
> Hi Mark,
>
> I think I can answer this one too. The ceramic doorknob cap are far
> better than the disk-type caps in the radio. I've used 'em in
> broadcast trannys as well -- they're small and work superb... really a
> hi performance cap.
>
> The fact that the tuning characteristics change on low bands (i.e.
> 160m), is that the capacative reactance is a bit higher at lower
> freqs...that's all it means. Putting 2 .001's in parallel would
> technically be less reactive and may negate this effect, but it's
> really not worth the trouble. The .001's are very common for plate
> coupling caps.
>
> Jim: Thanks for tell'n me about those 'knobys'... great idea for the
> 520 and the like. I think I'll upgrade my 520 with one as well.
>
> Bob, KD5MHQ
>
> --- On Fri, 1/11/13, Mark L. Hammond marklhammond@...
> <mailto:marklhammond%40gmail.com>> wrote:
>
> At 04:14 PM 1/11/2013 -0800, you wrote:
>

> >
>
> >
>
> >HI Bob,
>
> >Well, I do know that parts in the cage make a difference. Since we
>
> >found and started using the ceramic doorknob .001 @10kv cap as the final
>
> >coupling cap, we are getting 10-15 watts more output with no other
>
> >changes. So it is possible to get more efficient. This cap changes the
>
> >characteristics of the tune up on the lower bands just a little, but
>
> Hi Jim,
>
> I just received from you one of these doorknobs for the final cage for
> my TS-520. Can you please elaborate what you mean when you say "This
> cap changes the characteristics of the tune up on the lower bands just
> a little"?
>
> Oh, another thought--I also bought a set of the rubber feet for the
> "side" of the radio. They are very nice and a good bit bigger than the
> ones on my rig. In fact, they are so tall the existing screws won't
> thread in. Any idea what the thread is so I can try to find longer
> ones locally? Maybe the ones on my rig aren't typical "stock" rubber feet.
>
> Thanks for making replacement parts available!
>
> 73,
>
> Mark N8MH
>
> >otherwise is just the same tune up. We are getting 110-115w pretty
>
> >regularly now, but still I have not seen a single one produce over 100w
>
> >on 10M til this 530S today.
>
> >//
>
> >Jim KE7OAY
>
>

[Non-text portions of this message have been removed]

40568. Plate current falling

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-12 13:40:17 UTC
From: k5hfg
Topic: 40568 Message: 40568

Good morning all,
I have a 530 and 830 that I replaced screen and cathode resistors, Caps and choke in final tank, cleaned all switches and aligned per manuals. They were both non transmitting when I received them several months ago but up untill a few days ago I had both operating without any problems. I have used them just about every day on SSB and CW on 80, 40, 20 and 17 meters. I have noticed after an hour on the air that the plate current which I constantly monitor begins to fall back on keydown. It is a constant fall back for 50 mA and maybe would fall back more but I do not want to keydown more than a second or so. I can not find anything that would be causing this. HV is 850 and drops to about 750 on keydown. No reported audio or signal distortions. Has anyone experienced this problem. I thought it may be a meter problem, but on 2 rigs that have been revived? I also checked the power on a Bird 43 and it shows a fallback on keydown. About 10-20 watts in a second or so.
Any ideas?
73, Don K5HFG

40569. Re: [TS-520_820_530_830] High efficiency 530S ??

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-12 13:40:49 UTC
From: Mark L. Hammond
Topic: 40504 Message: 40569

Thanks, Jim. I'll contact you offlist and send a photo of the feet on my rig and the ones you sent. Maybe the ones on my rig aren't stock??

And the info on the doorknob cap will be helpful, too, when I get the new part installed.

73,

Mark N8MH

At 01:42 AM 1/12/2013 -0800, you wrote:
>
>
>Bob,
>Yes, correct on the low band tuning. It seems to be slightly
>different on 160M and 80M, Kinda like the Load control won't dip the
>current, or peak the power at all. It acts like a power level control
>(kinda like it's spose to?). At first it put me off, but when I
>realized that everything worked fine, it was OK.
>
>We've tried two of them in parallel, and when you increase the size
>of the coupling cap, it affects the position of the Load control, and
>it's kind of like you run out of range for the control, so I don't
>recommend it. It seems like all the variables that go into making the
>final tank circuit work are all interrelated and can't just be changed
>will nilly without having unintended consequences.
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>And, Mark, maybe we sent you the wrong side feet, I'll send you a set
>of smaller ones.
>
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>Jim KE7OAY
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>On 1/12/2013 12:36 AM, Bob wrote:
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>> Hi Mark,
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>> better than the disk-type caps in the radio. I've used 'em in
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>> hi performance cap.
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>> The fact that the tuning characteristics change on low bands (i.e.
>> 160m), is that the capacative reactance is a bit higher at lower
>> freqs...that's all it means. Putting 2 .001's in parallel would
>> technically be less reactive and may negate this effect, but it's
>> really not worth the trouble. The .001's are very common for plate

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>> Bob, KD5MHQ
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>> --- On Fri, 1/11/13, Mark L. Hammond <mailto:marklhammond%40gmail.com>marklhammond@...
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>> ones on my rig. In fact, they are so tall the existing screws won't
>> thread in. Any idea what the thread is so I can try to find longer
>> ones locally? Maybe the ones on my rig aren't typical "stock" rubber feet.
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>> Thanks for making replacement parts available!
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>> 73,
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>> Mark N8MH
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>> >otherwise is just the same tune up. We are getting 110-115w pretty
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>> >regularly now, but still I have not seen a single one produce over 100w

>>
>> >on 10M til this 530S today.
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>> >//
>>
>> >Jim KE7OAY
>>
>>
>
>[Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

40570. Re: WTB : Matched pair of New 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-12 14:05:56 UTC
From: herpsrwe
Topic: 40504 Message: 40570

I find no humor in someone wishing to have a matched pair of tubes. Seems logical, having a balanced circuit. A matched pair of transistors is best as well, in my opinion.
Everyone will have their own opinion, but I have read plenty of articles written by reputable technicians related to the subject.
It has been said, the stronger tube will prey upon the weaker tube and it will eventually fail. A viscious cycle will repeat, until one uses a matched pair. The same is said about final transistors used in pairs.
The manufacturer of one of my radios which uses transistors as finals, their Lead Technician recommends matched pairs, for that reason.
Yes, matched tubes may cost a little more... To me, well worth it.
Some say, a tube is a tube is a tube... Not all tubes are created equal. I'm sure you've noticed, having to compete with audiophiles in order to obtain some of these tubes. The craving for RCA black plate tubes... GE tubes... Tubes with certain getters...
1,000's of professional musicians cannot be wrong, using tube audio.
If there were something better they'd be using it, I imagine. They too, desire matched tubes. Yes, it even applies to trios, quads, etc, etc in my opinion. I imagine, the equipment manufacturers used matched tubes, tubes manufactured during the same run of production, which should be electrically identical. The equipment peaked and tuned using matched tubes.
There's plenty of talk of using tubes which are not matched... But it usually involves manipulating the electronic circuit, changing the value of components, in order to make the circuit balanced. Compensating for the electrical difference in the tubes... Whether you balance the circuit using matched tubes, or balance the circuit changing components... Most say, balanced is the way to go...
Just my opinions I have formed, having no electronics background, but rather using common sense while reading several articles related to the subject and then coming to my own conclusions...
Feel free to laugh, I can take it.
I am just a radio hobbyist who hopes to have trouble free equipment. I would use a matched pair of tubes. I imagine, if one sends a piece of equipment for repair, the technician would check for a matched pair of tubes, as part of troubleshooting...

--- In TS-520_820_530_830@...m, Mike wrote:
>
> Yep, we all know they can't post anything on the Internet unless it's
> true...hehehe
> On 1/7/2013 3:39 PM, John Davidson wrote:
> >
> > If he read it on lthe internet , it must be true :D :D
> >
> > _____
> > From: Mike w5rkl@... >
> > To: TS-520_820_530_830@yahoogroups.com
> >
> > Sent: Monday, January 7, 2013 3:40 PM

> > Subject: Re: [TS-520_820_530_830] WTB : Matched pair of New 6146B
> >
> >
> > Ray,
> >
> > What makes you think you need "matched pair of finals?" Were you told by
> > someone you should use matched tubes or did you read it somewhere?
> >
> > 73s
> > Mike
> > W5RKL
> >
> > On 1/7/2013 11:06 AM, John Davidson wrote:
> > >
> > > You don't need "MATCHED", indicating same emission curent test results
> > > etc.
> > > All a parallel tube circuit needs is the same letter suffix and tubes
> > > that work.
> > >
> > > _____
> > > From: raysdz mailto:raysdz%40yahoo.com >
> > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > >
> > > Sent: Sunday, January 6, 2013 12:06 AM
> > > Subject: [TS-520_820_530_830] WTB : Matched pair of New 6146B
> > >
> > >
> > > Hello, I am in need of a fresh matched pair of finals. TS-830S 6146B
> > >
> > > Thanks
> > >
> > > Ray WB8VDS
> > >
> > > [Non-text portions of this message have been removed]
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40571. Re: [TS-520_820_530_830] Re: WTB : Matched pair of New 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-12 16:29:15 UTC
From: John Davidson
Topic: 40504 Message: 40571

Dear herpswre (no call ?)

You missed the whole technical point about parallel vs push-pull circuits.
Tube finals are in Parallel circuits, Both tubes contribute in-phase power to a common point and they add up.
 Audio high fidelity amp pairs are in Push-pull circuits and need to be balanced because they are 180 degrees out of phase and add in a transformer pair of windings or are in a center tapped output xfmr to come out in phase.. Having to be of equal amplitude.
Totally different ideas.

.

_____
From: herpsrwe <herpsrwe@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, January 12, 2013 9:05 AM
Subject: [TS-520_820_530_830] Re: WTB : Matched pair of New 6146B

I find no humor in someone wishing to have a matched pair of tubes. Seems logical, having a balanced circuit. A matched pair of transistors is best as well, in my opinion.
Everyone will have their own opinion, but I have read plenty of articles written by reputable technicians related to the subject.
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The manufacturer of one of my radios which uses transistors as finals, their Lead Technician recommends matched pairs, for that reason
Reply via web post Reply to sender Reply to group Start a New Topic Messages in this topic (26)
Recent Activity: * New Members 9
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Switch to: Text-Only, Daily Digest • Unsubscribe • Terms of Use • Send us Feedback
.

[Non-text portions of this message have been removed]

40572. Re: [TS-520_820_530_830] Re: WTB : Matched pair of New 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-12 17:03:59 UTC
From: Michel van der Walle
Topic: 40504 Message: 40572

Hi,
I do not agree with you.
One has to consider in what class and in what configuration a pair of output tubes are employed.
In most RF output stages the tubes are run in Class AB1 (FM excepted where Class C is used)
In most Audio output stages the tubes are run in Class A (within the linear curve of the output device, may it be valve or transistor)
In RF output stages the tubes are run in Parrallel (It does not matter if the tubes are matched or not)
If one tube falls of in gain ie no longer matched all one will see is a reduction in output power.
In a Audio output stage most output devices are run in a Push Pull configuration.
If one tube in this output stage looses gain it will result also in loss of power but worse an increase in distortion.
In conclusion then in a pair of parralel wired output devices in a RF output stage Matched or not does not make any difference.
However in a Class A audio output utelizing a push pull configuration it does matter.
Regards Michel vk3kvw

----- Original Message -----
From: herpsrwe
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, January 13, 2013 1:05 AM
Subject: [TS-520_820_530_830] Re: WTB : Matched pair of New 6146B

I find no humor in someone wishing to have a matched pair of tubes. Seems logical, having a balanced circuit. A matched pair of transistors is best as well, in my opinion.
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1,000's of professional musicians cannot be wrong, using tube audio.
If there were something better they'd be using it, I imagine. They too, desire matched tubes. Yes, it even applies to trios, quads, etc, etc in my opinion. I imagine, the equipment manufacturers used matched tubes, tubes manufactured during the same run of production, which should be electrically identical. The equipment peaked and tuned using matched tubes.

There's plenty of talk of using tubes which are not matched... But it usually involves manipulating the electronic circuit, changing the value of components, in order to make the circuit balanced. Compensating for the electrical difference in the tubes... Whether you balance the circuit using matched tubes, or balance the circuit changing components... Most say, balanced is the way to go...
Just my opinions I have formed, having no electronics background, but rather using common sense while reading several articles related to the subject and then coming to my own conclusions...
Feel free to laugh, I can take it.
I am just a radio hobbyist who hopes to have trouble free equipment. I would use a matched pair of tubes. I imagine, if one sends a piece of equipment for repair, the technician would check for a matched pair of tubes, as part of troubleshooting...

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> > If he read it on lthe internet , it must be true :D :D
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> > From: Mike w5rkl@... >
> > To: TS-520_820_530_830@yahoogroups.com
> >
> > Sent: Monday, January 7, 2013 3:40 PM
> > Subject: Re: [TS-520_820_530_830] WTB : Matched pair of New 6146B
> >
> >
> > Ray,
> >
> > What makes you think you need "matched pair of finals?" Were you told by
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> > > From: raysdz mailto:raysdz%40yahoo.com >
> > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > >
> > > Sent: Sunday, January 6, 2013 12:06 AM

> > > Subject: [TS-520_820_530_830] WTB : Matched pair of New 6146B
> > >
> > >
> > > Hello, I am in need of a fresh matched pair of finals. TS-830S 6146B
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> > > Thanks
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> > > [Non-text portions of this message have been removed]
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Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 9.1.0.2900, Virus/Spyware Database: 6.20960)
http://www.pctools.com
=======

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 9.1.0.2900, Virus/Spyware Database: 6.20960)
http://www.pctools.com/
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40573. Re: [TS-520_820_530_830] Plate current falling

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-12 17:10:32 UTC
From: Michel van der Walle
Topic: 40568 Message: 40573

Swith on your internal calibrate signal.
Set the band switch to 10 meters
Peak the signal from the calibrator using the drive control.
If the signal does not peak to S9 you have a problem with the 12BY7 drive tube.
Regards Michel vk3kvw

----- Original Message -----
From: k5hfg
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, January 13, 2013 12:40 AM
Subject: [TS-520_820_530_830] Plate current falling

Good morning all,
I have a 530 and 830 that I replaced screen and cathode resistors, Caps and choke in final tank, cleaned all switches and aligned per manuals. They were both non transmitting when I received them several months ago but up untill a few days ago I had both operating without any problems. I have used them just about every day on SSB and CW on 80, 40, 20 and 17 meters. I have noticed after an hour on the air that the plate current which I constantly monitor begins to fall back on keydown. It is a constant fall back for 50 mA and maybe would fall back more but I do not want to keydown more than a second or so. I can not find anything that would be causing this. HV is 850 and drops to about 750 on keydown. No reported audio or signal distortions. Has anyone experienced this problem. I thought it may be a meter problem, but on 2 rigs that have been revived? I also checked the power on a Bird 43 and it shows a fallback on keydown. About 10-20 watts in a second or so.
Any ideas?
73, Don K5HFG

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Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 9.1.0.2900, Virus/Spyware Database: 6.20960)
http://www.pctools.com
=======

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Email scanned by PC Tools - No viruses or spyware found.
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[Non-text portions of this message have been removed]

40574. RE: [TS-520_820_530_830] Re: WTB : Matched pair of New 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-12 17:25:23 UTC
From: Rick Klinge
Topic: 40504 Message: 40574

Hello John,

I think you're correct. Also I believe tolerances of the tubes' parameters, such as transconductance, etc. can be quite high thus in audio/push-pull matched pairs are probably a good.
In my TS520SE all I had to do was neutralize them and that was it. Both tubes are different manufactures and have been running fine.

Rick
AC0TT

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of John Davidson
Sent: Saturday, January 12, 2013 10:29 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: WTB : Matched pair of New 6146B

Dear herpswre (no call ?)

You missed the whole technical point about parallel vs push-pull circuits.
Tube finals are in Parallel circuits, Both tubes contribute in-phase power to a common point and they add up.
Audio high fidelity amp pairs are in Push-pull circuits and need to be balanced because they are 180 degrees out of phase and add in a transformer pair of windings or are in a center tapped output xfmr to come out in phase.. Having to be of equal amplitude.
Totally different ideas.

.

40575. Re: Plate current falling

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-12 18:23:04 UTC
From: k5hfg
Topic: 40568 Message: 40575

Michel,
Thanks for the reply. I just checked the TS-530 on 28. It is still as I aligned it back in September. S9. Both rigs tune fine and no reported problems on the other end. But, while I was checking per your suggestion, I tuned back on 17 meters and got a little rough with the load control. In fact I banged it against the stop (by accident not by anger) and the current drop went away and the meter stayed at 100 watts with no drop. I decided to retune and see what happened. My plate dipped deep and every thing tuned up nicely with 220 mA and remained steady. So, it could be as simple as a dirty variable or a cold or cracked solder joint. The problem does act as it would were you to turn the Load control down. Maybe dirty cap? I have no idea how old the finals are but the driver is a new tube I replaced. I am not sure of a better way to clean a variable than to wash it but perhaps someone else has had this experience. I will have to open it back up again and check the drive cap. I do know that the finals were abused by the previous owner,(SK), because the choke was completely blackened and I rewound it. Have not had anything but good results since I worked on it in Sep. until now. I do not remember the load being in bad shape when I inspected it in Sep. It just seems odd that 2 different rigs develop the same glitch at the same time. Oh well, it is something to ponder. 73, Don K5HFG

40576. Re: [TS-520_820_530_830] Plate current falling

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-12 20:28:41 UTC
From: Joseph Stiles
Topic: 40568 Message: 40576

Don,

Falling Ip after key down is one of the first signs of failing finals. If, as you say, that the previous owner "abused" the rig, especially when the plate choke was discolored indicates that there was/is HIGH heat/current that discolored the varnish on the fine wire that the choke is wound with and,more than likely has damaged the final tubes. I would also suspect that they may be several other components(in the final cage area) that could have also been damaged. Take a look at Ken Kemski"s web site: k4eaa.com he has a very good section dealing with such a problem

73 Joe
WB7UQU

From: k5hfg <dlbowders@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, January 12, 2013 5:40 AM
Subject: [TS-520_820_530_830] Plate current falling

Good morning all,
I have a 530 and 830 that I replaced screen and cathode resistors, Caps and choke in final tank, cleaned all switches and aligned per manuals. They were both non transmitting when I received them several months ago but up untill a few days ago I had both operating without any problems. I have used them just about every day on SSB and CW on 80, 40, 20 and 17 meters. I have noticed after an hour on the air that the plate current which I constantly monitor begins to fall back on keydown. It is a constant fall back for 50 mA and maybe would fall back more but I do not want to keydown more than a second or so. I can not find anything that would be causing this. HV is 850 and drops to about 750 on keydown. No reported audio or signal distortions. Has anyone experienced this problem. I thought it may be a meter problem, but on 2 rigs that have been revived? I also checked the power on a Bird 43 and it shows a fallback on keydown. About 10-20 watts in a second or so.
Any ideas?
73, Don K5HFG

[Non-text portions of this message have been removed]

40577. Re: [TS-520_820_530_830] Plate current falling

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-12 20:33:54 UTC
From: Joseph Stiles
Topic: 40568 Message: 40577

How does the 12by7a driver tube affect the "calibrate signal," when it is not involved in the receive side of the rig?

73 Joe
WB7UQU

From: Michel van der Walle <vk3kvw@iinet.net.au>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, January 12, 2013 9:10 AM
Subject: Re: [TS-520_820_530_830] Plate current falling

Swith on your internal calibrate signal.
Set the band switch to 10 meters
Peak the signal from the calibrator using the drive control.
If the signal does not peak to S9 you have a problem with the 12BY7 drive tube.
Regards Michel vk3kvw

----- Original Message -----
From: k5hfg
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, January 13, 2013 12:40 AM
Subject: [TS-520_820_530_830] Plate current falling

Good morning all,
I have a 530 and 830 that I replaced screen and cathode resistors, Caps and choke in final tank, cleaned all switches and aligned per manuals. They were both non transmitting when I received them several months ago but up untill a few days ago I had both operating without any problems. I have used them just about every day on SSB and CW on 80, 40, 20 and 17 meters. I have noticed after an hour on the air that the plate current which I constantly monitor begins to fall back on keydown. It is a constant fall back for 50 mA and maybe would fall back more but I do not want to keydown more than a second or so. I can not find anything that would be causing this. HV is 850 and drops to about 750 on keydown. No reported audio or signal distortions. Has anyone experienced this problem. I thought it may be a meter problem, but on 2 rigs that have been revived? I also checked the power on a Bird 43 and it shows a fallback on keydown. About 10-20 watts in a second
or so.
Any ideas?
73, Don K5HFG

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 9.1.0.2900, Virus/Spyware Database: 6.20960)
http://www.pctools.com
=======

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 9.1.0.2900, Virus/Spyware Database: 6.20960)
http://www.pctools.com/
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[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

40578. Re: Plate current falling

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-12 20:55:51 UTC
From: k5hfg
Topic: 40568 Message: 40578

Hey Joe,
I believe Michel was thinking of my driver and I checked drive and it is steady. I did say that the rig tunes just fine on all bands with 100 watts and a little less above 17 meters. I replaced all in the final cage as described on Ken's website. I had to rewind the choke because it appeared to be damaged from heat. It looked worse than the piture on Ken's website. It has served fine since September when I did all the repairs. The tubes seem to be fine but like I said in my last post this problem just came up and I did temporarily solve it when I accidently banged the driver on the stop. I think it may be a dirty variable but I will keep an eye on it. I am active almost every day so I can monitor it for the next several days and open it up one day to check the load variable for dirt or loose solder joint or whatever.
73, Don K5HFG

40579. Re: [TS-520_820_530_830] Re: Plate current falling

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-12 21:56:46 UTC
From: Joseph Stiles
Topic: 40568 Message: 40579

Mel,

Very good. I was thinking also that: take a look at the shaft that is connected to the 3 air variables. I have seen the set screws that hold the sprockets in place crack the collars...and get the "system" out of sync if the load control is turned too hard to its stops. These cannot be glued. They are made of nylon...the same goes for the band switch coupler on the 530's and 830's....over time, they will crack...and make life unpleasant.

73 Joe
WB7UQU

From: k5hfg <dlbowders@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, January 12, 2013 12:55 PM
Subject: [TS-520_820_530_830] Re: Plate current falling

Hey Joe,
I believe Michel was thinking of my driver and I checked drive and it is steady. I did say that the rig tunes just fine on all bands with 100 watts and a little less above 17 meters. I replaced all in the final cage as described on Ken's website. I had to rewind the choke because it appeared to be damaged from heat. It looked worse than the piture on Ken's website. It has served fine since September when I did all the repairs. The tubes seem to be fine but like I said in my last post this problem just came up and I did temporarily solve it when I accidently banged the driver on the stop. I think it may be a dirty variable but I will keep an eye on it. I am active almost every day so I can monitor it for the next several days and open it up one day to check the load variable for dirt or loose solder joint or whatever.
73, Don K5HFG

[Non-text portions of this message have been removed]

40580. TS-520 CW Filter Loss of Gain

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-12 22:54:36 UTC
From: thf_99
Topic: 40580 Message: 40580

My TS-520 has both SSB and CW filters. Both work, but when using the CW filter, there is a significant loss in signal strength even when the desired signal is centered at the design frequency of the filter. It is so significant, that I have trouble hearing anything other than the strongest CW stations. I have aligned the rig in accordance with the specs. There are no problems with the SSB function. Is this an indication of a problem with the CW filter or did I perhaps miss something in the alignment process that is causing this problem? Thanks. Tom, W4OEQ

40581. RE: [TS-520_820_530_830] Re: Plate current falling

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-12 23:23:07 UTC
From: fpath fpath
Topic: 40568 Message: 40581

Don,

You have almost answered your own question. You stated that when you banged the control to the stop it corrected the fault, this would usually indicate a loose fitting, cracked\cold solder joint. Kenwood did have a batch of radios where in the the final cage. the wire was only wrapped and not soldered, have a detailed look at all the solder joints and wires that have been wrapped. Unfortunately, as you have stated the former owner did over heat the choke and that you have rewound it, not an easy job and credit to you for rewinding. I'm unsure if you did replace the other common parts in the PA cage from over heating, if you havent I'd replace the parts as per Ken's web page, then at least you know you can eleminate that area altogether. It is not uncommon to have a critter make its home amongst the plates of the air caps, have a good look in between, make sure there is no fine burrs or burn marks. As you fix one radio, I'd then go straight to the other and look in the same area This sounds more like a mechanical issue rather than faulty electronic issue. Please advise what you find.

73's
Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: dlbowders@nepower.coop
Date: Sat, 12 Jan 2013 18:23:04 +0000
Subject: [TS-520_820_530_830] Re: Plate current falling

Michel,
Thanks for the reply. I just checked the TS-530 on 28. It is still as I aligned it back in September. S9. Both rigs tune fine and no reported problems on the other end. But, while I was checking per your suggestion, I tuned back on 17 meters and got a little rough with the load control. In fact I banged it against the stop (by accident not by anger) and the current drop went away and the meter stayed at 100 watts with no drop. I decided to retune and see what happened. My plate dipped deep and every thing tuned up nicely with 220 mA and remained steady. So, it could be as simple as a dirty variable or a cold or cracked solder joint. The problem does act as it would were you to turn the Load control down. Maybe dirty cap? I have no idea how old the finals are but the driver is a new tube I replaced. I am not sure of a better way to clean a variable than to wash it but perhaps someone else has had this experience. I will have to open it back up again and check the drive cap. I do know that the finals were abused by the previous owner,(SK), because the choke was completely blackened and I rewound it. Have not had anything but good results since I worked on it in Sep. until now. I do not remember the load being in bad shape when I inspected it in Sep. It just seems odd that 2 different rigs develop the same glitch at the same time. Oh well, it is something to ponder. 73, Don K5HFG

[Non-text portions of this message have been removed]

40582. Re: Plate current falling

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-12 23:41:26 UTC
From: k5hfg
Topic: 40568 Message: 40582

Hello Dave,
Thanks for the reply. I am a follower of K4EAA and have learned quite a bit from his web site. I did replace the plate choke(rewound), C7, C8 and L1 in the tank and I replaced the cathode and screen resistors and realigned per manual this past October when I got the rig at a Ham Fest. Everything checked OK and it has been operating just FB until I noticed this problem. I will update when I know more. I use the rig quite bit so it will not take long to find out. I have also knocked the TS-830 load around a bit and got the same results. I guess it is not that strange to have the same thing happen to 2 different rigs when you consider that we buy them because they need repaired in the first place. No telling what they have been thru before we redeemed them.
73 Don K5HFG

40583. RE: [TS-520_820_530_830] Re: Plate current falling

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-13 02:54:33 UTC
From: fpath fpath
Topic: 40568 Message: 40583

Don, Enjoy the radios, nothing nicer knowing that you have done the hard work repairing it. It took me nearly 6 months to fully resotre to radios, both with different problems. If it wasn't for the great folks on this forum then I wouldn't have gotten the passion back to get back into it. I can give you lots my info to check but like to do the simple things first then progress to the harder things, but I'm sure you doing that already. Enjoy and look forward to hearing more of what you find

Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: dlbowders@...
Date: Sat, 12 Jan 2013 23:41:26 +0000
Subject: [TS-520_820_530_830] Re: Plate current falling

Hello Dave,
Thanks for the reply. I am a follower of K4EAA and have learned quite a bit from his web site. I did replace the plate choke(rewound), C7, C8 and L1 in the tank and I replaced the cathode and screen resistors and realigned per manual this past October when I got the rig at a Ham Fest. Everything checked OK and it has been operating just FB until I noticed this problem. I will update when I know more. I use the rig quite bit so it will not take long to find out. I have also knocked the TS-830 load around a bit and got the same results. I guess it is not that strange to have the same thing happen to 2 different rigs when you consider that we buy them because they need repaired in the first place. No telling what they have been thru before we redeemed them.
73 Don K5HFG

[Non-text portions of this message have been removed]

40584. TS-530-830 plate choke

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-13 03:51:46 UTC
From: k5hfg
Topic: 40584 Message: 40584

All,
I received an Email from Joe inquiring how I replaced a burned plate choke in my 530. I have lost that Email and will attempt to contact Joe thru this post. I removed the burned wire and rubbed the form to remove all the residue and varnish. I measured the wire dia at about .008 and counted the wraps as I removed them. I then rewound the choke using AWG #32 enameled wire. I wound about 10 or 15 turns at a time and secured with elmers glue. I let this dry over nite and repeated the process over many several days. I counted 195 turns so it takes a few days to complete :-)) I buy the wire in 1/4 pound spools. There is over 3,000 ft on the spool. By the way, do not drop the spool on the floor of your shack! It took me a week to untangle and wind it back on another spool.
Only lost a couple feet due to knots but many hours. I am not sure what the inductance of my coil ended up at but it works fine as I can tell. I check it periodically to make sure all is well. I tune my rigs very conservatively and monitor Ip constantly so I know it is not being abused. So far under these conditions I have had no problem with it. I will be sure to mention on this forum if it does not end well. The parts list says it is 470 mH. I am sure mine is within tolerance or it would have caused some trouble by now. It has been 3 1/2 months of almost daily use.

Joe,
You mentioned your wire had come loose from the form. If you are sure it is not broken you can wind it back on and glue it. Otherwise.....hope you have some free time.
73, Don K5HFG

40585. Unwonted signal on 15 meter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-13 15:31:17 UTC
From: emilioc
Topic: 40585 Message: 40585

Hi all's.
My Kenwood TS 820 has strange problem.
On 21.200 mhz working like a generator.
On this frequency there is signal for about S3
and wirh VFO-820 connected going to S9.
Well were is peduced this signal without antenna
really i don't know.
I have cecked the major area were i think is generated
but i do not found any thing.
Any one haved same problem.
Thanks
Regards
Emy

40586. RE: [TS-520_820_530_830] KENWOOD HYBRID USER NET (January 12th, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-13 18:18:34 UTC
From: Cal Vasquez
Topic: 40586 Message: 40586

Hello fellow hybrid users,

Well today I thought I would get things ready try to check in to the Kenwood hybrid users net for the first time. I heard the folks from the ICOM net and when they turned it over to the Kenwood group but I was not able to hear anyone. Yes this is the first time that I even tried to hear it. Well I guess here in Pittsburg CA. I am not able to hear it. I can hear voices under the noise but not able to understand what is being said. And that's it. Right now I do have a noise floor of s-7 to an s-8. So now going forward ihave the nets in my calendar and will listen again in the future. Hope that there is an opening so that I can check in with my TS-830s.

Cal Vasquez

K6VT

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of mvgilger
Sent: Sunday, January 06, 2013 11:35 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] KENWOOD HYBRID USER NET (January 7th, update)

The Saturday's net on 40 meter we had 20 stations checking with good band conditions. Out of those, there was 6 running TS-520(x), 4 running TS-530(x), 5 running TS-820(x), 1 running TS-830S. I was running a TS830. The rest were running non hybrids of one model or another.

The Sunday 20 meter net we had 19 stations checking in under good band conditions. Out of those, there were 4 running TS-520(x), 1 running TS-530(x), 2 running TS-820(x), 2 running TS-830S and 1 running 599 twins. I was running a non hybrid TS-830s. The rest were running non hybrids of one model or another.

We have been having several people checking in regularly with their TS-430, TS-440, and TS-940's, which of course is not a hybrid, although over 30+ years old.

If anyone would be interested in filling in as a net control station, please send me an email. Currently it's just myself, WB2KNR and WB0SGA. I would like to get several more. If we do, we can alternate so everyone might be on a 3-4 week rotation. It's a lot of fun and a good way to make sure you station is optimized.

For anyone that has not heard, we have a new web site that WB4HFN is hosting. He currently has a very nice site for Drake, Collins and Heathkit and now Kenwood Hybrids. Good quality manuals plus sale flyers and brochures

will be found here, along with user supplied information for all Hybrids.

His URL is:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 - Oct. 2012 Saturday total 754 check-ins, Sunday total 563 check-ins

November 2012, Saturday's, net total = 47, Sundays total = 20
December 2012, Saturday's, net total = 74, Sunday's total = 70
January 2013, Saturday's, net total = 20, Sunday's total = 19 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

[Non-text portions of this message have been removed]

40587. Re: [TS-520_820_530_830] TS-520 CW Filter Loss of Gain

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-13 20:51:44 UTC
From: John Davidson
Topic: 40580 Message: 40587

My TS520 400 Hz CW filter does reduce the signals, compared to tohe SSB filter, but only about one S unit. Maybe you have a bad filter or alignment problem in the can nearest to the filter input or output.
My newest Kenwood is a TS440s and it does the same thing, about 1 S unit reduction in signals with the 500 Hz CW filter in..

From: thf_99 <thfisher@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, January 12, 2013 5:54 PM
Subject: [TS-520_820_530_830] TS-520 CW Filter Loss of Gain

My TS-520 has both SSB and CW filters. Both work, but when using the CW filter, there is a significant loss in signal strength even when the desired signal is centered at the design frequency of the filter. It is so significant, that I have trouble hearing anything other than the strongest CW stations. I have aligned the rig in accordance with the specs. There are no problems with the SSB function. Is this an indication of a problem with the CW filter or did I perhaps miss something in the alignment process that is causing this problem? Thanks. Tom, W4OEQ

[Non-text portions of this message have been removed]

40588. Re: [TS-520_820_530_830] KENWOOD HYBRID USER NET (January 12th, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-13 22:47:23 UTC
From: KB1TCD
Topic: 40586 Message: 40588

Cal,

There was a slight glitch on the hybrid net; there was no net control so
a few of us kept it going so we wouldn't loose
the frequency for a while, finally, Richard, KJ4ZiZ, took the reigns and
we had a good net with about 20 check ins, net was closed at 20:00 UTM.
You might also want to try checking in Saturday at 12:30pm your time on
40 meters.

73 de Jose Douglas, KB1TCD

40589. Re: [TS-520_820_530_830] KENWOOD HYBRID USER NET (January 12th, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-14 02:05:33 UTC
From: Ned Chatelain
Topic: 40586 Message: 40589

Hello All-
I have a basic engineering question that I hope someone may be able to shed some light on. I operate a ts 520s and have long wondered why 1) you can sometimes hear the oscillator whistle on one side of a received SSB signal (or both sides of CW), and why that whistle is often many s-units stronger than the signal itself, and 2) why you can often hear a strong whistle, but no signal.
I'd appreciate both an explanation of why this happens, and also recommendations for further reading on this topic.
Thanks, and Happy New Year to all!
Ned
KJ4YNP

On Sun, Jan 13, 2013 at 5:47 PM, KB1TCD <kb1tcd@...> wrote:

> **
>
>
> Cal,
>
> There was a slight glitch on the hybrid net; there was no net control so
> a few of us kept it going so we wouldn't loose
> the frequency for a while, finally, Richard, KJ4ZiZ, took the reigns and
> we had a good net with about 20 check ins, net was closed at 20:00 UTM.
> You might also want to try checking in Saturday at 12:30pm your time on
> 40 meters.
>
> 73 de Jose Douglas, KB1TCD
>
>
>

[Non-text portions of this message have been removed]

40590. Re: TS-520 CW Filter Loss of Gain

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-14 03:27:08 UTC
From: thf_99
Topic: 40580 Message: 40590

Thanks for comment. I did further testing and can see the reduction in signal strength of about 1 S units (or perhaps a little more). However, upon closer listening to a steady carrier signal, I see that I do NOT have a single peak on the CW filter. It appears to have two and perhaps three peaks as if the bandpass curve is not symmetrical. If I had a scope, it would show as ripples at the top of the wave plot, I suppose. Would this mean that I have slight differences in the coil settings across the several IF coils? 73, Tom

--- In TS-520_820_530_830@yahoogroups.com, John Davidson wrote:
>
> My TS520 400 Hz CW filter does reduce the signals, compared to tohe SSB filter, but only about one S unit. Maybe you have a bad filter or alignment problem in the can nearest to the filter input or output.
> My newest Kenwood is a TS440s and it does the same thing, about 1 S unit reduction in signals with the 500 Hz CW filter in..
>
>
> _____
> From: thf_99
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Saturday, January 12, 2013 5:54 PM
> Subject: [TS-520_820_530_830] TS-520 CW Filter Loss of Gain
>
> Â
> My TS-520 has both SSB and CW filters. Both work, but when using the CW filter, there is a significant loss in signal strength even when the desired signal is centered at the design frequency of the filter. It is so significant, that I have trouble hearing anything other than the strongest CW stations. I have aligned the rig in accordance with the specs. There are no problems with the SSB function. Is this an indication of a problem with the CW filter or did I perhaps miss something in the alignment process that is causing this problem? Thanks. Tom, W4OEQ
>
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> [Non-text portions of this message have been removed]
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40591. Engineering Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-14 02:33:40 UTC
From: Ned Chatelain
Topic: 40591 Message: 40591

Hello All-
I have a basic engineering question that I hope someone may be able to shed some light on. I operate a ts 520s and have long wondered why 1) you can sometimes hear the oscillator whistle on one side of a received SSB signal (or both sides of CW), and why that whistle is often many s-units stronger than the signal itself, and 2) why you can often hear a strong whistle, but no signal.
I'd appreciate both an explanation of why this happens, and also recommendations for further reading on this topic.
Thanks, and Happy New Year to all!
Ned
KJ4YNP

[Non-text portions of this message have been removed]

40592. Re: [TS-520_820_530_830] KENWOOD HYBRID USER NET (January 12th, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-14 03:47:34 UTC
From: Mark Gilger
Topic: 40586 Message: 40592

I had arranged that Tom, WB0SGA would be taking
the net today when I heard that Rich took on the duties.

I need to talk Rich into being one of our net
control stations to help out the load.

Thanks for those that checked in and see you this coming weekend.

73's,
Mark, WB0IQK

At 05:47 PM 1/13/2013, KB1TCD wrote:
>
>
>Cal,
>
>There was a slight glitch on the hybrid net; there was no net control so
>a few of us kept it going so we wouldn't loose
>the frequency for a while, finally, Richard, KJ4ZiZ, took the reigns and
>we had a good net with about 20 check ins, net was closed at 20:00 UTM.
>You might also want to try checking in Saturday at 12:30pm your time on
>40 meters.
>
>73 de Jose Douglas, KB1TCD
>
>

[Non-text portions of this message have been removed]

40593. Re: [TS-520_820_530_830] Re: TS-520 CW Filter Loss of Gain

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-14 03:51:43 UTC
From: John Davidson
Topic: 40580 Message: 40593

Most filters have this bandpass "Ripple", caused internally by the filter's structure. I just pick the middle peak and things work ok.

From: thf_99 <thfisher@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, January 13, 2013 10:27 PM
Subject: [TS-520_820_530_830] Re: TS-520 CW Filter Loss of Gain

Thanks for comment. I did further testing and can see the reduction in signal strength of about 1 S units (or perhaps a little more). However, upon closer listening to a steady carrier signal, I see that I do NOT have a single peak on the CW filter. It appears to have two and perhaps three peaks as if the bandpass curve is not symmetrical. If I had a scope, it would show as ripples at the top of the wave plot, I suppose. Would this mean that I have slight differences in the coil settings across the several IF coils? 73, Tom

--- In mailto:TS-520_820_530_830%40yahoogroups.com, John Davidson wrote:
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

40594. Re: [TS-520_820_530_830] Engineering Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-14 03:53:08 UTC
From: John Davidson
Topic: 40591 Message: 40594

Is this on an AM signal ??confusing info.

From: Ned Chatelain <nedchatelain@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, January 13, 2013 9:33 PM
Subject: [TS-520_820_530_830] Engineering Question

Hello All-
I have a basic engineering question that I hope someone may be able to shed some light on. I operate a ts 520s and have long wondered why 1) you can sometimes hear the oscillator whistle on one side of a received SSB signal (or both sides of CW), and why that whistle is often many s-units stronger than the signal itself, and 2) why you can often hear a strong whistle, but no signal.
I'd appreciate both an explanation of why this happens, and also recommendations for further reading on this topic.
Thanks, and Happy New Year to all!
Ned
KJ4YNP

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

40595. Re: [TS-520_820_530_830] Plate current falling

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-14 04:22:47 UTC
From: John Davidson
Topic: 40568 Message: 40595

The transmitter "drive" variable cap is ganged physically to the RF recieve amp tuning cap.
The 12by7 tube would be suspect in fading power output and not really connected to the reciever.
Alignment issues May cause peak redaing ot RX and driver tuning to be in different positions of the "drive" tuning knob..
SO if you peak the reciever signal with the drive and have to move the control to get peak ALC on transmit tuneup You should consider a complete realignment to get things lined up .

_820_530_830@yahoogroups.com> BY7
Sent: Saturday, January 12, 2013 3:33 PM
Subject: Re: [TS-520_820_530_830] Plate current falling

How does the 12by7a driver tube affect the "calibrate signal," when it is not involved in the receive side of the rig?

73 Joe
WB7UQU

_____
From: Michel van der Walle mailto:vk3kvw%40iinet.net.au>
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Saturday, January 12, 2013 9:10 AM
Subject: Re: [TS-520_820_530_830] Plate current falling

Swith on your internal calibrate signal.
Set the band switch to 10 meters
Peak the signal from the calibrator using the drive control.
If the signal does not peak to S9 you have
Good morning
73, Don K5HFGhave been removed]

[Non-text portions of this message have been removed]

40596. Re: TS-520 CW Filter Loss of Gain

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-14 15:12:10 UTC
From: Brian Allen
Topic: 40580 Message: 40596

I use my 520s on cw quite a bit. The cw filter can reduce a weak signal considerably. Strong signals not affected much at all. If you are a cw op, you really need to do the modification that allows you to cut the cw filter off. You really need the filter at times. most of the time I don't use the filter.
The cw filter will cut out a station responding to a cq all together.

The mod is very easy. All it requires is a couple of pieces of wire. I wired mine to the fixed channel switch. No filter is no. 1, no 2. is the filter in line.

kb4mng

[Non-text portions of this message have been removed]

40597. Re: KENWOOD HYBRID USER NET (January 12th, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-14 15:13:50 UTC
From: Brian Allen
Topic: 40586 Message: 40597

Could not check in Sat. but talked to the guys on Sun. Was the first time I could hear several stations on sunday.

[Non-text portions of this message have been removed]

40598. Re: [TS-520_820_530_830] Engineering Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-14 13:33:14 UTC
From: Ned Chatelain
Topic: 40591 Message: 40598

Thanks for the reply - to clarify, I'm interested in understanding the technical reason why you sometimes hear oscillator whistle along with a received signal, sometimes don't, and sometimes hear a received signal with no oscillator noise, on AM, SSB and CW modes.

On Sun, Jan 13, 2013 at 10:53 PM, John Davidson <k8jd@...> wrote:

> **
>
>
> Is this on an AM signal ??confusing info.
>
> _____
> From: Ned Chatelain nedchatelain@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sunday, January 13, 2013 9:33 PM
> Subject: [TS-520_820_530_830] Engineering Question
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> Hello All-
> I have a basic engineering question that I hope someone may be able to shed
> some light on. I operate a ts 520s and have long wondered why 1) you can
> sometimes hear the oscillator whistle on one side of a received SSB signal
> (or both sides of CW), and why that whistle is often many s-units stronger
> than the signal itself, and 2) why you can often hear a strong whistle, but
> no signal.
> I'd appreciate both an explanation of why this happens, and also
> recommendations for further reading on this topic.
> Thanks, and Happy New Year to all!
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> KJ4YNP
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40599. noisy receive on TS 520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-14 17:19:17 UTC
From: G4jbr
Topic: 40599 Message: 40599

Hi .....MY friend has a TS520 which,when on receive,goes noisy,like as tho' it's a dirty pot...and sometimes turning the AF pot does the trick but other times not...can anyone suggest where to look?
thanks Pete g4jbr

[Non-text portions of this message have been removed]

40600. Re: Engineering Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-14 18:58:30 UTC
From: roberteleazer@rocketmail.com
Topic: 40591 Message: 40600

Well, Ned, I personally still am not sure what you are asking about but let me provide some general info.

Of course, if you tune in an AM signal on a TS-520, whether in CW or SSB modes, you will likely hear the carrier signal in addition to the modulation. In fact, I have on occasion tuned in an AM signal on the ham bands and not even realized it was AM rather than SSB. One guy running an old military transmitter on AM even said that happens to him a great deal; people he is talking to do not even know he is not on SSB. And of course this same thing happens when you tune in an AM signal with a receiver that has a BFO you can turn on and off

Also, it is possible that you might tune in a "beat" note between two AM signals as they interfere with one another, even with am AM-only receiver. Back in the days when all communication was AM with no sideband or carrier suppression that used to happen all the time on the ham bands. They called it "heterodyning." Essentially the carriers of two AM signals are combining so to produce the beat note the same way a BFO does. You still hear this occasionally on aircraft VHF AM transmissions

Here is a simple experiment you can try. Take a little AM portable radio and turn it on. Then turn on your car radio and tune it to a station around the middle of the AM band. Then tune the portable radio, hold it next to the car antenna, and you will find a spot where the local oscillator of the portable interferes with the station you have tuned to, producing a squeal. That's actually a simple way to add a BFO to an AM radio ☐ rather than injecting a signal at the IF inject one at the antenna with another tunable oscillator. In fact hams sued to employ this principle to make sure they were on the same frequency as a station they wanted to communicate with: use the oscillator signal from your separate transmitter to act as a BFO for your receiver, so both are then netted to the same frequency as the other station.

As for "oscillator whine" not accompanied by a station, there are many sources of HF signals that you can receive. One common one is the 3.579 MHZ signal used as a frequency standard by older CRT type TV sets as well as some other equipment. Harmonics of that signal are common as well; I cannot tune in the Kenwood Hybrids Net on Sundays because I get so much interference from TVs on that same frequency that it is just too painful to listen to.

So, I hope I have answered your question, but I am not sure I understood it.

73's

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, Ned Chatelain wrote:
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40601. Re: TS-520 CW Filter Loss of Gain

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-14 20:19:32 UTC
From: thf_99
Topic: 40580 Message: 40601

I have already done the modification and it works as it should. I have found that if I begin a CW QSO with the filter off, it is almost impossible to engage the filter and find the other station within the allowable (narrow) passband. I can use the RIT function and try to find the other station but if he is really weak, I may not find him at all. On the other hand, if I answer a station calling CQ and if I previously have tuned him in with the narrow filter, there is no problem in completing the QSO.

I am stating the obvious, but the difference in sensitivity, selectivity, and operator convenience between the 520 and my Omni-VII is tremendous. Technology has come a longgggg way. 72, Tom, W4OEQ

--- In TS-520_820_530_830@yahoogroups.com, Brian Allen wrote:
>
> I use my 520s on cw quite a bit. The cw filter can reduce a weak signal considerably. Strong signals not affected much at all. If you are a cw op, you really need to do the modification that allows you to cut the cw filter off. You really need the filter at times. most of the time I don't use the filter.
> The cw filter will cut out a station responding to a cq all together.
>
> The mod is very easy. All it requires is a couple of pieces of wire. I wired mine to the fixed channel switch. No filter is no. 1, no 2. is the filter in line.
>
> kb4mng
>
>
>
> [Non-text portions of this message have been removed]
>

40602. Low Power when in tune on TS-520S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-14 20:23:34 UTC
From: tjb813
Topic: 40602 Message: 40602

When I put my TS-520S in "Tune" and key up I get less than 1 watt. IN CW mode I get 100W. Is there a power level set for the Tune function? Or is there a particular resistor that sets the tune level?

THanks for the help!

40603. Re: [TS-520_820_530_830] Plate current falling

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-14 20:28:31 UTC
From: Joseph Stiles
Topic: 40568 Message: 40603

I have done some research with the assistance of another member of this group. The 12by7a can affect the "drive" indication that may show on the front
panel markings around the knob, BUT, removal of the 12by7a driver may degrade the "S meter" reading causing the operator to adjust the load control
to obtain the same "S meter reading" it may be only "one or two hours" let's say...started at 11:00 o'clock...now 10:00 o'clock.

A good test of the driver is to basically see if it can supply "full drive" on 10 meters...which from my understanding and, reading/research..is the
first band to indicate that the driver may be "going soft."

Also, I have found that a drive tube, and or final tubes, may test.....insert....good, or a number here...according to my "various models of tubes testers" and not function correctly in the "actual environment."

Due to inflation...that's my 25 cent worth.

73 Joe
WB7UQU

From: John Davidson <k8jd@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Sunday, January 13, 2013 8:22 PM
Subject: Re: [TS-520_820_530_830] Plate current falling

The transmitter "drive" variable cap is ganged physically to the RF recieve amp tuning cap.
The 12by7 tube would be suspect in fading power output and not really connected to the reciever.
Alignment issues May cause peak redaing ot RX and driver tuning to be in different positions of the "drive" tuning knob..
SO if you peak the reciever signal with the drive and have to move the control to get peak ALC on transmit tuneup You should consider a complete realignment to get things lined up .

_820_530_830@yahoogroups.com> BY7
Sent: Saturday, January 12, 2013 3:33 PM
Subject: Re: [TS-520_820_530_830] Plate current falling

How does the 12by7a driver tube affect the "calibrate signal," when it is not involved in the receive side of the rig?

73 Joe
WB7UQU

From: Michel van der Walle mailto:vk3kvw%40iinet.net.au>

To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Saturday, January 12, 2013 9:10 AM
Subject: Re: [TS-520_820_530_830] Plate current falling

Swith on your internal calibrate signal.
Set the band switch to 10 meters
Peak the signal from the calibrator using the drive control.
If the signal does not peak to S9 you have
Good morning
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40604. Re: [TS-520_820_530_830] Low Power when in tune on TS-520S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-14 20:42:45 UTC
From: Joseph Stiles
Topic: 40602 Message: 40604

Take a look at the HV UNIT X43-1110-00...measure the voltage...at the "wire wrap" posts....I think one post is marked "210" another "TUNE" It is possible that resistors R-5 & R-6, both 56K, have gone way out of spec.Tune mode cuts the voltage down during "tune" to give the finals a break from being operated out of tune..while "tuning." There may be other problems...but measure the voltages first. BE CAREFUL!!!! THERE IS ABOUT 900VDC LURKING AROUND THAT AREA!

73 Joe
WB7UQU

From: tjb813 <tjb813@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, January 14, 2013 12:23 PM
Subject: [TS-520_820_530_830] Low Power when in tune on TS-520S

When I put my TS-520S in "Tune" and key up I get less than 1 watt. IN CW mode I get 100W. Is there a power level set for the Tune function? Or is there a particular resistor that sets the tune level?

THanks for the help!

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40605. Re: [TS-520_820_530_830] Plate current falling

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-14 21:05:18 UTC
From: Mike
Topic: 40568 Message: 40605

The "LOAD" control has absolutely nothing to do with nor will it have
any affect on the receivesignal and the receiver's "S" meter indication
in receive!

The "LOAD" control is a "Transmitter " control and functions ONLY in
transmit. It is a multi-section variable capacitor which is part of and
attached to the output of the final amplifier's PI Network. The LOAD
control, when adjusted, provides a means to match the impedance load
(antenna or dummy load) connected to the antenna connector's SO-239 and
the output of the PI Network.

The receive signal does NOT flow through the PI Network and any
adjustment of the LOAD control will have no affect on the receive signal.

73s
Mike
W5RKL

On 1/14/2013 2:28 PM, Joseph Stiles wrote:
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> <mailto:TS-520_820_530_830%40yahoogroups.com>>
> Sent: Sunday, January 13, 2013 8:22 PM
> Subject: Re: [TS-520_820_530_830] Plate current falling
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> To: mailto:TS-520_820_530_830%40yahoogroups.com
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40606. Re: [TS-520_820_530_830] Engineering Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-15 00:10:31 UTC
From: Bob
Topic: 40591 Message: 40606

Hi Ned,

I think I understand yer question. Remember that there is a sideband filter in yer radio that will lop off 1 sideband - either the upper or lower depending where you set it. So, when you tune across a carrier, you will only hear 1 'whoop' (how's that for a word?) while spinning the dial over the carrier. Any yes, that whoop (whistle) sound will be pretty loud depending on the carrier level of what you're receiving.

With receiving CW mode, it does not lop off either upper or lower sidebands - it's more like AM where it can receive either sideband, but is usually very narrow bandwidth. So- if you tune across CW signals, you'll hear tone on either side of the dead-center carrier.

How's that?

Bob, KD5MHQ

From: Ned Chatelain nedchatelain@...>

Hello All-

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some light on.

I operate a ts 520s and have long wondered why

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2) why you can often hear a strong whistle, but no signal.

I'd appreciate both an explanation of why this happens, and also
recommendations for further reading on this topic.
Thanks, and Happy New Year to all!

Ned
KJ4YNP

40607. Re: [TS-520_820_530_830] Engineering Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-15 01:04:19 UTC
From: William Houghton
Topic: 40591 Message: 40607

Hi Bob,

"With receiving CW mode, it does not lop off either upper or lower sidebands - it's more like AM where it can receive either sideband, but is usually very narrow bandwidth. So- if you tune across CW signals, you'll hear tone on either side of the dead-center carrier."

I think we need to be a little bit careful with this. This may depend on the design of the receiver. I'm not familar with Kenwood receivers. I have done a lot of work on the Heathkit SB-104 transceivers. In the SB-104, receive mode for CW selects USB for the receiver. In transmit, a seperate carrier oscillator is used at a frequency slighty shifted from the USB carrier generator.

73,

Bill

From: Bob <bob4analog@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, January 14, 2013 4:10:37 PM
Subject: Re: [TS-520_820_530_830] Engineering Question

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Thanks, and Happy New Year to all!

Ned
KJ4YNP

[Non-text portions of this message have been removed]

40608. Re: Kenwood TS-830 Mods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-15 03:36:03 UTC
From: hytedin
Topic: 11481 Message: 40608

Max,

Can you give directions for adding level audio out? And transmit in? I'm willing to place the RCA jacks on the back.

Thanks!
Jason
K7MXN

--- In TS-520_820_530_830@yahoogroups.com, "ve3tmt" wrote:
>
> Walt and the group,
>
> Without beating a dead horse I will offer my opinions based on my
> experiences with the audio mods to the 830 and I will try to be brief
> and this will be my only post on this subject...
>
> As far as TX audio mods go I have done the following..
>
> 1. Swapped out C106 to a .01uf
> 2. Replaced the modulator diodes with the low noise as discussed
> previously.
> 3. Replaced the stock SSB filter with a YK-88S2 (3 Khz BW)
> 4. Direct balanced modulator feed from rear of radio.
>
> The first three will work regardless of where you feed your mic audio.
> The purpose of #4 is to bypass the internal mic amps which restrict
> the frequency response of your audio and allows the full bandwidth of
> your TX audio to get "into" the audio chain. If you are using a mic
> like the MC-50 or other mic made for amateur use, forget this mod. To
> take advantage of the modulator feed, you need external processing
> gear like mic preamps, EQ's and such which will feed a line level
> signal into the modulator. You will also need a good studio mic with a
> flat response curve. If you have not swapped the stock SSB filter for
> a wider once, then you are wasting your time. Also with the modulator
> feed, you bypass the VOX and processor circuits so these no longer work.
>
> I have used studio rack gear as well as the W2IHY stuff with the 830
> and I now use dynamic mic fitted with an electret element and in my
> opinion I have achieved the best results with this setup so far. When
> I was running the rack gear, I fiddled with VR2 on the PLL board,
> which adjusts your carrier insertion point. It did provide for some
> nice audio but it had lost the famous 830 sound. So aside from the
> diode swap and the cap change the radio is now back to normal. In my
> opinion you would need to swap the SSB filter to an INRAD # 475 (4 Khz
> BW) to really play with the audio. But there is also a 455 IF filter

> in there that needs to be swapped as well or it will negate the
> effects of the 4K filter.
>
> As for the receive, I swapped the dectector diodes as well as a few
> caps on the AF board to increase the low end response. To tell you the
> truth I can't tell the difference before or after any of the receive
> mods. I also have a fixed level RX output on the rear to feed my
> soundcard for digital work. The audio is tapped on the AF board before
> the AF GAIN control.
>
> So I guess in summary, if you want to invest the time and money
> anything is possible. But as Walt said, save your money and buy a used
> 850 or 940 and work on those. In my opinion the 830 is just fine the
> way it is.
>
> I tried to be brief, honest...
>
> Max
> VE3TMT
>

40609. Re: [TS-520_820_530_830] Plate current falling

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-15 03:52:08 UTC
From: Joseph Stiles
Topic: 40568 Message: 40609

To all,

  Mike is correct...I did not catch my "typos" I used "LOAD" when I should have used "DRIVE"

  Think I'll make sure from now on what I submit....type once...read twice...retype..if necessary.

73 Joe
WB7UQU

From: Mike <w5rkl@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, January 14, 2013 1:05 PM
Subject: Re: [TS-520_820_530_830] Plate current falling

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40610. TS830S: Rx lsb/usb balance

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-15 11:43:25 UTC
From: ravnpeter@ymail.com
Topic: 40610 Message: 40610

In this forum there are many answers as to achieving lsb/usb symmetry on receive on the TS830S. What is the simplest way?
Thanks.
Peter, OZ8CTH

40611. Re: [TS-520_820_530_830] Engineering Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-15 16:25:36 UTC
From: Bob
Topic: 40591 Message: 40611

Hi Bill,

Yes, you're correct, I stand corrected on that. However, it seems that tx favors neither sideband per se; it's more of an offset. Correct me if I said this correctly...maybe I'm not saying it right. As I understand it, there needs to be an offset somewhere, or no tone would be heard, say, if both the rx and tx were spot on center freq....unless a BFO were used. Ok, these are some more rx 'tricks', and then there are product detecters, etc, etc. It's hard to express this all in text form (hi). I got it in my head tho. ;-)

THanks, 73,

Bob, KD5MHQ

--- On Mon, 1/14/13, William Houghton <rdrbill@...> wrote:

Hi Bob,

"With receiving CW mode, it does not lop off either upper or lower sidebands - it's more like AM where it can receive either sideband, but is usually very narrow bandwidth. So- if you tune across CW signals, you'll hear tone on either side of the dead-center carrier."

I think we need to be a little bit careful with this. This may depend on the design of the receiver. I'm not familar with Kenwood receivers. I have done a lot of work on the Heathkit SB-104 transceivers. In the SB-104, receive mode for CW selects USB for the receiver. In transmit, a seperate carrier oscillator is used at a frequency slighty shifted from the USB carrier generator.

73,

Bill

40612. Re: [TS-520_820_530_830] Engineering Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-15 18:49:50 UTC
From: Ned Chatelain
Topic: 40591 Message: 40612

Thanks for the replies -- the answers raise another question, though...
Bob - I think your answer was closest to what i was looking for - the thing that still confuses me, however, is why you can hear the carrier at all. I thought that the whole advantage of SSB over AM was the narrower bandwidth required after one sideband and the carrier were suppressed *prior to *transmission.
Why, then, do we still hear the carrier "whoop" (great word...) on LSB or USB? And with CW, why would there be two carrier "whoops?" Is a carrier restored to the modulated signal by the IF in the receiver and then converted to audio? If so, why do we often not hear any "whoops" at all?!?!?!

Robert - thanks for your explanation of the ghost carrier noise. I live in a densely populated suburb where electrical white noise is a terrible problem - it never occurred to me that there could be an appliance transmitting on a narrow enough bandwidth to confuse my receiver into thinking it was a signal....ahhh, modern life. My grandfather used to drive his neighbors nuts by interfering with their TV's while he was operating. Now they are interfering with us!!

Ned
KJ4YNP

[Non-text portions of this message have been removed]

40613. TS-520 replacement speaker?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-15 19:31:27 UTC
From: hambonef8s
Topic: 40613 Message: 40613

Hi All,

Does anybody know of a good source for a replacement speaker for the TS-520 at a reasonable price?

Thought I'd ask here!

73,

Mark N8MH

40614. Re: [TS-520_820_530_830] Engineering Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-15 22:01:21 UTC
From: John Davidson
Topic: 40591 Message: 40614

In a MODERN reciever with the proper filters and aligned correctly you should only hear a high and desending pitch as you tune across a CW signal and then dissappearing as you tune past it. Retuning in the other direction passing by it should appear suddenly as a low pitch and increase pitch and again disappear as you pass by. We used to call that "single signal reception" .
 a properly operating SSB transmitter should have no audible carrier as you tune it in.

From: Ned Chatelain <nedchatelain@...>
To: TS-520_820_530_830@...m
Sent: Tuesday, January 15, 2013 1:49 PM
Subject: Re: [TS-520_820_530_830] Engineering Question

Thanks for the replies -- the answers raise another question, though...
Bob - I think your answer was closest to what i was looking for - the thing that still confuses me, however, is why you can hear the carrier at all. I thought that the whole advantage of SSB over AM was the narrower bandwidth required after one sideband and the carrier were suppressed *prior to *transmission.
Why, then, do we still hear the carrier "whoop" (great word...) on LSB or USB? And with CW, why would there be two carrier "whoops?"
Ned
KJ4YNP

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[Non-text portions of this message have been removed]

40615. RE: [TS-520_820_530_830] Engineering Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-15 22:09:34 UTC
From: w8hw@att.net
Topic: 40591 Message: 40615

The answer to:

Tone: You have a Beat frequency osc (BFO). It mixes with the cw signal and is usually 600 cps different in frequency to produce the tone that you hear. Without a BFO, a receiver is just an AM receiver. It is also used in SSB as it replaces the carrier that existed with AM.

Offset. The reason that you hear a 600 cps note (in cw mode) is because of the offset. This offset is adjustable, but most rigs are set to 600 cps.

In the days of old, we had to know what a BFO was because it was a control on our receiver. We also had to know what "zero beat" was and how to use it. This is because our TX and RX were separate units and we had to adjust all of the things that are automatic on most radios today.

Additionally (but not related to your question) with Unmatched separates we had to provide the following:::

TX to RX

* Un-key the TX (this is more than the CW key)
* Switch antennas (Dow key)
* UN-mute the RX
* Turn off VFO so as not to cause interference. VFO was another box on the table, not built in.
* Readjust the BFO and/or RX-VFO to his signal that has now drifted.
* Provide for grid block keying

RX-TX

* Switch antenna (Dow key)
* Mute TX audio or at lease reduce RF gain control
* Short antenna input to RX so as not to over drive the front end of receiver.
* Turn on VFO
* Turn on the transmitter
* Provide for grid block keying
* NOW and only NOW operate the CW key (chirp chirp chirp), darn have to buy a new OB2

Yes all of this had to be done on each exchange. Most of us automated (sort of) with a bank of relays contacts. You could hear them snap crackle and pop each time. If you think I am kidding, print this out and take to an "OT" in your club. He will look at is, chuckle, and then nod his head. Be ready for an interesting story. It will be worth your time and he will give you a lot more information to your question.

73, Bruce, W8HW

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Ned Chatelain
Sent: Tuesday, January 15, 2013 1:50 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Engineering Question

Thanks for the replies -- the answers raise another question, though...
Bob - I think your answer was closest to what i was looking for - the thing that still confuses me, however, is why you can hear the carrier at all. I thought that the whole advantage of SSB over AM was the narrower bandwidth required after one sideband and the carrier were suppressed *prior to *transmission.
Why, then, do we still hear the carrier "whoop" (great word...) on LSB or USB? And with CW, why would there be two carrier "whoops?" Is a carrier restored to the modulated signal by the IF in the receiver and then converted to audio? If so, why do we often not hear any "whoops" at all?!?!?!

Robert - thanks for your explanation of the ghost carrier noise. I live in a densely populated suburb where electrical white noise is a terrible problem - it never occurred to me that there could be an appliance transmitting on a narrow enough bandwidth to confuse my receiver into thinking it was a signal....ahhh, modern life. My grandfather used to drive his neighbors nuts by interfering with their TV's while he was operating. Now they are interfering with us!!

Ned
KJ4YNP

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[Non-text portions of this message have been removed]

40616. Re: [TS-520_820_530_830] Engineering Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-15 22:29:48 UTC
From: Mike
Topic: 40591 Message: 40616

Ned,

I mean no disrespect but I recommend doing some studying in the ARRL handbook(early to mid 70s edition) on basic AM and CW transmitter and receiver with a BFO so you understand how a simple signal is created and processed. Once you have a solid foundation in that subject then you can move on to the more advance signal processing that takes place in an SSB transmitter, receiver, and transceiver. I wouldn't recommend jumping first into trying to understand SSB without a firm grasp of the basic's in AM and CW transmitter and receiver signal creation and processing.

73s
Mike
W5RKL

On 1/15/2013 12:49 PM, Ned Chatelain wrote:
>
> Thanks for the replies -- the answers raise another question, though...
> Bob - I think your answer was closest to what i was looking for - the
> thing
> that still confuses me, however, is why you can hear the carrier at all. I
> thought that the whole advantage of SSB over AM was the narrower bandwidth
> required after one sideband and the carrier were suppressed *prior to
> *transmission.
> Why, then, do we still hear the carrier "whoop" (great word...) on LSB or
> USB? And with CW, why would there be two carrier "whoops?" Is a carrier
> restored to the modulated signal by the IF in the receiver and then
> converted to audio? If so, why do we often not hear any "whoops" at
> all?!?!?!
>
> Robert - thanks for your explanation of the ghost carrier noise. I live in
> a densely populated suburb where electrical white noise is a terrible
> problem - it never occurred to me that there could be an appliance
> transmitting on a narrow enough bandwidth to confuse my receiver into
> thinking it was a signal....ahhh, modern life. My grandfather used to
> drive his neighbors nuts by interfering with their TV's while he was
> operating. Now they are interfering with us!!
>
> Ned
> KJ4YNP
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

40617. Re: TS-520 replacement speaker?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-15 23:32:28 UTC
From: Gregory Albers
Topic: 40613 Message: 40617

Hi
I don't mean to hijack your thread, but I am also looking for a replacement speaker for my TS520. I have the speaker that is for that model, but want something with filters or some stand alone filters that I can use with the original speaker. Any ideas?
73
Greg
KC9VVU

Sent from Greg Albers iPad

40618. Re: [TS-520_820_530_830] Re: TS-520 replacement speaker?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-16 00:28:41 UTC
From: KB1TCD
Topic: 40613 Message: 40618

I'm using the Kenwood SP-230, has a low and two high filters as well as
a headphone jack and two inputs.
Have the TS-830S as well as a Yaesu 897 hooked up to it.
Nice speaker and matches the Kenwood hybrids.

73 de Jose Douglas, KB1TCD

40619. Re: [TS-520_820_530_830] Engineering Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-16 02:13:47 UTC
From: Ned Chatelain
Topic: 40591 Message: 40619

Thanks to all who responded to my question - I appreciate both the helpful explanations and recommendations for further reading.
73's
Ned
KJ4YNP

[Non-text portions of this message have been removed]

40620. Sudden loss of rx - TS520S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-16 11:49:28 UTC
From: lu8eq
Topic: 40620 Message: 40620

Hi folks,

Last saturday I was tuning my TS520S and suddenly it suffered a total loss of rx.

TX works ok. Full output power. Although, No rx.

I checked the relay (ok), then HET-CAR-VFO signals are working ok. I cannot get signals from TP2 or TP3 on the RF board... but I don't know where to go next. Audio board seems to work.

I would really appreciate all tips regarding this issue.

73 de Guido, LU8EQ

40621. Re: TS-520 replacement speaker?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-16 13:43:43 UTC
From: Bob
Topic: 40613 Message: 40621

I have the standard speakers that mount on the top cover....
Mounting hardware included...
Sell them for $10.00 plus $3.00 to mail...
Bob
****

--- In TS-520_820_530_830@yahoogroups.com, KB1TCD wrote:
>
> I'm using the Kenwood SP-230, has a low and two high filters as well as
> a headphone jack and two inputs.
> Have the TS-830S as well as a Yaesu 897 hooked up to it.
> Nice speaker and matches the Kenwood hybrids.
>
> 73 de Jose Douglas, KB1TCD
>

40622. Re: [TS-520_820_530_830] Re: TS-520 replacement speaker?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-16 18:22:46 UTC
From: John Davidson
Topic: 40613 Message: 40622

Greg, I have been using an Autek Research QF-1 audio filter, for a few decades, between the headfone output on my TS520 and TS440s and a variety of speakers.
The latest external speaker is a sturdy, loud and good sounding Kenwood KES-5 speaker for a commercial 2-way radio.
There are a lot of other variable audio peak/notch filters available in kit form for under $100 that do a great job. .
There are also pricey DSP filters that I wonder about, are they any better or just designer baloney :D

From: Gregory Albers <GEAgent21@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, January 15, 2013 6:32 PM
Subject: [TS-520_820_530_830] Re: TS-520 replacement speaker?

Hi
I don't mean to hijack your thread, but I am also looking for a replacement speaker for my TS520. I have the speaker that is for that model, but want something with filters or some stand alone filters that I can use with the original speaker. Any ideas?
73
Greg
KC9VVU

Sent from Greg Albers iPad

[Non-text portions of this message have been removed]

40623. Sudden complete loss of rx - TS520S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-16 12:00:10 UTC
From: Guido Luis Perazzoli
Topic: 40623 Message: 40623

Hi folks,

Last saturday I was tuning up my TS520S and suddenly it suffered a total loss of rx.

TX works ok. Full output power. Although, No rx.

I checked the relay (ok), then HET-CAR-VFO signals are working ok. I cannot get signals from TP2 or TP3 on the RF board... but I don't know where to go next. Audio board seems to work.

I would really appreciate all tips regarding this issue.

73 de Guido, LU8EQ

[Non-text portions of this message have been removed]

40624. Re: Low Power when in tune on TS-520S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-16 16:15:16 UTC
From: tjb813
Topic: 40602 Message: 40624

Thank you for the information. I will target that circuit first.

73's

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles wrote:
>
> Take a look at the HV UNITÂ X43-1110-00...measure the voltage...at the "wire wrap" posts....I think one post is marked "210" another "TUNE" It is possible that
> resistors R-5 & R-6, both 56K, have gone way out of spec.Tune mode cuts the voltage down during "tune" to give the finals a break from being operated out of tune..while "tuning." There may be other problems...but measure the voltages first. BE CAREFUL!!!! THERE IS ABOUT 900VDC LURKING AROUND THAT AREA!
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: tjb813
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, January 14, 2013 12:23 PM
> Subject: [TS-520_820_530_830] Low Power when in tune on TS-520S
>
>
> Â
> When I put my TS-520S in "Tune" and key up I get less than 1 watt. IN CW mode I get 100W. Is there a power level set for the Tune function? Or is there a particular resistor that sets the tune level?
>
> THanks for the help!
>
>
>
>
> [Non-text portions of this message have been removed]
>

40625. Re: [TS-520_820_530_830] Re: TS-520 replacement speaker?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-17 00:25:53 UTC
From: Denise Hargreaves
Topic: 40613 Message: 40625

I to run the QF-1 filter and I use either the SP-820 or the SP-230 depending which radio I am on....I also have unit from the "dark side" (solid state) that I use on a regular basis....It has a fully adjustable DSP.....Actually does an amazing job of cleaning signals up....The other combination with my Hybrid units does a good job....but of course takes a little time to get things set-up just right....Personally it does not stand toe to toe with the adjustable DSP unit.....but very close....and actually with an extreme heterodyne signal on the band it does a better job of filtering it out....."old tech" can be very effective in the hands of the right user.....I have used many "outboard "speakers on various rigs.....and I always end up with the SP-230 if I am looking for quality audio....

Regards....Wes....VA6DWH

On 2013-01-16, at 11:22 AM, John Davidson wrote:

> Greg, I have been using an Autek Research QF-1 audio filter, for a few decades, between the headfone output on my TS520 and TS440s and a variety of speakers.
> The latest external speaker is a sturdy, loud and good sounding Kenwood KES-5 speaker for a commercial 2-way radio.
> There are a lot of other variable audio peak/notch filters available in kit form for under $100 that do a great job. .
> There are also pricey DSP filters that I wonder about, are they any better or just designer baloney :D
>
> _____
> From: Gregory Albers GEAgent21@...>
> To: "TS-520_820_530_830@yahoogroups.com" TS-520_820_530_830@yahoogroups.com>
> Sent: Tuesday, January 15, 2013 6:32 PM
> Subject: [TS-520_820_530_830] Re: TS-520 replacement speaker?
>
>
> Hi
> I don't mean to hijack your thread, but I am also looking for a replacement speaker for my TS520. I have the speaker that is for that model, but want something with filters or some stand alone filters that I can use with the original speaker. Any ideas?
> 73
> Greg
> KC9VVU
>
> Sent from Greg Albers iPad
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

40626. Message to Guido

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-17 00:00:47 UTC
From: roberteleazer@rocketmail.com
Topic: 40626 Message: 40626

Guido:

Tried a reply to your RX problem question with a suggested troubleshooting approach but Yahoo lost it and I am not going to waste any more time on it.

Here is what the TS-520 Service notes say about RX problems:

Low Sensitivity: Touching RLT and 9V at function switch.
Receiver sensitivity: No -6v at AVR: Q8 2SC735 on X43-1100-00 is bad.
Frequency Shift: Bad carreir Xtal 3395 on carrier unit.
VFO drift: C6 22pf, VFO unit.
No receive: Bad Q4, 3rd IF amp 3SK35GR on X48-1060-00.
Receiver sensitivity and bias current jump, -6v unstable: T1 oscillator transformer for -6v is bad on X43-1100-00.
Erratic AGC action: C11 100uf 16Von X431100-00. Fix channel AVR is bad.
Frequency shift when warmed up: Q1 in VFO 3SK22GR.
No RX or TX: If unit C59 touch to T12 IF transformer.
Receiver noise: Q5 3SK35Y X44-1080-00.
Receiver sensitivity down: NBI terminal is pulled loose. Receiver at IF board.
No S meter reading and RF gain CCW. No meter deflection: Q3 on IF unit. Q5 on RF unit.
VFO frequency jumped: There is loose tension inside VFO.
VFO frequency shift: Cold solder of VFO output lead to VFO output socket.
Blows fuse when first on: Check Q1 and Q2 DC-DC converter transistor. One is possibly shorted.
Noise blanker inoperative: R6 4.7K resistor is broken at Q2 on X54- 1080-10.
Loud audio squeal: Q4 3SB473 on X49-0008-01 shorted.
Low receiver sensitivity: Diode D4 1S1587 on RF unit.
VFO intermittant: Wire to L1 in VFO is not soldered.
No receive: Q4 3SK35Y, Q5 3SK35GR on RF unit.
No receive: Q9 3SK35GR on IF unit.
Hash noise in receiver: Q3 on RF unit 3SK41.
Blows fuse: C31 power supply is shorted, 100uf 500v. Also check associated diode D3, D4.
No RX on all bands: WWV switch is broken or a wire is loose or not soldered.
Receiver sensitivity: Q5 on RF amp 3SK35Y.
Receiver sensitivity: NBO terminal on X48-1060-00 is loose.
Low audio: Check for purple wire touch to ground at 12 pin connector in rear panel.

Good luck!

Robert
WB5WSV

40627. looking for help

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-17 02:41:23 UTC
From: wb2dcu
Topic: 40627 Message: 40627

Was hoping to solve problem with my TS-820S with a question to the group. Sadly, it never got posted. Still have a question, can anyone help??

John
WB2DCU

40628. Re: [TS-520_820_530_830] Re: TS-520 replacement speaker?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-16 20:12:09 UTC
From: Gregory Albers
Topic: 40613 Message: 40628

John
Thanks for the info. I will check out the QF-1 filter.
73's
Greg

Sent from Greg Albers iPad

On Jan 16, 2013, at 1:22 PM, John Davidson <k8jd@yahoo.com> wrote:

> Greg, I have been using an Autek Research QF-1 audio filter, for a few decades, between the headfone output on my TS520 and TS440s and a variety of speakers.
> The latest external speaker is a sturdy, loud and good sounding Kenwood KES-5 speaker for a commercial 2-way radio.
> There are a lot of other variable audio peak/notch filters available in kit form for under $100 that do a great job. .
> There are also pricey DSP filters that I wonder about, are they any better or just designer baloney :D
>
> _____
> From: Gregory Albers GEAgent21@...m>
> To: "TS-520_820_530_830@yahoogroups.com" TS-520_820_530_830@yahoogroups.com>
> Sent: Tuesday, January 15, 2013 6:32 PM
> Subject: [TS-520_820_530_830] Re: TS-520 replacement speaker?
>
>
> Hi
> I don't mean to hijack your thread, but I am also looking for a replacement speaker for my TS520. I have the speaker that is for that model, but want something with filters or some stand alone filters that I can use with the original speaker. Any ideas?
> 73
> Greg
> KC9VVU
>
> Sent from Greg Albers iPad
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

40629. antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-16 07:38:50 UTC
From: rkings1956
Topic: 6768 Message: 40629

Hi everyone, I purchased a TS-520 about two months ago and I'm wondering what is the best antenna tuner for this rig? I will use it with a G5RV/zs6bkw 6m-80m and so will need a tuner. Does anyone have any advise.

Thanks and God Bless
Rob

40630. TS-820 Relays clicking

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-16 14:45:10 UTC
From: wb2dcu
Topic: 40630 Message: 40630

Good Morning,

I fired up my TS-820S last night and found a clicking noise coming from the radio. What seems to be happening is the relays are going into transmit mode even though I did not switch to that mode. I checked to be sure the VOX was off (it was). I then pulled the mic, but the relays continued to click away. I'd like to ask the group if anyone has encountered this problem and where I can look to fix the issue. Thanks in advance for any help.

John
WB2DCU

40631. Re: [TS-520_820_530_830] antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-17 13:59:39 UTC
From: John Davidson
Topic: 6768 Message: 40631

If you can run balanced line into the shack I think the MFJ974 balanced line tuner , that I use, is best for this kind of antenna.
The rig it's self can work into just about any unbalanced coax fed antenna without using a tuner since the output PI network handles a wide range of impedances.

From: rkings1956 <rkings1956@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, January 16, 2013 2:38 AM
Subject: [TS-520_820_530_830] antenna tuner for TS-520

Hi everyone, I purchased a TS-520 about two months ago and I'm wondering what is the best antenna tuner for this rig? I will use it with a G5RV/zs6bkw 6m-80m and so will need a tuner. Does anyone have any advise.

Thanks and God Bless
Rob

[Non-text portions of this message have been removed]

40632. General Warning!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-17 14:22:52 UTC
From: roberteleazer@rocketmail.com
Topic: 40632 Message: 40632

Folks, TWICE now in the past two days I have tried to post a reply to a question posted by someone else, only to have it lost when Yahoo then responded that it could not find the original message!

This happened yesterday with my response to Guido on his receive problem and this morning with my response to John on his request for help on an unspecified TS-820S topic.

So, if you do not get a response to a request for help it is very likely that it is because Yahoo is broke and not because no one cares.

So John, try to post you question agin and then look very carefully, since a response will NOT be as an addentum to your original post. That don't work no more.

Robert
WB5WSV

40633. Re: [TS-520_820_530_830] antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-17 16:49:18 UTC
From: KB1TCD
Topic: 6768 Message: 40633

I use a G5RV Jr antenna, antenna actually does fine on 40, 17, 10 and 6 meters without a tuner according to my antenna analiser. Antenna works fine on other bands as well.
I just tune the 830S for all bands without using an antenna tuner.
I tried using an auto antenna tuner a few years back on my 520SE and it didn't work so I just went to tuning the radio as per Ken's (K4EAA) instructions.

73 de Jose Douglas KB1TCD

40634. TS-530 turn on, S-meter stuck in corner

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-17 16:52:22 UTC
From: hansmmx
Topic: 40634 Message: 40634

When I turn on my TS-530 with antenna and agc fast then the s-meter shoots into the corner and slowly drops back.
When turning on the TS-530 with dummy then the s-meter slightly comes from zero and then drops back slowly.

The meter shoots into the corner so hard, I am afraid it will ruin the meter.
Is this normal?

73's Hans Pe1cyu (Netherlands)

40635. Clicking Relays

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-17 20:19:52 UTC
From: wb2dcu
Topic: 40635 Message: 40635

Good Morning,

I fired up my TS-820S last night and found a clicking noise coming from the radio. What seems to be happening is the relays are going into transmit mode even though I did not switch to that mode. I checked to be sure the VOX was off (it was). I then pulled the mic, but the relays continued to click away. I'd like to ask the group if anyone has encountered this problem and where I can look to fix the issue. Thanks in advance for any help.

John
WB2DCU

40636. Re: Low Power when in tune on TS-520S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-17 20:53:35 UTC
From: tjb813
Topic: 40602 Message: 40636

Yup, one of the 56k resistors was open. No screen voltage on tune.New resistor and we're back to normal. Thank you again.

--- In TS-520_820_530_830@yahoogroups.com, "tjb813" wrote:
>
> Thank you for the information. I will target that circuit first.
>
> 73's
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles wrote:
> >
> > Take a look at the HV UNITÂ X43-1110-00...measure the voltage...at the "wire wrap" posts....I think one post is marked "210" another "TUNE" It is possible that
> > resistors R-5 & R-6, both 56K, have gone way out of spec.Tune mode cuts the voltage down during "tune" to give the finals a break from being operated out of tune..while "tuning." There may be other problems...but measure the voltages first. BE CAREFUL!!!! THERE IS ABOUT 900VDC LURKING AROUND THAT AREA!
> >
> >
> > Â
> > 73Â Joe
> > WB7UQU
> >
> >
> >
> > _____
> > From: tjb813
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Monday, January 14, 2013 12:23 PM
> > Subject: [TS-520_820_530_830] Low Power when in tune on TS-520S
> >
> >
> > Â
> > When I put my TS-520S in "Tune" and key up I get less than 1 watt. IN CW mode I get 100W. Is there a power level set for the Tune function? Or is there a particular resistor that sets the tune level?
> >
> > THanks for the help!
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

40637. Re: [TS-520_820_530_830] Clicking Relays

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-17 21:13:04 UTC
From: Joseph Stiles
Topic: 40635 Message: 40637

John,

Are both relays "clicking?" There are two...one on the "relay board" and another under the metal shield by the final amp board. Check the voltages on the AF-AVR board first...you can look on Pg 38 of the "operators manual" or Pg 44 of the "service manual."
It is possible that you may have a failure on the "relay board," or the T/R relay by the final board...it's under the metal shield. You may also just want to remove both relays and inspect/clean the contacts, both external and internal. Easy places to start. Do that with the radio off and UNPLUGGED for awhile...you will be very close to 900VDC in a couple of areas...so let the HV caps bleed off.
I have not heard about this problem before. I am far from an expert on these rigs...some diagnostics are currently beyond my skill level...but I will help as much as I can.

73 Joe
WB7UQU

From: wb2dcu <jmcmahon1@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, January 17, 2013 12:19 PM
Subject: [TS-520_820_530_830] Clicking Relays

Good Morning,

I fired up my TS-820S last night and found a clicking noise coming from the radio. What seems to be happening is the relays are going into transmit mode even though I did not switch to that mode. I checked to be sure the VOX was off (it was). I then pulled the mic, but the relays continued to click away. I'd like to ask the group if anyone has encountered this problem and where I can look to fix the issue. Thanks in advance for any help.

John
WB2DCU

[Non-text portions of this message have been removed]

40638. RE: [TS-520_820_530_830] TS-530 turn on, S-meter stuck in corner

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-17 21:22:30 UTC
From: fpath fpath
Topic: 40634 Message: 40638

Hans,

Try disconnecting antenna or turning antenna switch to unused or ground postion after turning radio off. Then next time you go to use radio, turn radio on then connect antenna, on my 5 hybrid radios all do the same as what your experiencing. This is the way I do it and haven't had an issue since.

Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: mikroding@...
Date: Thu, 17 Jan 2013 16:52:22 +0000
Subject: [TS-520_820_530_830] TS-530 turn on, S-meter stuck in corner

When I turn on my TS-530 with antenna and agc fast then the s-meter shoots into the corner and slowly drops back.
When turning on the TS-530 with dummy then the s-meter slightly comes from zero and then drops back slowly.

The meter shoots into the corner so hard, I am afraid it will ruin the meter.
Is this normal?

73's Hans Pe1cyu (Netherlands)

[Non-text portions of this message have been removed]

40639. Re: [TS-520_820_530_830] Re: Low Power when in tune on TS-520S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-17 21:32:01 UTC
From: Joseph Stiles
Topic: 40602 Message: 40639

Glad I could help you getting it back working. Those resistors are the first place to look if you have the "no alc in tune" problem. It is not specific to the 520.
The 820, 530, 830 can also suffer from it..resistors are just numbered differently and are in different places.

73 Joe
WB7UQU

From: tjb813 <tjb813@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, January 17, 2013 12:53 PM
Subject: [TS-520_820_530_830] Re: Low Power when in tune on TS-520S

Yup, one of the 56k resistors was open. No screen voltage on tune.New resistor and we're back to normal. Thank you again.

--- In TS-520_820_530_830@yahoogroups.com, "tjb813" wrote:
>
> Thank you for the information. I will target that circuit first.
>
> 73's
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles wrote:
> >
> > Take a look at the HV UNITÂ X43-1110-00...measure the voltage...at the "wire wrap" posts....I think one post is marked "210" another "TUNE" It is possible that
> > resistors R-5 & R-6, both 56K, have gone way out of spec.Tune mode cuts the voltage down during "tune" to give the finals a break from being operated out of tune..while "tuning." There may be other problems...but measure the voltages first. BE CAREFUL!!!! THERE IS ABOUT 900VDC LURKING AROUND THAT AREA!
> >
> >
> > Â
> > 73Â Joe
> > WB7UQU
> >
> >
> >
> > ---
> > From: tjb813
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Monday, January 14, 2013 12:23 PM
> > Subject: [TS-520_820_530_830] Low Power when in tune on TS-520S
> >
> >

> > Â
> > When I put my TS-520S in "Tune" and key up I get less than 1 watt. IN CW mode I get 100W. Is there a power level set for the Tune function? Or is there a particular resistor that sets the tune level?
> >
> > THanks for the help!
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

[Non-text portions of this message have been removed]

40640. Re: antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-18 02:50:37 UTC
From: N7IQV
Topic: 6768 Message: 40640

Rob,

You might look around for an AT-180 on QRZ or E-Pay... The one you want is the "real" KENWOOD AT-180, not the one with the same model number, from "another" manufacturer. ;) AT-200 would also work well, from my experience. (Keep the lights low in the shack, nobody will notice the slight difference in the front panel paint)

John/N7IQV

--- In TS-520_820_530_830@yahoogroups.com, "rkings1956" wrote:
>
> Hi everyone, I purchased a TS-520 about two months ago and I'm wondering what is the best antenna tuner for this rig? I will use it with a G5RV/zs6bkw 6m-80m and so will need a tuner. Does anyone have any advise.
>
> Thanks and God Bless
> Rob
>

40641. Re: [TS-520_820_530_830] Re: antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-18 03:09:35 UTC
From: Robert Reyes
Topic: 6768 Message: 40641

Thank you John, I will keep a watch for the AT-180/AT-200.

Rob
KD6FSK

--- On Fri, 1/18/13, N7IQV <n7iqv@...> wrote:

From: N7IQV <n7iqv@yahoo.com>
Subject: [TS-520_820_530_830] Re: antenna tuner for TS-520
To: TS-520_820_530_830@yahoogroups.com
Date: Friday, January 18, 2013, 2:50 AM

Rob,

You might look around for an AT-180 on QRZ or E-Pay... The one you want is the "real" KENWOOD AT-180, not the one with the same model number, from "another" manufacturer. ;) AT-200 would also work well, from my experience. (Keep the lights low in the shack, nobody will notice the slight difference in the front panel paint)

John/N7IQV

--- In TS-520_820_530_830@yahoogroups.com, "rkings1956" wrote:
>
> Hi everyone, I purchased a TS-520 about two months ago and I'm wondering what is the best antenna tuner for this rig? I will use it with a G5RV/zs6bkw 6m-80m and so will need a tuner. Does anyone have any advise.
>
> Thanks and God Bless
> Rob
>

Yahoo! Groups Links

[Non-text portions of this message have been removed]

40642. Re: [TS-520_820_530_830] Re: antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-18 04:20:22 UTC
From: Bob Macklin
Topic: 6768 Message: 40642

The Kenwood AT-230 is another possibility. The difference between the AT-200 and the AT-230 is the AT-230 also has the WARC bands.

You don't need the WARC bands for an original TS-520 but if you get one of the newer units it might be nice to have them.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: Robert Reyes
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, January 17, 2013 7:09 PM
Subject: Re: [TS-520_820_530_830] Re: antenna tuner for TS-520

Thank you John, I will keep a watch for the AT-180/AT-200.

Rob
KD6FSK

--- On Fri, 1/18/13, N7IQV n7iqv@...> wrote:

From: N7IQV n7iqv@...>
Subject: [TS-520_820_530_830] Re: antenna tuner for TS-520
To: TS-520_820_530_830@yahoogroups.com
Date: Friday, January 18, 2013, 2:50 AM

Rob,

You might look around for an AT-180 on QRZ or E-Pay... The one you want is the "real" KENWOOD AT-180, not the one with the same model number, from "another" manufacturer. ;) AT-200 would also work well, from my experience. (Keep the lights low in the shack, nobody will notice the slight difference in the front panel paint)

John/N7IQV

--- In TS-520_820_530_830@yahoogroups.com, "rkings1956" wrote:
>
> Hi everyone, I purchased a TS-520 about two months ago and I'm wondering what is the best antenna tuner for this rig? I will use it with a G5RV/zs6bkw 6m-80m and so will need a tuner. Does anyone have any advise.
>
> Thanks and God Bless
> Rob
>

Yahoo! Groups Links

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[Non-text portions of this message have been removed]

40643. Digital Display On My TS-830S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-18 04:59:46 UTC
From: waynemvoigt
Topic: 40643 Message: 40643

Hi Everyone,
I will try to explain my problem. I set the Digital Display to 3.875.0 ok.
It will stay as set and then it will change to read 3.000.0. The VFO stays on Freq. 3.875 but the read out shows 3.000.0. I can sometimes turn the Fix button on then off and it will show the correct Freq. setting 3.875.0. I can continue to transmit on 3.875 even though the read out reads 3.000.0. My Analog Dial Scale is not calibrated right so I cannot depend on it. That is another problem I have to cure. Sure Hope someone can guide me on how to fix my readout. I had some problems last year and Terry jumped in and helped me through them and everything worked out just find. This is Truly a Great Net. Someone always has the answer to someones problem and Via you have the Fix. Thanks for your Help.
Wayne W6WMV Finley,Ca.

40644. Re: [TS-520_820_530_830] Re: antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-18 13:59:39 UTC
From: Mike
Topic: 6768 Message: 40644

Rob,

Contrary to what some hams believe/tell you and what some G5RV sales ads tell you, the 520 and other Kenwood hybrids have a "limited" output impedance matching range. Therefore, for "proper impedance matching" AND for "maximum transfer of power" to the antenna I highly recommend you use a suitable tuner between the transmitter and the G5RV antenna.

There are a variety of manual tuners available that will work with the G5RV antenna. I used a Drake MN-2000 tuners with a 102' long G5RV for years on 80 thru 10 with very good results. The G5RV can be strung between trees in a dipole arrangement or as an inverted vee, it doesn't matter but you should use a tuner for proper impedance matching AND for maximum power transfer to the antenna. Auto tuners can also be used but I prefer manual tuners myself.

I also recommend you obtain, if you do not already have one, a 50 ohm dummy load with a power rating equal to or higher than the maximum RF power your station currently produces. If you plan on purchasing an amplifier at a later date, the dummy load should be able to handle the maximum RF power the amplifier is capable of producing. All transmitter and amplifier tuning should be done with the dummy load connected to the transmitter/amplifier's output FIRST. Once the transmitter/amplifier tuning is complete and the tuner is connected, do NOT touch the transmitter and/or amplifier tuning controls. Make ALL adjustments for lowest SWR and maximum power transfer to the antenna with the "tuner controls".

73s
Mike
W5RKL

On 1/17/2013 9:09 PM, Robert Reyes wrote:
>
> Thank you John, I will keep a watch for the AT-180/AT-200.
>
> Rob
> KD6FSK
>
> --- On Fri, 1/18/13, N7IQV n7iqv@... <mailto:n7iqv%40yahoo.com>>
> wrote:
>
> From: N7IQV n7iqv@... <mailto:n7iqv%40yahoo.com>>
> Subject: [TS-520_820_530_830] Re: antenna tuner for TS-520
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>

> Date: Friday, January 18, 2013, 2:50 AM
>
> Rob,
>
> You might look around for an AT-180 on QRZ or E-Pay... The one you
> want is the "real" KENWOOD AT-180, not the one with the same model
> number, from "another" manufacturer. ;) AT-200 would also work well,
> from my experience. (Keep the lights low in the shack, nobody will
> notice the slight difference in the front panel paint)
>
> John/N7IQV
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "rkings1956" wrote:
> >
> > Hi everyone, I purchased a TS-520 about two months ago and I'm
> wondering what is the best antenna tuner for this rig? I will use it
> with a G5RV/zs6bkw 6m-80m and so will need a tuner. Does anyone have
> any advise.
> >
> > Thanks and God Bless
> > Rob
> >
>
> ------------------------------------
>
> Yahoo! Groups Links
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

40645. Re: [TS-520_820_530_830] Re: antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-18 18:50:20 UTC
From: KB1TCD
Topic: 6768 Message: 40645

Mike,

By stating that the hybrids have a "limited" output impedance matching range, do you mean for example that the radios will not effectively match anything higher than a 3:1 SWR?

I just put my G5RV Jr, which is up about 45 ft, on an analiser and got:

80m 2.2 - 2.5: 1
40m 1.8 - 2.7: 1
20m 2.5 - 2.8: 1
17m 1.7 - 2.0: 1
15m 1.0 - 1.6: 1
12m 2.0 : 1
10m 1.2 - 2.1: 1
6m 1.3 - 2.0: 1

I don't see a problem using the radio on its own without a tuner to get a good match using above figures.

73 de Jose Douglas, KB1TCD

40646. Re: [TS-520_820_530_830] Re: antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-18 22:07:31 UTC
From: Jim Lamanteer
Topic: 6768 Message: 40646

DE JOSE DO U USE A BALUN AT ALL? WHAT KIND OF FEED LINE IS IT COAX OR RIBBIN?? THANKS JIMMY

From: KB1TCD <kb1tcd@...>
To: TS-520_820_530_830@...m
Sent: Friday, January 18, 2013 1:50 PM
Subject: Re: [TS-520_820_530_830] Re: antenna tuner for TS-520

Mike,

By stating that the hybrids have a "limited" output impedance matching range, do you mean for example that the radios will not effectively match anything higher than a 3:1 SWR?

I just put my G5RV Jr, which is up about 45 ft, on an analiser and got:

80m 2.2 - 2.5: 1
40m 1.8 - 2.7: 1
20m 2.5 - 2.8: 1
17m 1.7 - 2.0: 1
15m 1.0 - 1.6: 1
12m 2.0 : 1
10m 1.2 - 2.1: 1
6m 1.3 - 2.0: 1

I don't see a problem using the radio on its own without a tuner to get a good match using above figures.

73 de Jose Douglas, KB1TCD

[Non-text portions of this message have been removed]

40647. Re: [TS-520_820_530_830] Re: antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-18 22:08:38 UTC
From: Mike
Topic: 6768 Message: 40647

Jose,

What I said was

"...Kenwood hybrids have a "limited" output impedance matching range. Therefore, for "proper impedance matching" AND for "maximum transfer of power" to the antenna I highly recommend you use a suitable tuner between the transmitter and the G5RV antenna.

...The G5RV can be strung between trees in a dipole arrangement or as an inverted vee, it doesn't matter but you should use a tuner for proper impedance matching AND for maximum power transfer to the antenna. Auto tuners can also be used but I prefer manual tuners myself."

The final amplifier's PI Network output and receiver's input impedance range of the Kenwood hybrids is between 50 and 70 ohms (see the manual's specification page for further details). The impedance range has a slight difference on the top and bottom end of the LOAD controlbut for maximum power transfer and lowest SWR, a tuner is recommendedwith the G5RV.

Having said all that and as always, whether you use a tuner or not is entirely up to you. I can only recommend a course of action to take based onexperience.

73s
Mike
W5RKL

On 1/18/2013 12:50 PM, KB1TCD wrote:
>
> Mike,
>
> By stating that the hybrids have a "limited" output impedance matching
> range, do you mean for example that the radios will not effectively
> match anything higher than a 3:1 SWR?
>
> I just put my G5RV Jr, which is up about 45 ft, on an analiser and got:
>
> 80m 2.2 - 2.5: 1
> 40m 1.8 - 2.7: 1
> 20m 2.5 - 2.8: 1
> 17m 1.7 - 2.0: 1
> 15m 1.0 - 1.6: 1
> 12m 2.0 : 1
> 10m 1.2 - 2.1: 1
> 6m 1.3 - 2.0: 1
>

> I don't see a problem using the radio on its own without a tuner to get
> a good match using above figures.
>
> 73 de Jose Douglas, KB1TCD
>
>

[Non-text portions of this message have been removed]

40648. Re: [TS-520_820_530_830] antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-18 23:29:23 UTC
From: John Davidson
Topic: 6768 Message: 40648

The op manual for my 520 says it can work into 15-200 ohm loads.

From: KB1TCD <kb1tcd@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, January 17, 2013 11:49 AM
Subject: Re: [TS-520_820_530_830] antenna tuner for TS-520

I use a G5RV Jr antenna, antenna actually does fine on 40, 17, 10 and 6 meters without a tuner according to my antenna analiser. Antenna works fine on other bands as well.
I just tune the 830S for all bands without using an antenna tuner.
I tried using an auto antenna tuner a few years back on my 520SE and it didn't work so I just went to tuning the radio as per Ken's (K4EAA) instructions.

73 de Jose Douglas KB1TCD

[Non-text portions of this message have been removed]

40649. Re: [TS-520_820_530_830] Re: antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-19 00:15:11 UTC
From: KB1TCD
Topic: 6768 Message: 40649

Hi Jimmy,

I do not use a balun.
Antenna is a Radiowavz G5RV JR we picked up at HRO in New Hampshire a couple of summers ago for $25.00.
It has an 18ft twin lead section with PL 239 connector.
It does help having it up 45 feet. We have a neighbor that has a tree cutting business and I talked him into bringing his cherry picker over to install the antenna.

We also use a GAP Eagle vertical dipole that does not require a tuner for 40, 20, 17, 15, 12 nd 10 meters.

73 de Jose Douglas, KB1TCD

40650. Re: [TS-520_820_530_830] Re: antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-19 01:33:06 UTC
From: Jim Lamanteer
Topic: 6768 Message: 40650

VERY GOOD DE JOSE THANKS FOR THE INFO BEST OF 73`S JIMMY.

From: KB1TCD <kb1tcd@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, January 18, 2013 7:15 PM
Subject: Re: [TS-520_820_530_830] Re: antenna tuner for TS-520

Hi Jimmy,

I do not use a balun.
Antenna is a Radiowavz G5RV JR we picked up at HRO in New Hampshire a couple of summers ago for $25.00.
It has an 18ft twin lead section with PL 239 connector.
It does help having it up 45 feet. We have a neighbor that has a tree cutting business and I talked him into bringing his cherry picker over to install the antenna.

We also use a GAP Eagle vertical dipole that does not require a tuner for 40, 20, 17, 15, 12 nd 10 meters.

73 de Jose Douglas, KB1TCD

[Non-text portions of this message have been removed]

40651. Re: antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-19 02:19:45 UTC
From: Otis Mc Coy
Topic: 6768 Message: 40651

Your setup is similar to mine. I am using a Kenwood TS-530S with a B&W VS300A tuner connected to a Hustler 4-BTV vertical as my primary antenna and a G5RV as the second antenna with a random length wire as the third antenna. This is switched using the built in antenna switch and everything works fine I like the setup and it works for me,

[Non-text portions of this message have been removed]

40652. Re: [TS-520_820_530_830] Re: antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-18 18:20:08 UTC
From: Robert Reyes
Topic: 6768 Message: 40652

Thank you Mike, the info was very helpful and I learned something new. Maybe one day I'll be able to answer these question for some else.

Rob

73s
KD6FSK
--- On Fri, 1/18/13, Mike <w5rkl@...> wrote:

From: Mike <w5rkl@...>
Subject: Re: [TS-520_820_530_830] Re: antenna tuner for TS-520
To: TS-520_820_530_830@yahoogroups.com
Date: Friday, January 18, 2013, 1:59 PM

Contrary to what some hams believe/tell you and what some G5RV sales ads tell you, the 520 and other Kenwood hybrids have a "limited" output impedance matching range. Therefore, for "proper impedance matching" AND for "maximum transfer of power" to the antenna I highly recommend you use a suitable tuner between the transmitter and the G5RV antenna.

There are a variety of manual tuners available that will work with the G5RV antenna. I used a Drake MN-2000 tuners with a 102' long G5RV for years on 80 thru 10 with very good results. The G5RV can be strung between trees in a dipole arrangement or as an inverted vee, it doesn't matter but you should use a tuner for proper impedance matching AND for maximum power transfer to the antenna. Auto tuners can also be used but I prefer manual tuners myself.

I also recommend you obtain, if you do not already have one, a 50 ohm dummy load with a power rating equal to or higher than the maximum RF power your station currently produces. If you plan on purchasing an amplifier at a later date, the dummy load should be able to handle the maximum RF power the amplifier is capable of producing. All transmitter and amplifier tuning should be done with the dummy load connected to the transmitter/amplifier's output FIRST. Once the transmitter/amplifier tuning is complete and the tuner is connected, do NOT touch the transmitter and/or amplifier tuning controls. Make ALL adjustments for lowest SWR and maximum power transfer to the antenna with the "tuner controls".

73s
Mike
W5RKL

On 1/17/2013 9:09 PM, Robert Reyes wrote:
>
> Thank you John, I will keep a watch for the AT-180/AT-200.

>
> Rob
> KD6FSK
>
> --- On Fri, 1/18/13, N7IQV n7iqv@... <mailto:n7iqv%40yahoo.com>>
> wrote:
>
> From: N7IQV n7iqv@... <mailto:n7iqv%40yahoo.com>>
> Subject: [TS-520_820_530_830] Re: antenna tuner for TS-520
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Date: Friday, January 18, 2013, 2:50 AM
>
> Rob,
>
> You might look around for an AT-180 on QRZ or E-Pay... The one you
> want is the "real" KENWOOD AT-180, not the one with the same model
> number, from "another" manufacturer. ;) AT-200 would also work well,
> from my experience. (Keep the lights low in the shack, nobody will
> notice the slight difference in the front panel paint)
>
> John/N7IQV
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "rkings1956" wrote:
> >
> > Hi everyone, I purchased a TS-520 about two months ago and I'm
> wondering what is the best antenna tuner for this rig? I will use it
> with a G5RV/zs6bkw 6m-80m and so will need a tuner. Does anyone have
> any advise.
> >
> > Thanks and God Bless
> > Rob
> >
>
> ------------------------------------
>
> Yahoo! Groups Links
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

Yahoo! Groups Links

[Non-text portions of this message have been removed]

40653. Re: [TS-520_820_530_830] antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-19 13:15:28 UTC
From: Mike
Topic: 6768 Message: 40653

John,

I can't find any reference in the 520 or the 520S operator's manual that states the 520's "output impedance" range is between 15 and 200 ohms. The manual states in the specification page the "output impedance" is "50 to 70" ohms and there are several references in the manual that states the 520 should be connected to a "50 ohm impedance with less than 2:1 SWR".

The G5RV is a very good all band antenna. I used a G5RV fed through a Drake MN-2000 tuner not only with a TS-820 I use to own but also with Drake C Line, Heathkit HW-101, Heathkit SB-100, Heathkit Apache TX1, Heathkit Marauder HX-10, Heathkit SB-400/401, and a Yaesu FT-857D. I no longer have the 820 but I still have and use all the other gear. The Apache TX-1 is down for HV supply capacitor replacement.

Tom Rauch, W8JI, has a webpage devoted to the G5RV with a nice informative write up (see the following link) which he states, as I did, that a tuner is required with a G5RV.

www.w8ji.com/g5rv_facts.htm

However John, and others, whether you use an antenna tuner with a G5RV or not is entirely up you. I personally would not feed an unbalanced "coax fed" G5RV without using a tuner.

73s
Mike
W5RKL

On 1/18/2013 5:29 PM, John Davidson wrote:
>
> The op manual for my 520 says it can work into 15-200 ohm loads.
>
> _____
> From: KB1TCD kb1tcd@... <mailto:kb1tcd%40gmail.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Thursday, January 17, 2013 11:49 AM
> Subject: Re: [TS-520_820_530_830] antenna tuner for TS-520
>
>
> I use a G5RV Jr antenna, antenna actually does fine on 40, 17, 10 and 6
> meters without a tuner according to my antenna analiser. Antenna works
> fine on other bands as well.
> I just tune the 830S for all bands without using an antenna tuner.
> I tried using an auto antenna tuner a few years back on my 520SE and it

> didn't work so I just went to tuning the radio as per Ken's (K4EAA)
> instructions.
>
> 73 de Jose Douglas KB1TCD
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

40654. Re: [TS-520_820_530_830] antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-19 14:05:16 UTC
From: Mike
Topic: 6768 Message: 40654

Jose,

You said you tried using an auto tuner with your 520SE but it didn't work. What type of antenna were you using with the auto tuner?

It appears from you statement that you might possibly be saying the auto tuner was at fault. If that's true, why do you think the auto tuner was at fault? What model auto tuner were you using?

73s
Mike
W5RKL

On 1/17/2013 10:49 AM, KB1TCD wrote:
>
> I use a G5RV Jr antenna, antenna actually does fine on 40, 17, 10 and 6
> meters without a tuner according to my antenna analiser. Antenna works
> fine on other bands as well.
> I just tune the 830S for all bands without using an antenna tuner.
> I tried using an auto antenna tuner a few years back on my 520SE and it
> didn't work so I just went to tuning the radio as per Ken's (K4EAA)
> instructions.
>
> 73 de Jose Douglas KB1TCD
>
>

[Non-text portions of this message have been removed]

40655. Re: [TS-520_820_530_830] antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-19 15:20:54 UTC
From: Mike
Topic: 6768 Message: 40655

John and others,

I stand corrected with the help from Terry. I did find the reference to 15-200 ohms impedance range in the manual, section 1.2 Antenna. I obviously missed that when I was searching for it in the manual. Some times it helps to have a second pair of eyes.

Having said that, I personally would not feed a G5RV without a tuner. Whether you do or not is entirely up to you. As I said, I had excellent result with my G5RV. It performed well at all power levels on most ham bands. I used it with my modified 11 meter Johnson Messenger 223 which is now a DDS VFO controlled AM transceiver on 29.0Mhz at 6 watts output. Worked a lot of stations on 10 meter AM when the band was open, all going through the MN-2000 tuner to the G5RV.

73s
Mike

On 1/18/2013 5:29 PM, John Davidson wrote:
>
> The op manual for my 520 says it can work into 15-200 ohm loads.
>
> _____
> From: KB1TCD kb1tcd@... <mailto:kb1tcd%40gmail.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Thursday, January 17, 2013 11:49 AM
> Subject: Re: [TS-520_820_530_830] antenna tuner for TS-520
>
>
> I use a G5RV Jr antenna, antenna actually does fine on 40, 17, 10 and 6
> meters without a tuner according to my antenna analiser. Antenna works
> fine on other bands as well.
> I just tune the 830S for all bands without using an antenna tuner.
> I tried using an auto antenna tuner a few years back on my 520SE and it
> didn't work so I just went to tuning the radio as per Ken's (K4EAA)
> instructions.
>
> 73 de Jose Douglas KB1TCD
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

40656. Re: [TS-520_820_530_830] antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-19 17:18:48 UTC
From: John Davidson
Topic: 6768 Message: 40656

Keep reading,
Sec 1.2 Requirements for operation page 6 under "antenna " heading.
IMHO the G5RV is not a really a "good " ant but a compromise that works "fairly" well on some bands.

From: Mike <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, January 19, 2013 8:15 AM
Subject: Re: [TS-520_820_530_830] antenna tuner for TS-520

John,

I can't find any reference in the 520 or the 520S operator's manual that states the 520's "output impedance" range is between 15 and 200 ohms. The manual states in the specification page the "output impedance" is "50 to 70" ohms and there are several references in the manual that states the 520 should be connected to a "50 ohm impedance with less than 2:1 SWR".

[Non-text portions of this message have been removed]

40657. M0CVO Antennas HW-42HP multiband HF antenna

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-19 17:31:58 UTC
From: kenny macdougall
Topic: 40657 Message: 40657

Hi All,
Anybody had any dealings with this antenna .
73s
Kenny
Skye
http://www.ebay.co.uk/itm/230895983621?ssPageName=STRK:MEWAX:IT&_trksid=p3984.m1438.l2649

[Non-text portions of this message have been removed]

40658. Re: [TS-520_820_530_830] antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-19 20:32:28 UTC
From: Mike
Topic: 6768 Message: 40658

John and others,

An SWR ratio of 2:1, for example, has a power loss of 11%. Therefore, if the transmitter is producing 100 watts output and the antenna system presents an SWR of 2:1 to the transmitter, the effective radated power "at the antenna" is now down to 89 watts, a loss of 11 watts in the antenna system. A higher SWR of say 3:1 has a power loss of 25% and with the same 100 watts output at the transmitter will result in 75 watts of effective radiated power at the antenna, a loss of 25 watts. Let go one step further and take a linear amplifier with a power output at the amplifier's antenna connector of 600 watts and a 3:1 SWR. The power loss is "150 watts" resulting in an effective radiate power at the antenna of 450 watts. As you can see, the higher the SWR ratio is the greater the power loss is and the lower the antenna's efficiency and effective radiate power is. That's why I recommended using a tuner with the G5RV so the antenna's efficiency is as close to maximum and the effective radiated power is as close to maximum as possible. Why allow power loss in your antenna system to occur simply because one doesn't use a tuner to achieve the "lowest SWR" possible and the "maximum transfer of power" (effective radiated power) at the antenna can occur with a tuner?

The following link provides percentages of power loss based on SWR ratios:

http://www.firestik.com/Tech_Docs/SWRLOSS.htm

Here's another link Terry gave me that may be of interest for those members who are using the G5RV. It's a very good webpage that shows you what the G5RV radiation patterns are on various HF ham band frequencies.

http://hf-antenna.com/014/

As the website says, you should consider these radiation patterns when building and using a G5RV antenna.

73s
Mike
W5RKL

On 1/19/2013 11:18 AM, John Davidson wrote:
>
> Keep reading,
> Sec 1.2 Requirements for operation page 6 under "antenna " heading.
> IMHO the G5RV is not a really a "good " ant but a compromise that
> works "fairly" well on some bands.
>
> _____
> From: Mike w5rkl@yahoo.com <mailto:w5rkl%40yahoo.com>>

> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Saturday, January 19, 2013 8:15 AM
> Subject: Re: [TS-520_820_530_830] antenna tuner for TS-520
>
>
> John,
>
> I can't find any reference in the 520 or the 520S operator's manual that
> states the 520's "output impedance" range is between 15 and 200 ohms.
> The manual states in the specification page the "output impedance" is
> "50 to 70" ohms and there are several references in the manual that
> states the 520 should be connected to a "50 ohm impedance with less than
> 2:1 SWR".
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

40659. Re: Clicking Relays

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-19 20:17:42 UTC
From: wb2dcu
Topic: 40635 Message: 40659

Hi Joe,

I took your kind advice and checked the voltages on the AF-AVR board and sadly found them to be OK. Next I checked the relays and found that on set of contacts on the relay on the relay board were stuck in the wrong position. I carefully fixed the relay and cleaned all of the contacts and all is now ok the rx side of things. I then reconnected the relays to the Fix-VOX board and sadly, they started to click away again. i started to check voltages on the FIX-VOX board and found the 14A voltage had a 1 volt sawtooth riding on it. Looking back to the relay board this voltage was clean. Unfortunately, my schematic is not real good (small) so I'm having a tough time finding where the junk is coming from. I'm wondering if Q9 on the FIX-VOX board could be bad as it seems to be only partially conducting, but just enough to make the relay chatter. Interestingly, when I disconnect the relays from Q9 voltage goes up to noisy 14 volts. I guessing that would be normal as the is no load on the collector. The manual I have ain't a good one, but it gets me around. I'd love to have one with a bit more detail.
Any thoughts??

Best 73's
John
WB2DCU

s830@yahoogroups.com, Joseph Stiles wrote:
>
> John,
>
> Â Are both relays "clicking?" There are two...one on the "relay board" and another under the metal shield by the final amp board. Check the voltages on the AF-AVR board first...you can look on Pg 38 of the "operators manual" orÂ Pg 44 of the "service manual."
> It is possible that you may have a failure on the "relay board," or the T/R relay by the final board...it's under the metal shield. You may also just want to remove both relays
> and inspect/clean the contacts, both external and internal. Easy places to start. Do that with the radio off and UNPLUGGED for awhile...you will be very close to 900VDC
> in a couple of areas...so let the HV caps bleed off.
> I have not heard about this problem before. I am far from an expert on these rigs...some diagnostics are currently beyond my skill level...but I will help as much as I can.
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: wb2dcu
> To: TS-520_820_530_830@yahoogroups.com

> Sent: Thursday, January 17, 2013 12:19 PM
> Subject: [TS-520_820_530_830] Clicking Relays
>
>
> Â
> Good Morning,
>
> I fired up my TS-820S last night and found a clicking noise coming from the
> radio. What seems to be happening is the relays are going into transmit mode
> even though I did not switch to that mode. I checked to be sure the VOX was off
> (it was). I then pulled the mic, but the relays continued to click away. I'd
> like to ask the group if anyone has encountered this problem and where I can
> look to fix the issue. Thanks in advance for any help.
>
> John
> WB2DCU
>
>
>
>
> [Non-text portions of this message have been removed]
>

40660. Re: Clicking Relays

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-19 20:38:21 UTC
From: wb2dcu
Topic: 40635 Message: 40660

Hi Joe,

Tried to reply, but I guess the site is not working as it told me your message did not exist. Sorry.

John
--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles wrote:
>
> John,
>
> Â Are both relays "clicking?" There are two...one on the "relay board" and another under the metal shield by the final amp board. Check the voltages on the AF-AVR board first...you can look on Pg 38 of the "operators manual" orÂ Pg 44 of the "service manual."
> It is possible that you may have a failure on the "relay board," or the T/R relay by the final board...it's under the metal shield. You may also just want to remove both relays
> and inspect/clean the contacts, both external and internal. Easy places to start. Do that with the radio off and UNPLUGGED for awhile...you will be very close to 900VDC
> in a couple of areas...so let the HV caps bleed off.
> I have not heard about this problem before. I am far from an expert on these rigs...some diagnostics are currently beyond my skill level...but I will help as much as I can.
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: wb2dcu
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, January 17, 2013 12:19 PM
> Subject: [TS-520_820_530_830] Clicking Relays
>
>
> Â
> Good Morning,
>
> I fired up my TS-820S last night and found a clicking noise coming from the
> radio. What seems to be happening is the relays are going into transmit mode
> even though I did not switch to that mode. I checked to be sure the VOX was off
> (it was). I then pulled the mic, but the relays continued to click away. I'd
> like to ask the group if anyone has encountered this problem and where I can
> look to fix the issue. Thanks in advance for any help.
>

> John
> WB2DCU
>
>
>
>
> [Non-text portions of this message have been removed]
>

40661. Re: [TS-520_820_530_830] M0CVO Antennas HW-42HP multiband HF antenna

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-19 21:45:12 UTC
From: John Davidson
Topic: 40657 Message: 40661

Looks like an OCF dipole for 40M and up.

From: kenny macdougall <kenny.macdougall@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, January 19, 2013 12:31 PM
Subject: [TS-520_820_530_830] M0CVO Antennas HW-42HP multiband HF antenna

Hi All,
Anybody had any dealings with this antenna .
73s
Kenny
Skye
http://www.ebay.co.uk/itm/230895983621?ssPageName=STRK:MEWAX:IT&_trksid=p3984.m1438.l2649

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

40662. Re: [TS-520_820_530_830] antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-19 21:51:25 UTC
From: John Davidson
Topic: 6768 Message: 40662

Are you referring to feedline loss< depends on type of coax and freq , not just

a flat tax of 11%.
Or is it reflected power of 11 % burning up in the final ?? Some of that ends up going back to the antenna depending on phase, reactance and things that hurt my brain !

From: Mike <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, January 19, 2013 3:32 PM
Subject: Re: [TS-520_820_530_830] antenna tuner for TS-520

John and others,

An SWR ratio of 2:1, for example, has a power loss of 11%. Therefore, if the transmitter is producing 100 watts output and the antenna system presents an SWR of 2:1 to the transmitter, the effective radated power "at the antenna" is now down to 89 watts, a loss of 11 watts in the antenna system. A higher SWR of say 3:1 has a power loss of 25% and with the same 100 watts output at the transmitter will result in 75 watts of effective radiated power at the antenna, a loss of 25 watts. Let go one step further and take a linear amplifier with a power output at the amplifier's antenna connector of 600 watts and a 3:1 SWR. The power loss is "150 watts" resulting in an effective radiate power at the antenna of 450 watts. As you can see, the higher the SWR ratio is the greater the power loss is and the lower the antenna's efficiency and effective radiate power is. That's why I recommended using a tuner with the G5RV so the antenna's efficiency is as close to maximum and the effective radiated power is as close to maximum as possible. Why allow power loss in your antenna system to occur simply because one doesn't use a tuner to achieve the "lowest SWR" possible and the "maximum transfer of power" (effective radiated power) at the antenna can occur with a tuner?

The following link provides percentages of power loss based on SWR ratios:

http://www.firestik.com/Tech_Docs/SWRLOSS.htm

Here's another link Terry gave me that may be of interest for those members who are using the G5RV. It's a very good webpage that shows you what the G5RV radiation patterns are on various HF ham band frequencies.

http://hf-antenna.com/014/

As the website says, you should consider these radiation patterns when building and using a G5RV antenna.

73s
Mike
W5RKL

On 1/19/2013 11:18 AM, John Davidson wrote:
>
> Keep reading,
> Sec 1.2 Requirements for operation page 6 under "antenna " heading.
> IMHO the G5RV is not a really a "good " ant but a compromise that
> works "fairly" well on some bands.
>
> _____
> From: Mike mailto:w5rkl%40yahoo.com >
> To: mailto:TS-520_820_530_830%40yahoogroups.com
>
> Sent: Saturday, January 19, 2013 8:15 AM
> Subject: Re: [TS-520_820_530_830] antenna tuner for TS-520
>
>
> John,
>
> I can't find any reference in the 520 or the 520S operator's manual that
> states the 520's "output impedance" range is between 15 and 200 ohms.
> The manual states in the specification page the "output impedance" is
> "50 to 70" ohms and there are several references in the manual that
> states the 520 should be connected to a "50 ohm impedance with less than
> 2:1 SWR".
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

40663. Re: [TS-520_820_530_830] Re: Clicking Relays

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-19 22:02:57 UTC
From: Joseph Stiles
Topic: 40635 Message: 40663

John,

Go to Ken Kemski's web site: k4eaa.com he has very good large format schematics for the 820 & 830. You can down load for free. I put them on a thumb drive and went to "Kinkos" and had it printed on about a 24" x 36" paper....no eye strain and easy to follow.

73 Joe
WB7UQU

From: wb2dcu <jmcmahon1@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, January 19, 2013 12:17 PM
Subject: [TS-520_820_530_830] Re: Clicking Relays

Hi Joe,

I took your kind advice and checked the voltages on the AF-AVR board and sadly found them to be OK. Next I checked the relays and found that on set of contacts on the relay on the relay board were stuck in the wrong position. I carefully fixed the relay and cleaned all of the contacts and all is now ok the rx side of things. I then reconnected the relays to the Fix-VOX board and sadly, they started to click away again. i started to check voltages on the FIX-VOX board and found the 14A voltage had a 1 volt sawtooth riding on it. Looking back to the relay board this voltage was clean. Unfortunately, my schematic is not real good (small) so I'm having a tough time finding where the junk is coming from. I'm wondering if Q9 on the FIX-VOX board could be bad as it seems to be only partially conducting, but just enough to make the relay chatter. Interestingly, when I disconnect the relays from Q9 voltage goes up to noisy 14 volts. I guessing that would be normal as the is no load on the collector. The manual I have ain't a good one, but it gets me around. I'd love to have one with a bit more detail.
Any thoughts??

Best 73's
John
WB2DCU

s830@yahoogroups.com, Joseph Stiles wrote:
>
> John,
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> Â Are both relays "clicking?" There are two...one on the "relay board" and another under the metal shield by the final amp board. Check the voltages on the AF-AVR board first...you can look on Pg 38 of the "operators manual" orÂ Pg 44 of the "service manual."
> It is possible that you may have a failure on the "relay board," or the T/R relay by the final board...it's under the metal shield. You may also just want to remove both relays
> and inspect/clean the contacts, both external and internal. Easy places to start. Do that

with the radio off and UNPLUGGED for awhile...you will be very close to 900VDC
> in a couple of areas...so let the HV caps bleed off.
> I have not heard about this problem before. I am far from an expert on these rigs...some diagnostics are currently beyond my skill level...but I will help as much as I can.
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: wb2dcu
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, January 17, 2013 12:19 PM
> Subject: [TS-520_820_530_830] Clicking Relays
>
>
> Â
> Good Morning,
>
> I fired up my TS-820S last night and found a clicking noise coming from the
> radio. What seems to be happening is the relays are going into transmit mode
> even though I did not switch to that mode. I checked to be sure the VOX was off
> (it was). I then pulled the mic, but the relays continued to click away. I'd
> like to ask the group if anyone has encountered this problem and where I can
> look to fix the issue. Thanks in advance for any help.
>
> John
> WB2DCU
>
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

40664. Re: [TS-520_820_530_830] antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-19 22:21:37 UTC
From: Jan Servaites
Topic: 6768 Message: 40664

That's a CB'er web site. Don't believe what they say there or else one
gets confused.
Jan N8CBX

Mike wrote:

>
>
>
>
> The following link provides percentages of power loss based on SWR ratios:
>
> http://www.firestik.com/Tech_Docs/SWRLOSS.htm
>
>
>
>

40665. Re: [TS-520_820_530_830] antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-19 22:39:58 UTC
From: Mike
Topic: 6768 Message: 40665

Well you all work out the problem among yourselves from now on, I've had enough.

73s
Mike

On 1/19/2013 4:21 PM, Jan Servaites wrote:
>
> That's a CB'er web site. Don't believe what they say there or else one
> gets confused.
> Jan N8CBX
>
> Mike wrote:
>
> >
> >
> >
> >
> > > The following link provides percentages of power loss based on SWR
> > ratios:
> > >
> > > http://www.firestik.com/Tech_Docs/SWRLOSS.htm
> > >
> > >
> > >
> > >
> >
>
>

[Non-text portions of this message have been removed]

40666. Amp classifications

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-20 11:32:37 UTC
From: fpath fpath
Topic: 40346 Message: 40666

Hi All,

Have had a few direct emails relating to Class types, thought it would be good to put some basic information on the forum. Sorry to those who know this, but thought it would help some of the newbies to the Hybird era

1. Class A means that the power tube conducts the same amount of current all the time, whether idling or producing full power. Class A is very inefficient with electricity but usually gives very low distortion.

There are single-ended class-A, or SE, amplifiers. They use one or more tubes in parallel, which are all in phase with each other. This is commonly used in smaller guitar amps and in exotic high-end amplifiers. Many audiophiles prefer the SE amplifier, even though it has relatively high levels of even-order distortion. Most 300B high-end amplifiers are SE. Negative feedback, which can be used to decrease the distortion of an amplifier, is felt by some people to sound inferior. Most SE amps have no feedback.
Push-pull class-A amplifiers also exist--they use two, four or more tubes (always in pairs) which are driven in opposite phase to each other. This cancels out the even-order distortion and gives very clean sound. An example of a class-A push-pull amplifier is the Vox AC-30 guitar amp. Push-pull Class A operation usually involves low plate voltages and high plate currents, compared to Class AB operation below. The high currents might tend to wear out the tube cathodes faster than in an AB amplifier.
There are two kinds of class-A operation, which can apply to single-ended or push-pull.
--Class A1 means that the grid voltage is always more negative than the cathode voltage. This gives the greatest possible linearity and is used with triodes such as the SV300B, and with audio beam tetrodes and pentodes.
--Class A2 means that the grid is driven MORE POSITIVE than the cathode for part or all of the waveform. This means the grid will draw current from the cathode and heat up. A2 is not often used with beam tetrodes, pentodes or triodes like the SV300B, especially in audio. Usually a class-A2 amplifier will use tubes with special rugged grids, such as the SV811 and SV572 series of triodes.
Class A2 also requires a special driver circuit, that can supply power to the grid.
2. Class AB applies only to push-pull amplifiers. It means that when one tube's grid is driven until its plate current cuts off (stops) completely, the other tube takes over and handles the power output. This gives greater efficiency than Class A. It also results in increased distortion, unless the amplifier is carefully designed and uses some negative feedback. There are class-AB1 and class-AB2 amplifiers; the differences are the same as were explained above--the tube's grids are not (AB1) or are (AB2) driven positive.
3. Class B applies only to push-pull amplifiers in audio; it SOMETIMES applies to RF power amplifiers with one tube. It is like Class AB, except that the tubes idle at or near zero current. This gives even greater efficiency than Class A or AB. It also results in increased distortion, unless the amplifier is carefully designed and uses some negative feedback. If careful design is not undertaken, the result may be crossover distortion, which appears at the midpoint of the output waveform and has very bad-sounding effects in audio. Most solid-state audio amplifiers use class B, because the transistors undergo less heat stress when idling.

Bias
Bias is a negative voltage applied to a power tube's control grid, to set the amount of idle current the tube draws. It is important to bias a tube to stay within its rated dissipation. Otherwise, you DO NOT need to worry about small deviances from the manufacturer's recommendations. Many times we have customers asking us things like, "I replaced the tubes, the old tubes ran at 35 mA, the new ones run at 38 mA. I'm worried that I have to rebias the amp." This is NOT worth worrying about. Especially with guitar amps--they tend to run their tubes at idle conditions which are conservative. Some high-end audio amps run their power tubes quite hard--in that case, rebiasing is necessary. Many amps have no bias adjustments at all, and are designed so that you do not need to concern yourself with bias. This includes most Mesa-Boogie guitar amps, most amps using EL84s, and many single-ended triode hi-fi amps

Regards

Dave
VK5PDL

[Non-text portions of this message have been removed]

40667. Re: [TS-520_820_530_830] Re: antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-20 05:57:16 UTC
From: Robert Reyes
Topic: 6768 Message: 40667

Thanks Bob for the info.

Rob
KD6FSK

--- On Fri, 1/18/13, Bob Macklin <macklinbob@...> wrote:

From: Bob Macklin <macklinbob@...>
Subject: Re: [TS-520_820_530_830] Re: antenna tuner for TS-520
To: TS-520_820_530_830@yahoogroups.com
Date: Friday, January 18, 2013, 4:20 AM

The Kenwood AT-230 is another possibility. The difference between the AT-200 and the AT-230 is the AT-230 also has the WARC bands.

You don't need the WARC bands for an original TS-520 but if you get one of the newer units it might be nice to have them.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

  ----- Original Message -----
  From: Robert Reyes
  To: TS-520_820_530_830@yahoogroups.com
  Sent: Thursday, January 17, 2013 7:09 PM
  Subject: Re: [TS-520_820_530_830] Re: antenna tuner for TS-520

  Thank you John, I will keep a watch for the AT-180/AT-200.

  Rob
  KD6FSK

  --- On Fri, 1/18/13, N7IQV n7iqv@...m> wrote:

  From: N7IQV n7iqv@...>
  Subject: [TS-520_820_530_830] Re: antenna tuner for TS-520
  To: TS-520_820_530_830@yahoogroups.com
  Date: Friday, January 18, 2013, 2:50 AM

  Rob,

  You might look around for an AT-180 on QRZ or E-Pay... The one you want is the "real" KENWOOD AT-180, not the one with the same model number, from "another" manufacturer. ;) AT-200 would also work well, from my experience. (Keep the lights low in the shack, nobody will notice the slight difference in the front panel paint)

John/N7IQV

--- In TS-520_820_530_830@yahoogroups.com, "rkings1956" wrote:
>
> Hi everyone, I purchased a TS-520 about two months ago and I'm wondering what is the best antenna tuner for this rig? I will use it with a G5RV/zs6bkw 6m-80m and so will need a tuner. Does anyone have any advise.
>
> Thanks and God Bless
> Rob
>

Yahoo! Groups Links

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Yahoo! Groups Links

[Non-text portions of this message have been removed]

40668. KENWOOD HYBRID USER NET (January 13th, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-20 19:36:53 UTC
From: mvgilger
Topic: 40668 Message: 40668

The Saturday's net on 40 meter we had 19 stations checking with good band conditions. Out of those, there was 3 running TS-520(x), 2 running TS-530(x), 6 running TS-820(x), 4 running TS-830S. I was running a TS830. The rest were running non hybrids of one model or another.

The Sunday 20 meter was run byu Richard, KJ4ZIZ. The had 20 stations checking in. Out of those, there were 3 running TS-520(x), 1 running TS-530(x), 4 running TS-820(x), 4 running TS-830S and 1 running a set of 599 Twins . Richard was running his TS-520. Thanks Richard for stepping up and doing a good job running the net in my absence.

We have been having several people checking in regularly with their TS-430, TS-440, and TS-940's, which of course is not a hybrid, although over 30+ years old. Everyone is welcome as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a net control station, please send me an email. Currently it's just myself, WB2KNR and WB0SGA. I would like to get several more. If we do, we can alternate so everyone might be on a 3-4 week rotation. It's a lot of fun and a good way to make sure you station is optimized.

For anyone that has not heard, we have a new web site that WB4HFN is hosting. He currently has a very nice site for Drake, Collins and Heathkit and now Kenwood Hybrids. Good quality manuals plus sale flyers and brochures will be found here, along with user supplied information for all Hybrids.

His URL is:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754 check-ins, Sunday total 563 check-ins

November 2012, Saturday's, net total = 47, Sundays total = 20
December 2012, Saturday's, net total = 74, Sunday's total = 70
January 2013, Saturday's, net total = 49, Sunday's total = 39 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

40669. KENWOOD HYBRID USER NET (January 20th, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-20 19:39:52 UTC
From: mvgilger
Topic: 40669 Message: 40669

The Saturday's net on 40 meter we had 28 stations checking with good band conditions. Out of those, there was 7 running TS-520(x), 3 running TS-530(x), 7 running TS-820(x), 3 running TS-830S. I was running a TS830. The rest were running non hybrids of one model or another. A last minute check-in was WB8WT and indicated he had two TS-511's and would check in next Saturday using one of them. I will look forward to hearing it.

The Sunday 20 meter net we had 25 stations checking in under. Out of those, there were 6 running TS-520(x), 0 running TS-530(x), 5 running TS-820(x), 3 running TS-830S . I was running a non hybrid TS-940. The rest were running non hybrids of one model or another. Richard, KJ4ZIZ picked up the net last Sunday, and did a good job.

We have been having several people checking in regularly with their TS-430, TS-440, and TS-940's, which of course is not a hybrid, although over 30+ years old. Everyone is welcome as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a net control station, please send me an email. Currently it's just myself, WB2KNR and WB0SGA. I would like to get several more. If we do, we can alternate so everyone might be on a 3-4 week rotation. It's a lot of fun and a good way to make sure you station is optimized.

For anyone that has not heard, we have a new web site that WB4HFN is hosting. He currently has a very nice site for Drake, Collins and Heathkit and now Kenwood Hybrids. Good quality manuals plus sale flyers and brochures will be found here, along with user supplied information for all Hybrids.

His URL is:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754 check-ins, Sunday total 563 check-ins

November 2012, Saturday's, net total = 47, Sundays total = 20
December 2012, Saturday's, net total = 74, Sunday's total = 70
January 2013, Saturday's, net total = 67, Sunday's total = 64 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

40670. Re: antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-20 20:27:12 UTC
From: scott10k
Topic: 6768 Message: 40670

There have been a lot of replies to this thread, so I will be brief. I use either an LDG auto tuner or a MFJ manual tuner (Versa Tuner II) with my hybrids. I have several antennas, including a G5RV-Jr with 16 feet of ladder line, and with the G5RV-Jr I find the tuner is really needed on several bands to get the SWR down to 1.5 to 1, especially on 15 meters where I find it very difficult to get a reasonably low SWR. Just my experience. Enjoy your TS-520!
73s, Scott, N6CIC

--- In TS-520_820_530_830@yahoogroups.com, "rkings1956" wrote:
>
> Hi everyone, I purchased a TS-520 about two months ago and I'm wondering what is the best antenna tuner for this rig? I will use it with a G5RV/zs6bkw 6m-80m and so will need a tuner. Does anyone have any advise.
>
> Thanks and God Bless
> Rob
>

40671. For Sale, 2.1kHz filter for Kenwood 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-20 19:58:08 UTC
From: k8nb
Topic: 40671 Message: 40671

Hello all,

I recently picked up an 820 as a project. There was an additional filter in the radio in addition to the stock SSB and CW filter. This was on a separate board, and was not hooked up when I got the radio. There is no label on this filter however I did take it to work and measure it's response with a spectrum analyzer and tracking generator. It is centered on 8.830 and is a 2.1 kHz filter. I have posted pictures of the filter and the board it is on on Photobucket. Here is the link to the pictures:
http://s1286.beta.photobucket.com/user/K8NB/library/TS-820%20Filter

I would like to sell this filter. I have no further information on it and no hookup data. I would guess that it is an INRAD, but not sure. It appears it could be used as a cascaded filter, after the stock filters, or it could be taken off the board and used to replace the stock SSB filter.

I would like $50.00 for this filter and I will ship it in the US. Please contact me off list at k8nb@.... The first response gets it. Thank you for your time to read this.

73, Noel

40672. WTB: TS-530 w/CW Filter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-20 22:13:01 UTC
From: k3jls@verizon.net
Topic: 40672 Message: 40672

Hello folks.

I'm interested in buying a clean TS-530S/SP, preferably with a CW filter.

Please state price and condition with shipping to 19606.

73's - Joe - K3JLS

40673. Re: antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-20 22:28:00 UTC
From: wallydoc
Topic: 6768 Message: 40673

Hi Rob
I own a two 520s a 530 and a 820.
I use a G5RV inverted V. VSWR is about 3.3 (not good)
A Kenwood tuner (or any manual tuner)for the rig will help some.
Anyway at least you will have a wattmeter.
I have an AT200 and do not use it much.
I do think it helps somewhat.
The rig seems to work fine with or without the tuner.

Wally
KC9INK

--- In TS-520_820_530_830@yahoogroups.com, "rkings1956" wrote:
>
> Hi everyone, I purchased a TS-520 about two months ago and I'm wondering what is the best antenna tuner for this rig? I will use it with a G5RV/zs6bkw 6m-80m and so will need a tuner. Does anyone have any advise.
>
> Thanks and God Bless
> Rob
>

40674. TS830S: Adjustment of receive IF coils

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-21 19:37:26 UTC
From: ravnpeter@ymail.com
Topic: 40674 Message: 40674

According to the instruction manual the procedure for adjustment of receive IF coils is: "Adjust the DRIVE and the main tuning for maxium S meter deflection. Adjust T2 on the RF unit and L5, L6, L7, L11 and L12 on the IF unit for maximum S meter indication. DO NOT adjust L3, L5 and L9".

On one hand it says L5 should be adjusted. On the other hand you should not touch L5. So what to believe?

Thanks.

Peter, OZ8CTH

40675. Re: [TS-520_820_530_830] TS830S: Adjustment of receive IF coils

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-21 19:54:14 UTC
From: n6wk@...
Topic: 40674 Message: 40675

Peter,
One of My 830 instruction manual says to adjust T2 on the RF board, then L3,L4,L5,L6,L7,L11 and L12. It says to NOT touch L9.
Another TS-830 Instruction manual I have says to adjust L5,L6,L7,L11,L12 but NOT to adjust L3,L4,L5,L9. Crazy.
I always use the procedure in the Service manual and have never had an issue.
The service manual says adjust T2 on RF board, then adjust L2,L3,L4,L5,L6L7,L9 and L11 for maximum S-Meter reading.
The Drive control should be Centered when doing these adjustments!

73,
Gordon
N6WK

On 1/21/2013 11:37 AM, ravnpeter@... wrote:
>
> According to the instruction manual the procedure for adjustment of
> receive IF coils is: "Adjust the DRIVE and the main tuning for maxium
> S meter deflection. Adjust T2 on the RF unit and L5, L6, L7, L11 and
> L12 on the IF unit for maximum S meter indication. DO NOT adjust L3,
> L5 and L9".
>
> On one hand it says L5 should be adjusted. On the other hand you
> should not touch L5. So what to believe?
>
> Thanks.
>
> Peter, OZ8CTH
>
>
>

40676. Re: [TS-520_820_530_830] TS830S: Adjustment of receive IF coils

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-21 19:58:19 UTC
From: n6wk@...
Topic: 40674 Message: 40676

The two different Instruction manuals I have are on the last page of the manual labeled
25312 B50-2738-00 (G) (K)
The other is 15102 B50-2738-00 (G) K Note: this one has a Circle around the K but I can't make the circle LOL

73,
Gordon

On 1/21/2013 11:37 AM, ravnpeter@... wrote:
>
> According to the instruction manual the procedure for adjustment of
> receive IF coils is: "Adjust the DRIVE and the main tuning for maxium
> S meter deflection. Adjust T2 on the RF unit and L5, L6, L7, L11 and
> L12 on the IF unit for maximum S meter indication. DO NOT adjust L3,
> L5 and L9".
>
> On one hand it says L5 should be adjusted. On the other hand you
> should not touch L5. So what to believe?
>
> Thanks.
>
> Peter, OZ8CTH
>
>
>

40677. Re: [TS-520_820_530_830] TS830S: Adjustment of receive IF coils

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-22 02:05:49 UTC
From: pmarkavage@...
Topic: 40674 Message: 40677

They never reissued the operating manual, B50-2738-00. The last two digits, in this case "00" indicate it was the first printing. It is peppered with errors. If you're going to do any any any service on any of these hybrids, don't be foolish and just try to use the operating manual instructions. It will take most likely take you and your rig to where you don't want to go. Always use the service manual instructions and try to use the most recent version.

Pete, wa2cwa

On Mon, 21 Jan 2013 11:58:19 -0800 n6wk@... writes:
> The two different Instruction manuals I have are on the last page of
> the
> manual labeled
> 25312 B50-2738-00 (G) (K)
> The other is 15102 B50-2738-00 (G) K Note: this one has a Circle
> around
> the K but I can't make the circle LOL
>
> 73,
> Gordon
>
>
> On 1/21/2013 11:37 AM, ravnpeter@... wrote:
> >
> > According to the instruction manual the procedure for adjustment
> of
> > receive IF coils is: "Adjust the DRIVE and the main tuning for
> maxium
> > S meter deflection. Adjust T2 on the RF unit and L5, L6, L7, L11
> and
> > L12 on the IF unit for maximum S meter indication. DO NOT adjust
> L3,
> > L5 and L9".
> >
> > On one hand it says L5 should be adjusted. On the other hand you
> > should not touch L5. So what to believe?
> >
> > Thanks.
> >
> > Peter, OZ8CTH
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> Yahoo! Groups Links
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40678. Re: [TS-520_820_530_830] TS830S: Adjustment of receive IF coils

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-22 02:41:20 UTC
From: n6wk@...
Topic: 40674 Message: 40678

Pete,
Why is it that my two Instruction Manuals are different if they never
re-issued it?
As I stated, they even have different prefixes and one has ( ) around
the K and the other has a Circle.
Curious minds would like to know?
Thanks,
Gordon
N6WK

On 1/21/2013 6:05 PM, pmarkavage@... wrote:
>
> They never reissued the operating manual, B50-2738-00. The last two
> digits, in this case "00" indicate it was the first printing. It is
> peppered with errors. If you're going to do any any any service on any of
> these hybrids, don't be foolish and just try to use the operating manual
> instructions. It will take most likely take you and your rig to where you
> don't want to go. Always use the service manual instructions and try to
> use the most recent version.
>
> Pete, wa2cwa
>
> On Mon, 21 Jan 2013 11:58:19 -0800 n6wk@...
> <mailto:n6wk%40n6wk.com> writes:
> > The two different Instruction manuals I have are on the last page of
> > the
> > manual labeled
> > 25312 B50-2738-00 (G) (K)
> > The other is 15102 B50-2738-00 (G) K Note: this one has a Circle
> > around
> > the K but I can't make the circle LOL
> >
> > 73,
> > Gordon
> >
> >
> > On 1/21/2013 11:37 AM, ravnpeter@...
> <mailto:ravnpeter%40ymail.com> wrote:
> > >
> > > According to the instruction manual the procedure for adjustment
> > of
> > > receive IF coils is: "Adjust the DRIVE and the main tuning for
> > maxium
> > > S meter deflection. Adjust T2 on the RF unit and L5, L6, L7, L11
> > and

> > > L12 on the IF unit for maximum S meter indication. DO NOT adjust
> > L3,
> > > L5 and L9".
> > >
> > > On one hand it says L5 should be adjusted. On the other hand you
> > > should not touch L5. So what to believe?
> > >
> > > Thanks.
> > >
> > > Peter, OZ8CTH
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> > Yahoo! Groups Links
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40679. Re: [TS-520_820_530_830] TS830S: Adjustment of receive IF coils

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-22 02:49:54 UTC
From: n6wk@...
Topic: 40674 Message: 40679

Also, The first one does NOT list the Belgium Kenwood address at the end
as the second one does.
you ca see the last page of each here:
http://www.n6wk.com/Kenwood%20manual%20differences/

73,
Gordon
N6WK

On 1/21/2013 6:41 PM, n6wk@... wrote:
> Pete,
> Why is it that my two Instruction Manuals are different if they never
> re-issued it?
> As I stated, they even have different prefixes and one has ( ) around
> the K and the other has a Circle.
> Curious minds would like to know?
> Thanks,
> Gordon
> N6WK
>
>
>
> On 1/21/2013 6:05 PM, pmarkavage@... wrote:
>> They never reissued the operating manual, B50-2738-00. The last two
>> digits, in this case "00" indicate it was the first printing. It is
>> peppered with errors. If you're going to do any any any service on any of
>> these hybrids, don't be foolish and just try to use the operating manual
>> instructions. It will take most likely take you and your rig to where you
>> don't want to go. Always use the service manual instructions and try to
>> use the most recent version.
>>
>> Pete, wa2cwa
>>
>> On Mon, 21 Jan 2013 11:58:19 -0800 n6wk@...
>> <mailto:n6wk%40n6wk.com> writes:
>>> The two different Instruction manuals I have are on the last page of
>>> the
>>> manual labeled
>>> 25312 B50-2738-00 (G) (K)
>>> The other is 15102 B50-2738-00 (G) K Note: this one has a Circle
>>> around
>>> the K but I can't make the circle LOL
>>>
>>> 73,
>>> Gordon

>>>
>>>
>>> On 1/21/2013 11:37 AM, ravnpeter@...
>> <mailto:ravnpeter%40ymail.com> wrote:
>>>> According to the instruction manual the procedure for adjustment
>>> of
>>>> receive IF coils is: "Adjust the DRIVE and the main tuning for
>>> maxium
>>>> S meter deflection. Adjust T2 on the RF unit and L5, L6, L7, L11
>>> and
>>>> L12 on the IF unit for maximum S meter indication. DO NOT adjust
>>> L3,
>>>> L5 and L9".
>>>>
>>>> On one hand it says L5 should be adjusted. On the other hand you
>>>> should not touch L5. So what to believe?
>>>>
>>>> Thanks.
>>>>
>>>> Peter, OZ8CTH
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40680. TS-830S CW Transmit Problem

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-22 04:16:16 UTC
From: baamaster
Topic: 40680 Message: 40680

I purchased a TS-830S last weekend, and it seems to work well except for one minor problem. If you have a key plugged in and not closed, and switch to CW mode, you hear the sidetone and if VOX is enabled, the rig is keyed.

If you unplug the key, it's fine. The plug is not shorted, and when the radio transmits via the VOX, closing or opening the key has no effect on the keying of the transmitter.

In short, when you plug in a 1/4 in phono plug, it keys the transmitter in CW Mode.

Anyone have any thoughts before I start tearing things apart?

Thanks,

Bill
KA4GAV

40681. Re: [TS-520_820_530_830] TS830S: Adjustment of receive IF coils

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-22 08:28:33 UTC
From: pmarkavage@...
Topic: 40674 Message: 40681

They obviously did more then one printing of the operating manual over the life of the TS-830S. Ideally, if no changes were made to the content, the part number, in this case B50-2738-00, was not changed. However, Kenwood documentation, and other Japanese company documentation, back in the 70's and early 80's, were very sloppy in many of their documents probably due to translation and not using real proofreading verifications. It probably wasn't uncommon to correct an error or typo in a subsequent printing and make no reference to it in the part number (the last two numbers). With this manual, the last page (since it only has locations) would not be considered a content page. If you look at the five digit number that follows the Copyright symbol on each back that you posted, you'll see two different numbers. Just like date of manufacture, Kenwood had some convoluted way of expressing year and week in their serial numbers and, in this case, when the document print took place. The letters with ( ) or a circle, I believe, had to do with what international region the manual/equipment was targeted for.

For any type of service related work, no matter how trivial, the service manual should only/always be used. The service manual was reissued three times. B51-0916-00, B51-0916-10, and B51-0916-20. If you really want to boggle your mind, following the part number for the service manual for the third edition (-20), there is (K), (W), (T), (X), the number 2 with a square around it, a G with a circle around it, and then the number 350.

Pete, wa2cwa

On Mon, 21 Jan 2013 18:49:54 -0800 n6wk@... writes:
> Also, The first one does NOT list the Belgium Kenwood address at the
> end
> as the second one does.
> you ca see the last page of each here:
> http://www.n6wk.com/Kenwood%20manual%20differences/
>
> 73,
> Gordon
> N6WK
>
>
> On 1/21/2013 6:41 PM, n6wk@... wrote:
> > Pete,
> > Why is it that my two Instruction Manuals are different if they
> never
> > re-issued it?
> > As I stated, they even have different prefixes and one has ( )
> around
> > the K and the other has a Circle.

> > Curious minds would like to know?
> > Thanks,
> > Gordon
> > N6WK
> >
> >
> >
> > On 1/21/2013 6:05 PM, pmarkavage@... wrote:
> >> They never reissued the operating manual, B50-2738-00. The last
> two
> >> digits, in this case "00" indicate it was the first printing. It
> is
> >> peppered with errors. If you're going to do any any any service
> on any of
> >> these hybrids, don't be foolish and just try to use the operating
> manual
> >> instructions. It will take most likely take you and your rig to
> where you
> >> don't want to go. Always use the service manual instructions and
> try to
> >> use the most recent version.
> >>
> >> Pete, wa2cwa
> >>
> >> On Mon, 21 Jan 2013 11:58:19 -0800 n6wk@...
> >> <mailto:n6wk%40n6wk.com> writes:
> >>> The two different Instruction manuals I have are on the last
> page of
> >>> the
> >>> manual labeled
> >>> 25312 B50-2738-00 (G) (K)
> >>> The other is 15102 B50-2738-00 (G) K Note: this one has a
> Circle
> >>> around
> >>> the K but I can't make the circle LOL
> >>>
> >>> 73,
> >>> Gordon
> >>>
> >>>
> >>> On 1/21/2013 11:37 AM, ravnpeter@...
> >> <mailto:ravnpeter%40ymail.com> wrote:
> >>>> According to the instruction manual the procedure for
> adjustment
> >>> of
> >>>> receive IF coils is: "Adjust the DRIVE and the main tuning for
> >>> maxium
> >>>> S meter deflection. Adjust T2 on the RF unit and L5, L6, L7,
> L11
> >>> and

> >>>> L12 on the IF unit for maximum S meter indication. DO NOT
> adjust
> >>> L3,
> >>>> L5 and L9".
> >>>>
> >>>> On one hand it says L5 should be adjusted. On the other hand
> you
> >>>> should not touch L5. So what to believe?
> >>>>
> >>>> Thanks.
> >>>>
> >>>> Peter, OZ8CTH
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40682. YK-88C-1 CW Filter - Reuse in the TS-530S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-22 14:46:52 UTC
From: k3jls@verizon.net
Topic: 40682 Message: 40682

Hello,

I just bought a TS-530S that has an SSB narrow filter. I'm not a big SSB operator, so I was going to look around for a narrow CW filter, perhaps selling the SSB filter on eBay.

Does anyone know if the plug-in YK-88C, YK-88CN's variants that are currently advertised on eBay can be removed from their plug-in 'carrier' and then soldered onto the TS-530's IF board?

Thanks - Joe - K3JLS

40683. Re: [TS-520_820_530_830] Re: antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-22 07:47:10 UTC
From: Robert Reyes
Topic: 6768 Message: 40683

Thanks Scott
Rob

--- On Sun, 1/20/13, scott10k <scottandalene@...> wrote:

From: scott10k <scottandalene@...>
Subject: [TS-520_820_530_830] Re: antenna tuner for TS-520
To: TS-520_820_530_830@yahoogroups.com
Date: Sunday, January 20, 2013, 8:27 PM

There have been a lot of replies to this thread, so I will be brief. I use either an LDG auto tuner or a MFJ manual tuner (Versa Tuner II) with my hybrids. I have several antennas, including a G5RV-Jr with 16 feet of ladder line, and with the G5RV-Jr I find the tuner is really needed on several bands to get the SWR down to 1.5 to 1, especially on 15 meters where I find it very difficult to get a reasonably low SWR. Just my experience. Enjoy your TS-520!
73s, Scott, N6CIC

--- In TS-520_820_530_830@yahoogroups.com, "rkings1956" wrote:
>
> Hi everyone, I purchased a TS-520 about two months ago and I'm wondering what is the best antenna tuner for this rig? I will use it with a G5RV/zs6bkw 6m-80m and so will need a tuner. Does anyone have any advise.
>
> Thanks and God Bless
> Rob
>

Yahoo! Groups Links

[Non-text portions of this message have been removed]

40684. Re: [TS-520_820_530_830] Re: antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-22 07:56:54 UTC
From: Robert Reyes
Topic: 6768 Message: 40684

Thanks Wally for the info I will wait till I setup the antenna and see how the rig performes, without a Tuner and decide if I really need.

Rob
KD6FSK

--- On Sun, 1/20/13, wallydoc <wallydoc@...> wrote:

From: wallydoc <wallydoc@...>
Subject: [TS-520_820_530_830] Re: antenna tuner for TS-520
To: TS-520_820_530_830@yahoogroups.com
Date: Sunday, January 20, 2013, 10:28 PM

Hi Rob
I own a two 520s a 530 and a 820.
I use a G5RV inverted V. VSWR is about 3.3 (not good)
A Kenwood tuner (or any manual tuner)for the rig will help some.
Anyway at least you will have a wattmeter.
I have an AT200 and do not use it much.
I do think it helps somewhat.
The rig seems to work fine with or without the tuner.

Wally
KC9INK

--- In TS-520_820_530_830@yahoogroups.com, "rkings1956" wrote:
>
> Hi everyone, I purchased a TS-520 about two months ago and I'm wondering what is the best antenna tuner for this rig? I will use it with a G5RV/zs6bkw 6m-80m and so will need a tuner. Does anyone have any advise.
>
> Thanks and God Bless
> Rob
>

Yahoo! Groups Links

[Non-text portions of this message have been removed]

40685. KENWOOD TWINS JR599 and TX599

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-22 12:22:33 UTC
From: Behiels JeanPierre
Topic: 40685 Message: 40685

Hi Kenwood members;

Is there someone on the usergroup who could confirm me,that the transceive interconnection cable of a R599/T599 (bronze frontplates)

the same is has for the JR599/TX599 custom deluxe version (silver frontplates)??

My JR599 has always been used alone,as stand alone receiver only.

Before I connect them in transceive with a TX599 transmitter,does I have to change something on the wiring of the transceive connector of the JR599..

Witch means can I direct connect both by means of the interconnection cable without change any wiring inside or so of my JR599 or TX599 ?

Why this question,because I use the JR599 longtime as stand alone equipment.

It is better to take some precautions before firering up this old gear hi !!

I am looking forward to any information around

Kindly regards Jean ON4AEF.

[Non-text portions of this message have been removed]

40687. Re: TS830S: Adjustment of receive IF coils

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-22 16:42:07 UTC
From: ravnpeter@ymail.com
Topic: 40674 Message: 40687

Hi Pete,
This leads to the question where to get hold of the 3rd edition of the service manual.
Those on the internet all seem to be 1st editions.
73 Peter
OZ8CTH

--- In TS-520_820_530_830@yahoogroups.com, pmarkavage@... wrote:
>
> They obviously did more then one printing of the operating manual over
> the life of the TS-830S. Ideally, if no changes were made to the content,
> the part number, in this case B50-2738-00, was not changed. However,
> Kenwood documentation, and other Japanese company documentation, back in
> the 70's and early 80's, were very sloppy in many of their documents
> probably due to translation and not using real proofreading
> verifications. It probably wasn't uncommon to correct an error or typo in
> a subsequent printing and make no reference to it in the part number (the
> last two numbers). With this manual, the last page (since it only has
> locations) would not be considered a content page. If you look at the
> five digit number that follows the Copyright symbol on each back that you
> posted, you'll see two different numbers. Just like date of manufacture,
> Kenwood had some convoluted way of expressing year and week in their
> serial numbers and, in this case, when the document print took place.
> The letters with ( ) or a circle, I believe, had to do with what
> international region the manual/equipment was targeted for.
>
> For any type of service related work, no matter how trivial, the service
> manual should only/always be used. The service manual was reissued three
> times. B51-0916-00, B51-0916-10, and B51-0916-20. If you really want to
> boggle your mind, following the part number for the service manual for
> the third edition (-20), there is (K), (W), (T), (X), the number 2 with a
> square around it, a G with a circle around it, and then the number 350.
>
> Pete, wa2cwa
>
> On Mon, 21 Jan 2013 18:49:54 -0800 n6wk@... writes:
> > Also, The first one does NOT list the Belgium Kenwood address at the
> > end
> > as the second one does.
> > you ca see the last page of each here:
> > http://www.n6wk.com/Kenwood%20manual%20differences/
> >
> > 73,
> > Gordon
> > N6WK
> >

> >
> > On 1/21/2013 6:41 PM, n6wk@... wrote:
> > > Pete,
> > > Why is it that my two Instruction Manuals are different if they
> > never
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> > > As I stated, they even have different prefixes and one has ( )
> > around
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> > > Curious minds would like to know?
> > > Thanks,
> > > Gordon
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> > >
> > >
> > > On 1/21/2013 6:05 PM, pmarkavage@... wrote:
> > >> They never reissued the operating manual, B50-2738-00. The last
> > two
> > >> digits, in this case "00" indicate it was the first printing. It
> > is
> > >> peppered with errors. If you're going to do any any any service
> > on any of
> > >> these hybrids, don't be foolish and just try to use the operating
> > manual
> > >> instructions. It will take most likely take you and your rig to
> > where you
> > >> don't want to go. Always use the service manual instructions and
> > try to
> > >> use the most recent version.
> > >>
> > >> Pete, wa2cwa
> > >>
> > >> On Mon, 21 Jan 2013 11:58:19 -0800 n6wk@...
> > >> writes:
> > >>> The two different Instruction manuals I have are on the last
> > page of
> > >>> the
> > >>> manual labeled
> > >>> 25312 B50-2738-00 (G) (K)
> > >>> The other is 15102 B50-2738-00 (G) K Note: this one has a
> > Circle
> > >>> around
> > >>> the K but I can't make the circle LOL
> > >>>
> > >>> 73,
> > >>> Gordon
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> > >>>
> > >>> On 1/21/2013 11:37 AM, ravnpeter@...

> > >> wrote:
> > >>>> According to the instruction manual the procedure for
> > adjustment
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> > >>> maxium
> > >>>> S meter deflection. Adjust T2 on the RF unit and L5, L6, L7,
> > L11
> > >>> and
> > >>>> L12 on the IF unit for maximum S meter indication. DO NOT
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> > >>> L3,
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> > >>>> On one hand it says L5 should be adjusted. On the other hand
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> > >>>>
> > >>>> Peter, OZ8CTH
> > >>>>
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40688. Re: [TS-520_820_530_830] Re: antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-22 17:16:28 UTC
From: Bob Macklin
Topic: 6768 Message: 40688

Just a comment about measuring SWR.

Most of the SWR bridges I am familiar with are designed for use with 50 ohm coax.

But a 1/2 wave dipole is closer to 75 ohms.

Heathkit made 3 SWR bridges that could be built for either 50 ohm or 75 ohm coax.

The Heathkit HM-11, HM-15, and the SB-630 station monitor all use the same SWR bridge. There are instructions in the manual how to set them up for either 50 ohm or 75 ohm coax.

If you are using your hybrid with a 1/2 wave dipole and 75 ohm coax it will work just fine. But 50 ohm SWR meters will not give correct readings.

You can use your hybrid just fine with a 1/2 wave dipole and no antenna tuner.

I don't mess with so called multi-band antennas. I do use trap dipole antennas. A 40M dipole with 20M traps will allow you to work 40M, 20M, and 15M without a tuner.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: Robert Reyes
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, January 21, 2013 11:56 PM
Subject: Re: [TS-520_820_530_830] Re: antenna tuner for TS-520

Thanks Wally for the info I will wait till I setup the antenna and see how the rig performes, without a Tuner and decide if I really need.

Rob
KD6FSK

--- On Sun, 1/20/13, wallydoc wallydoc@...> wrote:

From: wallydoc wallydoc@...>
Subject: [TS-520_820_530_830] Re: antenna tuner for TS-520
To: TS-520_820_530_830@yahoogroups.com
Date: Sunday, January 20, 2013, 10:28 PM

Hi Rob
I own a two 520s a 530 and a 820.
I use a G5RV inverted V. VSWR is about 3.3 (not good)
A Kenwood tuner (or any manual tuner)for the rig will help some.
Anyway at least you will have a wattmeter.

I have an AT200 and do not use it much.
I do think it helps somewhat.
The rig seems to work fine with or without the tuner.

Wally
KC9INK

--- In TS-520_820_530_830@yahoogroups.com, "rkings1956" wrote:
>
> Hi everyone, I purchased a TS-520 about two months ago and I'm wondering what is the best antenna tuner for this rig? I will use it with a G5RV/zs6bkw 6m-80m and so will need a tuner. Does anyone have any advise.
>
> Thanks and God Bless
> Rob
>

Yahoo! Groups Links

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40689. Re: [TS-520_820_530_830] Re: TS830S: Adjustment of receive IF coils

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-22 18:37:55 UTC
From: pmarkavage@...
Topic: 40674 Message: 40689

Go to the Kenwood Hybrid Restoration and Repair web site:
http://www.hybridrestore.com/parts/
Scroll almost to the bottom of the page. He has them there.

Pete, wa2cwa

On Tue, 22 Jan 2013 16:42:07 -0000 "ravnpeter@..."
<fasan5@...> writes:
> Hi Pete,
> This leads to the question where to get hold of the 3rd edition of
> the service manual. Those on the internet all seem to be 1st
> editions.
> 73 Peter
> OZ8CTH
>
> --- In TS-520_820_530_830@yahoogroups.com, pmarkavage@... wrote:
> >
> > They obviously did more then one printing of the operating manual
> over
> > the life of the TS-830S. Ideally, if no changes were made to the
> content,
> > the part number, in this case B50-2738-00, was not changed.
> However,
> > Kenwood documentation, and other Japanese company documentation,
> back in
> > the 70's and early 80's, were very sloppy in many of their
> documents
> > probably due to translation and not using real proofreading
> > verifications. It probably wasn't uncommon to correct an error or
> typo in
> > a subsequent printing and make no reference to it in the part
> number (the
> > last two numbers). With this manual, the last page (since it only
> has
> > locations) would not be considered a content page. If you look at
> the
> > five digit number that follows the Copyright symbol on each back
> that you
> > posted, you'll see two different numbers. Just like date of
> manufacture,
> > Kenwood had some convoluted way of expressing year and week in
> their
> > serial numbers and, in this case, when the document print took
> place.
> > The letters with ( ) or a circle, I believe, had to do with what

> > international region the manual/equipment was targeted for.
> >
> > For any type of service related work, no matter how trivial, the
> service
> > manual should only/always be used. The service manual was reissued
> three
> > times. B51-0916-00, B51-0916-10, and B51-0916-20. If you really
> want to
> > boggle your mind, following the part number for the service manual
> for
> > the third edition (-20), there is (K), (W), (T), (X), the number 2
> with a
> > square around it, a G with a circle around it, and then the number
> 350.
> >
> > Pete, wa2cwa

40690. Re: [TS-520_820_530_830] Re: antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-22 18:58:30 UTC
From: John Davidson
Topic: 6768 Message: 40690

Sure a Dipole in FREE SPACE is 72 ohms but one in the real world is too close to the ground in most installations to be 75 ohms. Maybe a 10 or 12 meter ant would be hjigh enough but on 80M, for instance, You need to get a dipole up 250 ft to get near FREE SPACE performance.
In the average Ham's basck yard you are close enough to the ground to need to trim the length short due to capacatnce to ground etc. 50 ohms is a reasonable outcome.

From: Bob Macklin <macklinbob@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, January 22, 2013 12:16 PM
Just a comment about measuring SWR.
Most of the SWR bridges I am familiar with are designed for use with 50 ohm coax.
But a 1/2 wave dipole is closer to 75 ohms.
Heathkit made 3 SWR bridges that could be built for either 50 ohm or 75 ohm coax.
a tuner.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

Rob
KD6FSK> ----------

Yahoo! Groups Links

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40691. Re: TS-830S CW Transmit Problem

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-22 20:36:31 UTC
From: scott10k
Topic: 40680 Message: 40691

Bill,
Do you have an electronic keyer hooked up to the plug? If you do, the keyer needs to be set on "Grid-Block Keying", or if it is on "Direct Keying" it will do as you are experiencing. If you are using a manual key, then I am not sure what the problem is.
73s, Scott, N6CIC

--- In TS-520_820_530_830@yahoogroups.com, "baamaster" wrote:
>
> I purchased a TS-830S last weekend, and it seems to work well except for one minor problem. If you have a key plugged in and not closed, and switch to CW mode, you hear the sidetone and if VOX is enabled, the rig is keyed.
>
> If you unplug the key, it's fine. The plug is not shorted, and when the radio transmits via the VOX, closing or opening the key has no effect on the keying of the transmitter.
>
> In short, when you plug in a 1/4 in phono plug, it keys the transmitter in CW Mode.
>
> Anyone have any thoughts before I start tearing things apart?
>
> Thanks,
>
> Bill
> KA4GAV
>

40692. Re: [TS-520_820_530_830] Re: TS-830S CW Transmit Problem

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-23 02:37:08 UTC
From: John Davidson
Topic: 40680 Message: 40692

Usually the key jack goes shorted when you remove a plug. A leaf swiching part of the jack does this. Maybe this part is bent over and touching when the plug is in!
Sometimes even a high resistance short can key the rig. do you have a plug with nothing wired to test with to see if a totally open plug will not key up when plugged in !?
good luck,
73...JD

From: scott10k <scottandalene@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, January 22, 2013 3:36 PM
Subject: [TS-520_820_530_830] Re: TS-830S CW Transmit Problem

Bill,
Do you have an electronic keyer hooked up to the plug? If you do, the keyer needs to be set on "Grid-Block Keying", or if it is on "Direct Keying" it will do as you are experiencing. If you are using a manual key, then I am not sure what the problem is.
73s, Scott, N6CIC

--- In mailto:TS-520_820_530_830%40yahoogroups.com, "baamaster" wrote:
>
> I purchased a TS-830S last weekend, and it seems to work well except for one minor problem. If you have a key plugged in and not closed, and switch to CW mode, you hear the sidetone and if VOX is enabled, the rig is keyed.
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> If you unplug the key, it's fine. The plug is not shorted, and when the radio transmits via the VOX, closing or opening the key has no effect on the keying of the transmitter.
>
> In short, when you plug in a 1/4 in phono plug, it keys the transmitter in CW Mode.
>
> Anyone have any thoughts before I start tearing things apart?
>
> Thanks,
>
> Bill
> KA4GAV
>

[Non-text portions of this message have been removed]

40693. Re: YK-88C-1 CW Filter - Reuse in the TS-530S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-23 03:50:34 UTC
From: Bob
Topic: 40682 Message: 40693

I have the following filters that I will be putting up on QTH on Wednesday or Thursday, thought I would offer here first...
YK-88C (500 Hz bandpass).... $65 plus $3 to mail...Very nice...
YK-88CN (270 Hz bandpass.....$80 plus $3 to mail)... Very nice...
YK-88S1 (2.6 KHz bandpass(nice)... $60 plus $3 to mail)
Fox Tango (same as Inrad) 33H2.1 .... $45 plus $3 to mail
muRata CFJ455k-5 (2.4 KHz bandpass)..... $35 plus $2 to mail...
muRata CFJ455k-12 (2.9 KHz bandpass) hard to find... $50 plus $2 to mail...
All the above filters in nice condition...
PayPal OK if you can add a bit for part of the fee...
No trades...
Packed well...
Thanks,
Bob

--- In TS-520_820_530_830@yahoogroups.com, "k3jls@..." wrote:
>
> Hello,
>
> I just bought a TS-530S that has an SSB narrow filter. I'm not a big SSB operator, so I was going to look around for a narrow CW filter, perhaps selling the SSB filter on eBay.
>
> Does anyone know if the plug-in YK-88C, YK-88CN's variants that are currently advertised on eBay can be removed from their plug-in 'carrier' and then soldered onto the TS-530's IF board?
>
> Thanks - Joe - K3JLS
>

40694. Re: YK-88C-1 CW Filter - Reuse in the TS-530S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-23 04:11:43 UTC
From: Bob
Topic: 40682 Message: 40694

Sorry, forgot the contact info...
Ke5ftf@...
303-968-4705 (cell)
The YK-88C is sold pending funds...
Bob
****

--- In TS-520_820_530_830@yahoogroups.com, "Bob" wrote:
>
> I have the following filters that I will be putting up on QTH on Wednesday or Thursday, thought I would offer here first...
> YK-88C (500 Hz bandpass).... $65 plus $3 to mail...Very nice...
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> muRata CFJ455k-5 (2.4 KHz bandpass)..... $35 plus $2 to mail...
> muRata CFJ455k-12 (2.9 KHz bandpass) hard to find... $50 plus $2 to mail...
> All the above filters in nice condition...
> PayPal OK if you can add a bit for part of the fee...
> No trades...
> Packed well...
> Thanks,
> Bob
>
> --- In TS-520_820_530_830@yahoogroups.com, "k3jls@" wrote:
> >
> > Hello,
> >
> > I just bought a TS-530S that has an SSB narrow filter. I'm not a big SSB operator, so I was going to look around for a narrow CW filter, perhaps selling the SSB filter on eBay.
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> > Does anyone know if the plug-in YK-88C, YK-88CN's variants that are currently advertised on eBay can be removed from their plug-in 'carrier' and then soldered onto the TS-530's IF board?
> >
> > Thanks - Joe - K3JLS
> >
>

40695. Re: [TS-520_820_530_830] KENWOOD TWINS JR599 and TX599

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-23 07:21:27 UTC
From: Allan Bear
Topic: 40685 Message: 40695

Hi..my R599 and T599 twins work connected together with the same interconnecting cable;so I presume the connections are the same...Regards Allan GM3VXI

--- On Tue, 22/1/13, Behiels JeanPierre <on4aef@...> wrote:

From: Behiels JeanPierre <on4aef@...>
Subject: [TS-520_820_530_830] KENWOOD TWINS JR599 and TX599
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, 22 January, 2013, 12:22

Hi Kenwood members;

Is there someone on the usergroup who could confirm me,that the transceive interconnection cable of a R599/T599 (bronze frontplates)

the same is has for the JR599/TX599 custom deluxe version (silver frontplates)??

My JR599 has always been used alone,as stand alone receiver only.

Before I connect them in transceive with a TX599 transmitter,does I have to change something on the wiring of the transceive connector of the JR599..

Witch means can I direct connect both by means of the interconnection cable without change any wiring inside or so of my JR599 or TX599 ?

Why this question,because I use the JR599 longtime as stand alone equipment.

It is better to take some precautions before firering up this old gear hi !!

I am looking forward to any information around

Kindly regards Jean ON4AEF.

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

40696. Re: [TS-520_820_530_830] Re: YK-88C-1 CW Filter - Reuse in the TS-530S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-23 10:18:38 UTC
From: Alan Lewis
Topic: 40682 Message: 40696

Bob, would like the YK-88CN if still available and you are prepared to ship to UK.

Sent from Samsung Mobile

-------- Original message --------
From: Bob <ke5ftf@...>
Date:
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: YK-88C-1 CW Filter - Reuse in the TS-530S

I have the following filters that I will be putting up on QTH on Wednesday or Thursday, thought I would offer here first...
YK-88C (500 Hz bandpass).... $65 plus $3 to mail...Very nice...
YK-88CN (270 Hz bandpass.....$80 plus $3 to mail)... Very nice...
YK-88S1 (2.6 KHz bandpass(nice)... $60 plus $3 to mail)
Fox Tango (same as Inrad) 33H2.1 .... $45 plus $3 to mail
muRata CFJ455k-5 (2.4 KHz bandpass)..... $35 plus $2 to mail...
muRata CFJ455k-12 (2.9 KHz bandpass) hard to find... $50 plus $2 to mail...
All the above filters in nice condition...
PayPal OK if you can add a bit for part of the fee...
No trades...
Packed well...
Thanks,
Bob

--- In TS-520_820_530_830@yahoogroups.com, "k3jls@..." wrote:
>
> Hello,
>
> I just bought a TS-530S that has an SSB narrow filter. I'm not a big SSB operator, so I was going to look around for a narrow CW filter, perhaps selling the SSB filter on eBay.
>
> Does anyone know if the plug-in YK-88C, YK-88CN's variants that are currently advertised on eBay can be removed from their plug-in 'carrier' and then soldered onto the TS-530's IF board?
>
> Thanks - Joe - K3JLS
>

[Non-text portions of this message have been removed]

40697. Re: [TS-520_820_530_830] KENWOOD TWINS JR599 and TX599

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-23 14:06:43 UTC
From: Behiels JeanPierre
Topic: 40685 Message: 40697

Hi Allen

Thanks for the information around.
I ask while I obtain this week a old JR599 receiver (Silver frontplate Custom Deluxe) witch has been used in the past for RX only(not in conjunction with a TX599)
I will be sure before connect to a TX599 (Silver frontplate Custom Deluxe) I do not make a short circuit or so.
I thought maby for RX use only,thay have made some brigdes on the connector or maby a rewired trannceive connector.
So if I good understood you could use a JR599 for RX only without changing anything on the back transceive connector (no brigdes or other rewiring) ?
In that case everything is staying originally and I can use my transceive cable with connectors of my other rigs R599 and T599 (bronze frontplates) for this purpose also !!
To be short : " the transceive cable on the back of a JR599 and TX599 in conjunction with a R599 or T599 are same"

Regards Jean ON4AEF.

----- Original Message -----
From: Allan Bear
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, January 23, 2013 8:21 AM
Subject: Re: [TS-520_820_530_830] KENWOOD TWINS JR599 and TX599

Hi..my R599 and T599 twins work connected together with the same interconnecting cable;so I presume the connections are the same...Regards Allan GM3VXI

--- On Tue, 22/1/13, Behiels JeanPierre on4aef@...> wrote:

From: Behiels JeanPierre on4aef@...>
Subject: [TS-520_820_530_830] KENWOOD TWINS JR599 and TX599
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, 22 January, 2013, 12:22

Hi Kenwood members;

Is there someone on the usergroup who could confirm me,that the transceive interconnection cable of a R599/T599 (bronze frontplates)

the same is has for the JR599/TX599 custom deluxe version (silver frontplates)??

My JR599 has always been used alone,as stand alone receiver only.

Before I connect them in transceive with a TX599 transmitter,does I have to change something on the wiring of the transceive connector of the JR599..

Witch means can I direct connect both by means of the interconnection cable without change any wiring inside or so of my JR599 or TX599 ?

Why this question,because I use the JR599 longtime as stand alone equipment.

It is better to take some precautions before firering up this old gear hi !!

I am looking forward to any information around

Kindly regards Jean ON4AEF.

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

40698. Re: TS-520S ALC erratic in SSB mode

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-23 15:24:50 UTC
From: dscolson1949
Topic: 39946 Message: 40698

Just an update bought a MC-50 mic and that seems to work fine. Made several contacts and got good audio reports.
Thanks for your help

Dave KB1WOD

--- In TS-520_820_530_830@yahoogroups.com, "dscolson1949" wrote:
>
> See the following web page
> http://www.ve3sqb.com/
>
> "The coaxial dipole or bazooka is the best keep secret. Made out of coax, it matches closely to 50 ohms and can be set up horizontally or in an inverted V. It is very broadband for a dipole and makes a great field day antenna."
>
> --- In TS-520_820_530_830@yahoogroups.com, John Davidson wrote:
> >
> > Exactly what is a "folded coaxial dipole", a kind of vague discription,Â Â Is it made of coax or Â is itÂ FED with coax?Â A Folded dipole is near 300 ohm Z and a high mismatch to 50 Ohm feedline and rigs.
> > High SWR and maybe feedline radiation may be your biggest problem!
> >
> >
> > _____
> > From: dscolson1949
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Friday, November 16, 2012 9:11 AM
> > Subject: [TS-520_820_530_830] Re: TS-520S ALC erratic in SSB mode
> >
> >
> > Â
> >
> > I am using a folded coaxial dipole cut for 20m. .
> >
> > --- In TS-520_820_
> > Reply via web post Reply to sender Reply to group Start a New Topic Messages in this topic (9)
> > Recent Activity: * New Members 13 * New Photos 2
> > Visit Your Group
> >
> > Switch to: Text-Only, Daily Digest â□¢ Unsubscribe â□¢ Terms of Use â□¢ Send us Feedback
> > .
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

40699. Re: YK-88C-1 CW Filter - Reuse in the TS-530S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-23 16:05:53 UTC
From: k3jls@verizon.net
Topic: 40682 Message: 40699

Hello - I would like to buy the YK-88c if it's still available.

73's - Joe - K3JLS

--- In TS-520_820_530_830@yahoogroups.com, "Bob" wrote:
>
> I have the following filters that I will be putting up on QTH on Wednesday or Thursday, thought I would offer here first...
> YK-88C (500 Hz bandpass).... $65 plus $3 to mail...Very nice...
> YK-88CN (270 Hz bandpass.....$80 plus $3 to mail)... Very nice...
> YK-88S1 (2.6 KHz bandpass(nice)... $60 plus $3 to mail)
> Fox Tango (same as Inrad) 33H2.1 .... $45 plus $3 to mail
> muRata CFJ455k-5 (2.4 KHz bandpass)..... $35 plus $2 to mail...
> muRata CFJ455k-12 (2.9 KHz bandpass) hard to find... $50 plus $2 to mail...
> All the above filters in nice condition...
> PayPal OK if you can add a bit for part of the fee...
> No trades...
> Packed well...
> Thanks,
> Bob
>
> --- In TS-520_820_530_830@yahoogroups.com, "k3jls@" wrote:
> >
> > Hello,
> >
> > I just bought a TS-530S that has an SSB narrow filter. I'm not a big SSB operator, so I was going to look around for a narrow CW filter, perhaps selling the SSB filter on eBay.
> >
> > Does anyone know if the plug-in YK-88C, YK-88CN's variants that are currently advertised on eBay can be removed from their plug-in 'carrier' and then soldered onto the TS-530's IF board?
> >
> > Thanks - Joe - K3JLS
> >
>

40700. Re: YK-88C-1 CW Filter - Reuse in the TS-530S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-23 16:08:49 UTC
From: k3jls@verizon.net
Topic: 40682 Message: 40700

Well, if the YK-88c is sold, I'll take the CN unit then.

Please let me know. Thanks - Joe

--- In TS-520_820_530_830@yahoogroups.com, "k3jls@..." wrote:
>
> Hello - I would like to buy the YK-88c if it's still available.
>
> 73's - Joe - K3JLS
>
> --- In TS-520_820_530_830@yahoogroups.com, "Bob" wrote:
> >
> > I have the following filters that I will be putting up on QTH on Wednesday or Thursday, thought I would offer here first...
> > YK-88C (500 Hz bandpass).... $65 plus $3 to mail...Very nice...
> > YK-88CN (270 Hz bandpass.....$80 plus $3 to mail)... Very nice...
> > YK-88S1 (2.6 KHz bandpass(nice)... $60 plus $3 to mail)
> > Fox Tango (same as Inrad) 33H2.1 .... $45 plus $3 to mail
> > muRata CFJ455k-5 (2.4 KHz bandpass)..... $35 plus $2 to mail...
> > muRata CFJ455k-12 (2.9 KHz bandpass) hard to find... $50 plus $2 to mail...
> > All the above filters in nice condition...
> > PayPal OK if you can add a bit for part of the fee...
> > No trades...
> > Packed well...
> > Thanks,
> > Bob
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "k3jls@" wrote:
> > >
> > > Hello,
> > >
> > > I just bought a TS-530S that has an SSB narrow filter. I'm not a big SSB operator, so I was going to look around for a narrow CW filter, perhaps selling the SSB filter on eBay.
> > >
> > > Does anyone know if the plug-in YK-88C, YK-88CN's variants that are currently advertised on eBay can be removed from their plug-in 'carrier' and then soldered onto the TS-530's IF board?
> > >
> > > Thanks - Joe - K3JLS
> > >
> >
>

40701. Re: antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-23 16:57:24 UTC
From: Avguy
Topic: 6768 Message: 40701

Rob,

You have gotten lots of good advice from the group, I will throw in my 2 cents for you to consider. Yes, you can run the TS520 without a tuner into a reasonably matched antenna with no problems at all. I use a TS520s and have used many different antennas since I like to experiment with wire antennas. 30+ years ago when I bought the rig, I soon found that even though I was getting good signal reports and having lots of fun making contacts with my set up, every once and a while I would tune up on a different frequency or band and find I had lots of RF floating around the shack. This was even with good grounding of the rig. Needless to say when you reach for a control or the microphone and get bit when you key up the transmitter, it is not fun! I eliminated 99% of the problem by always having an antenna matching unit between the station and the antenna. Initially I used a MFJ16010 random wire tuner and a CB swr meter. My current tuner is an SGC-239 smart tuner. I initially tune into a good dummy load, and then switch to my antenna of choice and the tuner takes care of the rest. I use a Bird 43 wattmeter inline from the transceiver and I can watch the tuning process occur. When it is done, I usually see about 100 watts forward and nearly nothing reflected. No more unexpected bites when I key up!

Ken
AE7PX

40702. R-820 For Sale

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-23 17:13:32 UTC
From: Cliff White
Topic: 40702 Message: 40702

Howdy everyone! I just saw that an R-820 (with an SP-820) just came up for sale on Ebay. Since it's way out of my price range, I thought I'd post it here and let y'all know about it. I don't know anything about this seller or his reputation, so I can't vouch for him.

http://www.ebay.com/itm/Kenwood-R-820-Communications-Receiver-Rare-Rare-Minty-SP-820-/170976873442?pt=US_Ham_Radio_Receivers&hash=item27cf040be2

-Cliff White
W5CNW

40703. Re: [TS-520_820_530_830] Re: Bazooka, anti tank antenna

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-23 19:02:20 UTC
From: John Davidson
Topic: 39946 Message: 40703

If you made your dipoles out of the 4 in dia. solid copper jacket coax that 100 kW FM broadcasters use it would be more broadband .
 RG 58 or 213 does not make much diff compared to # 12 wire ...I have read some articles about the "bazooka" dipoles.

--- In mailto:TS-520_820_530_830%40yahoogroups.com, "dscolson1949" wrote:
>
> See the following web page
> http://www.ve3sqb.com/
>
> "The coaxial dipole or bazooka is the best keep secret. Made out of coax, it matches closely to 50 ohms and can be set up horizontally or in an inverted V. It is very broadband for a dipole and makes a great field day antenna."
> > > I am using a folded coaxial dipole cut for 20m. .
> > > > .
> >

[Non-text portions of this message have been removed]

40704. Re: YK-88C-1 CW Filter - Reuse in the TS-530S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-23 20:50:23 UTC
From: Bob
Topic: 40682 Message: 40704

OK, I already sold the YK-88C, YK-88CN & the muRata CFJ455k-12
They sold rather quickly.... Sorry
Bob
****

--- In TS-520_820_530_830@yahoogroups.com, "k3jls@..." wrote:
>
> Well, if the YK-88c is sold, I'll take the CN unit then.
>
> Please let me know. Thanks - Joe
>
> --- In TS-520_820_530_830@yahoogroups.com, "k3jls@" wrote:
> >
> > Hello - I would like to buy the YK-88c if it's still available.
> >
> > 73's - Joe - K3JLS
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Bob" wrote:
> > >
> > > I have the following filters that I will be putting up on QTH on Wednesday or Thursday, thought I would offer here first...
> > > YK-88C (500 Hz bandpass).... $65 plus $3 to mail...Very nice...
> > > YK-88CN (270 Hz bandpass.....$80 plus $3 to mail)... Very nice...
> > > YK-88S1 (2.6 KHz bandpass(nice)... $60 plus $3 to mail)
> > > Fox Tango (same as Inrad) 33H2.1 .... $45 plus $3 to mail
> > > muRata CFJ455k-5 (2.4 KHz bandpass)..... $35 plus $2 to mail...
> > > muRata CFJ455k-12 (2.9 KHz bandpass) hard to find... $50 plus $2 to mail...
> > > All the above filters in nice condition...
> > > PayPal OK if you can add a bit for part of the fee...
> > > No trades...
> > > Packed well...
> > > Thanks,
> > > Bob
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "k3jls@" wrote:
> > > >
> > > > Hello,
> > > >
> > > > I just bought a TS-530S that has an SSB narrow filter. I'm not a big SSB operator, so I was going to look around for a narrow CW filter, perhaps selling the SSB filter on eBay.
> > > >
> > > > Does anyone know if the plug-in YK-88C, YK-88CN's variants that are currently advertised on eBay can be removed from their plug-in 'carrier' and then soldered onto the TS-530's IF board?

> > > >
> > > > Thanks - Joe - K3JLS
> > > >
> > >
> >
>

40705. Re: YK-88C-1 CW Filter - Reuse in the TS-530S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-24 02:29:02 UTC
From: k3jls@verizon.net
Topic: 40682 Message: 40705

Hello folks.

I just wanted to repeat my question as I didn't see any answers to it and I was a tad too slow to snare one of those filter bargains. If I missed any response, I apologize.

Kenwood advertises a plug-in version of the YK-88C filter for their later solid state radios. It looks like the same hard wired filter used - for example - in the TS-530 placed on a plug-in kind of 'carrier' for the later radios.

My question is this. Does anyone think it would be possible to remove the filter from the carrier and then solder it to the TS-530's IF board?

The later model filters are more plentiful on eBay and other places, and even less expensive than the hard wired units.

Your thoughts?

Thanks,

Joe - K3JLS

40706. Re: [TS-520_820_530_830] Re: YK-88C-1 CW Filter - Reuse in the TS-530S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-24 04:02:19 UTC
From: Joseph Stiles
Topic: 40682 Message: 40706

Joe,

You can use it. I put one in an 830 I had a few years ago...but like a dummy...I sold it. : (

73 Joe
WB7UQU

From: "k3jls@..." <k3jls@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, January 23, 2013 6:29 PM
Subject: [TS-520_820_530_830] Re: YK-88C-1 CW Filter - Reuse in the TS-530S

Hello folks.

I just wanted to repeat my question as I didn't see any answers to it and I was a tad too slow to snare one of those filter bargains. If I missed any response, I apologize.

Kenwood advertises a plug-in version of the YK-88C filter for their later solid state radios. It looks like the same hard wired filter used - for example - in the TS-530 placed on a plug-in kind of 'carrier' for the later radios.

My question is this. Does anyone think it would be possible to remove the filter from the carrier and then solder it to the TS-530's IF board?

The later model filters are more plentiful on eBay and other places, and even less expensive than the hard wired units.

Your thoughts?

Thanks,

Joe - K3JLS

[Non-text portions of this message have been removed]

40707. Re: [TS-520_820_530_830] R-820 For Sale

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-24 04:25:48 UTC
From: Cliff White
Topic: 40702 Message: 40707

I'm not sure if this worked the first time. If not, here it is again.

-Cliff

On 01/23/2013 11:13 AM, Cliff White wrote:
> Howdy everyone! I just saw that an R-820 (with an SP-820) just came up
> for sale on Ebay. Since it's way out of my price range, I thought I'd
> post it here and let y'all know about it. I don't know anything about
> this seller or his reputation, so I can't vouch for him.
>
> http://www.ebay.com/itm/Kenwood-R-820-Communications-Receiver-Rare-Rare-Minty-SP-820-/170976873442?pt=US_Ham_Radio_Receivers&hash=item27cf040be2
>
> -Cliff White
> W5CNW
>
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> ------------------------------------
>
> Yahoo! Groups Links
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>
>
>

[Non-text portions of this message have been removed]

40708. Re: [TS-520_820_530_830] Re: Bazooka, anti tank antenna

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-24 20:58:18 UTC
From: dennis hatch
Topic: 39946 Message: 40708

Good point John. Th bazooka has very poor radiation efficiency, and if you run a 1 KW amplifier on RTTY with one you will melt the center poly insulation......ask me how I know this. I feel it is a very over rated antenna.

--- On Wed, 1/23/13, John Davidson <k8jd@...> wrote:

From: John Davidson <k8jd@...>
Subject: Re: [TS-520_820_530_830] Re: Bazooka, anti tank antenna
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Date: Wednesday, January 23, 2013, 1:02 PM

If you made your dipoles out of the 4 in dia. solid copper jacket coax that 100 kW FM broadcasters use it would be more broadband .
 RG 58 or 213 does not make much diff compared to # 12 wire ...I have read some articles about the "bazooka" dipoles.

--- In mailto:TS-520_820_530_830%40yahoogroups.com, "dscolson1949" wrote:
>
> See the following web page
> http://www.ve3sqb.com/
>
> "The coaxial dipole or bazooka is the best keep secret. Made out of coax, it matches closely to 50 ohms and can be set up horizontally or in an inverted V. It is very broadband for a dipole and makes a great field day antenna."
> > > I am using a folded coaxial dipole cut for 20m. .
> > > > .
> >

[Non-text portions of this message have been removed]

Yahoo! Groups Links

[Non-text portions of this message have been removed]

40709. TS-530S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-25 18:20:24 UTC
From: WL
Topic: 20 Message: 40709

Hi Guys,
Butch Lewis (K0PSA) here and I have a question. Last night I was listening to two guys, one on a 530 and the other on a 930. They seemed to think that both radios were manufactured in 1981. I believe the 530 was introduced in 1981 and the 930 in 1982. Does anyone know if early 930's might have been built in 1981? I would appreciate any input.
Thanks and 73,
Butch Lewis

40710. Re: [TS-520_820_530_830] TS-530S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-25 19:12:32 UTC
From: pmarkavage@...
Topic: 20 Message: 40710

I wrote this down a long time ago:
Kenwood HF rig serial numbers follow the convention that the first digit
of the serial number is equal to the last digit of the year produced +2.
The next two digits tell you the month in the year. So if your Kenwood
serial number starts with "510xxxx", it was produced in October 1983.

Pete, wa2cwa

On Fri, 25 Jan 2013 18:20:24 -0000 "WL" <nscb56a@...> writes:
> Hi Guys,
> Butch Lewis (K0PSA) here and I have a question. Last night I was
> listening to two guys, one on a 530 and the other on a 930. They
> seemed to think that both radios were manufactured in 1981. I
> believe the 530 was introduced in 1981 and the 930 in 1982. Does
> anyone know if early 930's might have been built in 1981? I would
> appreciate any input.
> Thanks and 73,
> Butch Lewis

[Non-text portions of this message have been removed]

40711. Antenne cable for interconnect JR-599 and TX-599

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-25 19:28:42 UTC
From: Behiels JeanPierre
Topic: 40711 Message: 40711

Hi members;

I am searching for a 50 ohm cable antenne interconnection cable for my Kenwood twins.
One end of the cable must have a male PL-connector and on the other side a male cinch plugplug.
Or any eady made source for sutch cable.
Made one by my own is difficult due difficiltys to solder a 50 ohm coax (RG58) to a small cinch plug !!
Ready made cables use a special design cinch plug for this purpose,witch I not have..
I have a commercial example witch fix this problem,but where to buy ?

I hope to get some information around or usefull tips or adresses.

Kindly regards Jean ON4AEF.

[Non-text portions of this message have been removed]

40712. Re: antenna tuner for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-24 13:49:02 UTC
From: Steven Balliette
Topic: 6768 Message: 40712

With my TS-520 I use an MFJ-949d. My antennas are a 20m vertical 1/4 wave and an off center fed "almost 40 meter" dipole.
With my shack on the second floor grounding has been of concern to me. I have a #14 wire connected to copper plumbing for a safety ground. This is not adequate for an rf ground. When I first keyed the mic into the dipole my rf field strength meter on the shelf next to the rid when full scale. No shocks fortunately. After trying a series of choke baluns on the feed line (60 feet RG-8x) and getting only small improvements I cut a series of 1/4 wavelength wires, one for each band, soldered the ends together into a bundle and attached them to the ground lug on the tuner. The bundle of radials lay on the floor behind cabinets with the longer ends in a pile 10 feet away from the rig.
After this the field strength meter showed zero rf on all bands.
I do not know why this works. Can anyone explain it, please?

Steven KD0ETC

40713. hybrid missing link?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-25 20:09:36 UTC
From: Joseph Stiles
Topic: 40713 Message: 40713

Greeting group

Strange thing...evolution...I have here a possible missing link: a TS-830S with the 520/820 power connector on the rear panel. It also has all the other "correct" plugs/sockets and one would normally see on the rear of an 830. As usual...I saved it from being aparts queen/junked...as it "doesn't power up." I still need to track down the exact problem...but it is on the rectifier board. I have looked at the power connections on the"radio side" and none of it matches with the 520/820 power schematic...and of course the 830 schematic is different and also does not match up. It came with no power cord. Has anyone in the group seen such a rig? I have not....I just don't want to blow it up. I have up-loaded a couple of pictures in the files section: "HYBRID missing link?"

73 Joe
WB7UQU

[Non-text portions of this message have been removed]

40714. Re: hybrid missing link?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-25 20:34:40 UTC
From: n6wk_skcc3
Topic: 40713 Message: 40714

Joe,
I have worked on one of those. In fact, if you can find a -00 Service manual for the 830, It shows the wiring of the plug you have.
If you can't find one, let me know and I'll scan this -00 I have here.

73,
Gordon
N6WK

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles wrote:
>
> Greeting group
>
> Strange thing...evolution...I have here a possible missing link: a TS-830S with the 520/820 power connector on the rear panel. It also has all the other "correct" plugs/sockets and one would normally see on the rear of an 830. As usual...I saved it from being aparts queen/junked...as it "doesn't power up." I still need to track down the exact problem...but it is on the rectifier board. I have looked at the power connections on the"radio side" and none of it matches with the 520/820 power schematic...and of course the 830 schematic is different and also does not match up. It came with no power cord. Has anyone in the group seen such a rig? I have not....I just don't want to blow it up. I have up-loaded a couple of pictures in the files section: "HYBRID missing link?"
>
>
> 73 Joe
> WB7UQU
>
>
> [Non-text portions of this message have been removed]
>

40715. Re: hybrid missing link?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-25 20:36:48 UTC
From: n6wk_skcc3
Topic: 40713 Message: 40715

Joe, Actually, It is on the -10 Schematic as well. Just look all the way over on the left side of the Schematic and you'll see it in the side line.

73,
Gordon
N6WK

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles wrote:
>
> Greeting group
>
> Strange thing...evolution...I have here a possible missing link: a TS-830S with the 520/820 power connector on the rear panel. It also has all the other "correct" plugs/sockets and one would normally see on the rear of an 830. As usual...I saved it from being aparts queen/junked...as it "doesn't power up." I still need to track down the exact problem...but it is on the rectifier board. I have looked at the power connections on the"radio side" and none of it matches with the 520/820 power schematic...and of course the 830 schematic is different and also does not match up. It came with no power cord. Has anyone in the group seen such a rig? I have not....I just don't want to blow it up. I have up-loaded a couple of pictures in the files section: "HYBRID missing link?"
>
>
> 73 Joe
> WB7UQU
>
>
> [Non-text portions of this message have been removed]
>

40716. Re: [TS-520_820_530_830] TS-530S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-25 22:02:04 UTC
From: W LEWIS
Topic: 20 Message: 40716

Thanks, Pete for your response. It makes perfect sense to me but using your formula I can't seem to come up to your result. Using your example the first digit, 5, plus 2 equals 7 and I don't see a 7 in your result. Help me out here, this is such an easy, sensible system I want it to work.
Thanks and 73s,
Butch Lewis

--- On Fri, 1/25/13, pmarkavage@... <pmarkavage@...> wrote:

From: pmarkavage@juno.com <pmarkavage@...>
Subject: Re: [TS-520_820_530_830] TS-530S
To: TS-520_820_530_830@yahoogroups.com
Date: Friday, January 25, 2013, 1:12 PM

I wrote this down a long time ago:
Kenwood HF rig serial numbers follow the convention that the first digit
of the serial number is equal to the last digit of the year produced +2.
The next two digits tell you the month in the year. So if your Kenwood
serial number starts with "510xxxx", it was produced in October 1983.

Pete, wa2cwa

On Fri, 25 Jan 2013 18:20:24 -0000 "WL" nscb56a@...> writes:
> Hi Guys,
> Butch Lewis (K0PSA) here and I have a question. Last night I was
> listening to two guys, one on a 530 and the other on a 930. They
> seemed to think that both radios were manufactured in 1981. I
> believe the 530 was introduced in 1981 and the 930 in 1982. Does
> anyone know if early 930's might have been built in 1981? I would
> appreciate any input.
> Thanks and 73,
> Butch Lewis

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[Non-text portions of this message have been removed]

40717. Re: [TS-520_820_530_830] TS-530S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-25 22:08:16 UTC
From: Bob Macklin
Topic: 20 Message: 40717

Try 3+2 =5!
Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: W LEWIS
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, January 25, 2013 2:02 PM
Subject: Re: [TS-520_820_530_830] TS-530S

Thanks, Pete for your response. It makes perfect sense to me but using your formula I can't seem to come up to your result. Using your example the first digit, 5, plus 2 equals 7 and I don't see a 7 in your result. Help me out here, this is such an easy, sensible system I want it to work.
Thanks and 73s,
Butch Lewis

--- On Fri, 1/25/13, pmarkavage@... pmarkavage@...> wrote:

From: pmarkavage@... pmarkavage@...>
Subject: Re: [TS-520_820_530_830] TS-530S
To: TS-520_820_530_830@yahoogroups.com
Date: Friday, January 25, 2013, 1:12 PM

I wrote this down a long time ago:
Kenwood HF rig serial numbers follow the convention that the first digit
of the serial number is equal to the last digit of the year produced +2.
The next two digits tell you the month in the year. So if your Kenwood
serial number starts with "510xxxx", it was produced in October 1983.

Pete, wa2cwa

On Fri, 25 Jan 2013 18:20:24 -0000 "WL" nscb56a@...> writes:
> Hi Guys,
> Butch Lewis (K0PSA) here and I have a question. Last night I was
> listening to two guys, one on a 530 and the other on a 930. They
> seemed to think that both radios were manufactured in 1981. I
> believe the 530 was introduced in 1981 and the 930 in 1982. Does
> anyone know if early 930's might have been built in 1981? I would
> appreciate any input.
> Thanks and 73,
> Butch Lewis

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[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

40718. Re: [TS-520_820_530_830] Re: hybrid missing link?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-25 22:14:58 UTC
From: pmarkavage@...
Topic: 40713 Message: 40718

BE VERY CAREFUL HERE. The 12 pin plugs were only used with the W, T, and X type TS-830S transceivers. I suspect very few, if any, were ever originally sold here in the U. S. These plugs were intended to be wired into 220-240 AC lines. If you find a 12 pin plug and wire it up for 120 AC, be very careful on the necessary jumpers that are required inside the plug to power everything up. A wrong or incorrect jumper connection can lead to big nasty problems.

Pete, wa2cwa

On Fri, 25 Jan 2013 20:34:40 -0000 "n6wk_skcc3" <n6wk@...> writes:
>
> Joe,
> I have worked on one of those. In fact, if you can find a -00
> Service manual for the 830, It shows the wiring of the plug you
> have.
> If you can't find one, let me know and I'll scan this -00 I have
> here.
>
> 73,
> Gordon
> N6WK
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles wrote:
> >
> > Greeting group
> >
> > Strange thing...evolution...I have here a possible missing link:
> a TS-830S with the 520/820 power connector on the rear panel. It
> also has all the other "correct" plugs/sockets and one would
> normally see on the rear of an 830. As usual...I saved it from being
> aparts queen/junked...as it "doesn't power up." I still need to
> track down the exact problem...but it is on the rectifier board. I
> have looked at the power connections on the"radio side" and none of
> it matches with the 520/820 power schematic...and of course the 830
> schematic is different and also does not match up. It came with no
> power cord. Has anyone in the group seen such a rig? I have not....I
> just don't want to blow it up. I have up-loaded a couple of pictures
> in the files section: "HYBRID missing link?"
> >
> >
> > 73 Joe
> > WB7UQU

40719. Re: [TS-520_820_530_830] TS-530S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-25 22:23:21 UTC
From: W LEWIS
Topic: 20 Message: 40719

This is a really good duh moment. Now it makes perfect sense. When I was taking the FAA exams for my various tickets, the gouge was RTFQ. In radio it's RTFM. I should know well enough to apply it emails, too. Thanks, for your continuous help.
Regards,
Butch Lewis

--- On Fri, 1/25/13, Bob Macklin <macklinbob@...> wrote:

From: Bob Macklin <macklinbob@...>
Subject: Re: [TS-520_820_530_830] TS-530S
To: TS-520_820_530_830@yahoogroups.com
Date: Friday, January 25, 2013, 4:08 PM

Try 3+2 =5!
Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: W LEWIS
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, January 25, 2013 2:02 PM
Subject: Re: [TS-520_820_530_830] TS-530S

Thanks, Pete for your response. It makes perfect sense to me but using your formula I can't seem to come up to your result. Using your example the first digit, 5, plus 2 equals 7 and I don't see a 7 in your result. Help me out here, this is such an easy, sensible system I want it to work.
Thanks and 73s,
Butch Lewis

--- On Fri, 1/25/13, pmarkavage@... pmarkavage@...> wrote:

From: pmarkavage@juno.com pmarkavage@...>
Subject: Re: [TS-520_820_530_830] TS-530S
To: TS-520_820_530_830@yahoogroups.com
Date: Friday, January 25, 2013, 1:12 PM

I wrote this down a long time ago:
Kenwood HF rig serial numbers follow the convention that the first digit
of the serial number is equal to the last digit of the year produced +2.
The next two digits tell you the month in the year. So if your Kenwood
serial number starts with "510xxxx", it was produced in October 1983.

Pete, wa2cwa

On Fri, 25 Jan 2013 18:20:24 -0000 "WL" nscb56a@...> writes:
> Hi Guys,
> Butch Lewis (K0PSA) here and I have a question. Last night I was
> listening to two guys, one on a 530 and the other on a 930. They
> seemed to think that both radios were manufactured in 1981. I
> believe the 530 was introduced in 1981 and the 930 in 1982. Does
> anyone know if early 930's might have been built in 1981? I would
> appreciate any input.
> Thanks and 73,
> Butch Lewis

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40720. Re: [TS-520_820_530_830] TS-530S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-25 22:21:42 UTC
From: pmarkavage@...
Topic: 20 Message: 40720

Right, if your first serial number digit was "5", which means it was manufactured in 1983 (5-2= 3) . I sure someone back in the day at Kenwood had "logic" as to why they identified it this way.
Pete, wa2cwa

On Fri, 25 Jan 2013 14:08:16 -0800 "Bob Macklin" <macklinbob@...> writes:
> Try 3+2 =5!
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
>
> ----- Original Message -----
> From: W LEWIS
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Friday, January 25, 2013 2:02 PM
> Subject: Re: [TS-520_820_530_830] TS-530S
>
>
>
> Thanks, Pete for your response. It makes perfect sense to me but
> using your formula I can't seem to come up to your result. Using
> your example the first digit, 5, plus 2 equals 7 and I don't see a
> 7 in your result. Help me out here, this is such an easy, sensible
> system I want it to work.
> Thanks and 73s,
> Butch Lewis
>
> --- On Fri, 1/25/13, pmarkavage@... pmarkavage@...>
> wrote:
>
> From: pmarkavage@... pmarkavage@...>
> Subject: Re: [TS-520_820_530_830] TS-530S
> To: TS-520_820_530_830@yahoogroups.com
> Date: Friday, January 25, 2013, 1:12 PM
>
>
>
> I wrote this down a long time ago:
> Kenwood HF rig serial numbers follow the convention that the first
> digit
> of the serial number is equal to the last digit of the year
> produced +2.
> The next two digits tell you the month in the year. So if your

> Kenwood
> serial number starts with "510xxxx", it was produced in October
> 1983.
>
> Pete, wa2cwa
>
> On Fri, 25 Jan 2013 18:20:24 -0000 "WL" nscb56a@...>
> writes:
> > Hi Guys,
> > Butch Lewis (K0PSA) here and I have a question. Last night I was
>
> > listening to two guys, one on a 530 and the other on a 930. They
>
> > seemed to think that both radios were manufactured in 1981. I
> > believe the 530 was introduced in 1981 and the 930 in 1982. Does
>
> > anyone know if early 930's might have been built in 1981? I
> would
> > appreciate any input.
> > Thanks and 73,
> > Butch Lewis

40721. Re: [TS-520_820_530_830] Re: hybrid missing link?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-25 22:27:40 UTC
From: n6wk@...
Topic: 40713 Message: 40721

Pete,
Then 830M (Mobile) uses that plug and it could be wired for 120 or
12 volts.
I am looking at the 830M manual as I type this.
73,
Gordon
N6WK

On 1/25/2013 2:14 PM, pmarkavage@... wrote:
>
> BE VERY CAREFUL HERE. The 12 pin plugs were only used with the W, T, and
> X type TS-830S transceivers. I suspect very few, if any, were ever
> originally sold here in the U. S. These plugs were intended to be wired
> into 220-240 AC lines. If you find a 12 pin plug and wire it up for 120
> AC, be very careful on the necessary jumpers that are required inside the
> plug to power everything up. A wrong or incorrect jumper connection can
> lead to big nasty problems.
>
> Pete, wa2cwa
>
> On Fri, 25 Jan 2013 20:34:40 -0000 "n6wk_skcc3" n6wk@...
> <mailto:n6wk%40n6wk.com>> writes:
> >
> > Joe,
> > I have worked on one of those. In fact, if you can find a -00
> > Service manual for the 830, It shows the wiring of the plug you
> > have.
> > If you can't find one, let me know and I'll scan this -00 I have
> > here.
> >
> > 73,
> > Gordon
> > N6WK
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles wrote:
> > >
> > > Greeting group
> > >
> > > Strange thing...evolution...I have here a possible missing link:
> > a TS-830S with the 520/820 power connector on the rear panel. It
> > also has all the other "correct" plugs/sockets and one would
> > normally see on the rear of an 830. As usual...I saved it from being
> > aparts queen/junked...as it "doesn't power up." I still need to
> > track down the exact problem...but it is on the rectifier board. I

> > have looked at the power connections on the"radio side" and none of
> > it matches with the 520/820 power schematic...and of course the 830
> > schematic is different and also does not match up. It came with no
> > power cord. Has anyone in the group seen such a rig? I have not....I
> > just don't want to blow it up. I have up-loaded a couple of pictures
> > in the files section: "HYBRID missing link?"
> > >
> > >
> > > 73 Joe
> > > WB7UQU
>
>
> R
> <http://groups.yahoo.com/group/TS-520_820_530_830/post;_ylc=X3oDMTJxZHYxczlqBF9TAzk3MzU5
NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BG1zZ0lkAzQwNzE4BHNlYwNmdHIEc2xrA3JwbHkEc3
RpbWUDMTM1OTE1MjU2MQ--?act=reply&messageNum=40718>
>
>
>
>
>

40722. Re: [TS-520_820_530_830] Re: hybrid missing link?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-25 22:53:50 UTC
From: pmarkavage@...
Topic: 40713 Message: 40722

Although the TS-830M, which I believe is considered a "W" type, was not sold here in the U.S., the 12 pin plug diagram on Page 61 of the service manual should work wired for 120 AC. I believe only the "K" type TS-830S was sold off-the-shelf here in the U. S. Don't know if any of the other "types" could be special ordered by retailers. The main difference between the TS-830S and M, besides the 12 pin power plug, was the addition of the AM board, wiring, 6KHz filter, and associated parts and labels. Actually there were three operating manuals for the various "types" of TS-830S. Part Number B-50-2738-00 was the "K type", the B-50-2739-00 was the "T type", and the B-50-2740-00 were the "W and T types".

Pete, wa2cwa

On Fri, 25 Jan 2013 14:27:40 -0800 n6wk@... writes:
> Pete,
> Then 830M (Mobile) uses that plug and it could be wired for 120
> or
> 12 volts.
> I am looking at the 830M manual as I type this.
> 73,
> Gordon
> N6WK
>
>
> On 1/25/2013 2:14 PM, pmarkavage@... wrote:
> >
> > BE VERY CAREFUL HERE. The 12 pin plugs were only used with the W,
> T, and
> > X type TS-830S transceivers. I suspect very few, if any, were
> ever
> > originally sold here in the U. S. These plugs were intended to be
> wired
> > into 220-240 AC lines. If you find a 12 pin plug and wire it up
> for 120
> > AC, be very careful on the necessary jumpers that are required
> inside the
> > plug to power everything up. A wrong or incorrect jumper
> connection can
> > lead to big nasty problems.
> >
> > Pete, wa2cwa
> >
> > On Fri, 25 Jan 2013 20:34:40 -0000 "n6wk_skcc3" n6wk@...
> > <mailto:n6wk%40n6wk.com>> writes:

> > >
> > > Joe,
> > > I have worked on one of those. In fact, if you can find a -00
> > > Service manual for the 830, It shows the wiring of the plug you
> > > have.
> > > If you can't find one, let me know and I'll scan this -00 I
> have
> > > here.
> > >
> > > 73,
> > > Gordon
> > > N6WK
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles
> wrote:
> > > >
> > > > Greeting group
> > > >
> > > > Strange thing...evolution...I have here a possible missing
> link:
> > > a TS-830S with the 520/820 power connector on the rear panel.
> It
> > > also has all the other "correct" plugs/sockets and one would
> > > normally see on the rear of an 830. As usual...I saved it from
> being
> > > aparts queen/junked...as it "doesn't power up." I still need to
> > > track down the exact problem...but it is on the rectifier board.
> I
> > > have looked at the power connections on the"radio side" and none
> of
> > > it matches with the 520/820 power schematic...and of course the
> 830
> > > schematic is different and also does not match up. It came with
> no
> > > power cord. Has anyone in the group seen such a rig? I have
> not....I
> > > just don't want to blow it up. I have up-loaded a couple of
> pictures
> > > in the files section: "HYBRID missing link?"
> > > >
> > > >
> > > > 73 Joe
> > > > WB7UQU
> >
> >
> > R

40723. Re: [TS-520_820_530_830] Re: hybrid missing link?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-25 23:12:10 UTC
From: n6wk@...
Topic: 40713 Message: 40723

Thanks Pete,
The B-50-2740-00 operating manual was for the "W and X" not "W and T".
I'll be interested to see if the radio Joe has, has an AM board and also
what the board number is for the IF Board.

73,
Gordon
N6WK

On 1/25/2013 2:53 PM, pmarkavage@... wrote:
>
> Although the TS-830M, which I believe is considered a "W" type, was not
> sold here in the U.S., the 12 pin plug diagram on Page 61 of the service
> manual should work wired for 120 AC. I believe only the "K" type TS-830S
> was sold off-the-shelf here in the U. S. Don't know if any of the other
> "types" could be special ordered by retailers. The main difference
> between the TS-830S and M, besides the 12 pin power plug, was the
> addition of the AM board, wiring, 6KHz filter, and associated parts and
> labels. Actually there were three operating manuals for the various
> "types" of TS-830S. Part Number B-50-2738-00 was the "K type", the
> B-50-2739-00 was the "T type", and the B-50-2740-00 were the "W and T
> types".
>
> Pete, wa2cwa
>
> On Fri, 25 Jan 2013 14:27:40 -0800 n6wk@...
> <mailto:n6wk%40n6wk.com> writes:
> > Pete,
> > Then 830M (Mobile) uses that plug and it could be wired for 120
> > or
> > 12 volts.
> > I am looking at the 830M manual as I type this.
> > 73,
> > Gordon
> > N6WK
> > >
> > >
> > On 1/25/2013 2:14 PM, pmarkavage@...
> <mailto:pmarkavage%40juno.com> wrote:
> > > >
> > > BE VERY CAREFUL HERE. The 12 pin plugs were only used with the W,
> > T, and
> > > > X type TS-830S transceivers. I suspect very few, if any, were
> > ever
> > > originally sold here in the U. S. These plugs were intended to be

> > wired
> > > into 220-240 AC lines. If you find a 12 pin plug and wire it up
> > for 120
> > > AC, be very careful on the necessary jumpers that are required
> > inside the
> > > plug to power everything up. A wrong or incorrect jumper
> > connection can
> > > lead to big nasty problems.
> > >
> > > Pete, wa2cwa
>

40724. Re: TS-530S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-26 00:04:34 UTC
From: markshawley
Topic: 20 Message: 40724

--- In TS-520_820_530_830@yahoogroups.com, pmarkavage@... wrote:
>
> Right, if your first serial number digit was "5", which means it was
> manufactured in 1983 (5-2= 3) . I sure someone back in the day at Kenwood
> had "logic" as to why they identified it this way.
> Pete, wa2cwa
>
> On Fri, 25 Jan 2013 14:08:16 -0800 "Bob Macklin"
> writes:
> > Try 3+2 =5!
> > Bob Macklin
> > K5MYJ
> > Seattle, Wa.
> > "Real Radios Glow In The Dark"
> >

This sounded great, so I checked the serial number plates on my TS-820S and TS-830S.

It works for my TS-830S: s/n 2030162 = 1980 March

It doesn't work for TS-830S: s/n 730195 = 1985 ? 30 ?

And yes, I double-checked the s/n on the TS-830S to make sure I read it correctly. Any other insights? I thought I had read on this forum previously that there was no way to tell the year of manufacture from the serial number.

Thanks!
Mark kj4nxx

40725. Re: [TS-520_820_530_830] Re: TS-530S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-26 00:55:48 UTC
From: Don
Topic: 20 Message: 40725

Mine is
1111111 all ones with the ac/dc power supply

Don/Ve2ud

On 25/01/2013 7:04 PM, markshawley wrote:
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, pmarkavage@... wrote:
> >
> > Right, if your first serial number digit was "5", which means it was
> > manufactured in 1983 (5-2= 3) . I sure someone back in the day at
> Kenwood
> > had "logic" as to why they identified it this way.
> > Pete, wa2cwa
> >
> > On Fri, 25 Jan 2013 14:08:16 -0800 "Bob Macklin"
> > writes:
> > > Try 3+2 =5!
> > > Bob Macklin
> > > K5MYJ
> > > Seattle, Wa.
> > > "Real Radios Glow In The Dark"
> > >
>
> This sounded great, so I checked the serial number plates on my
> TS-820S and TS-830S.
>
> It works for my TS-830S: s/n 2030162 = 1980 March
>
> It doesn't work for TS-830S: s/n 730195 = 1985 ? 30 ?
>
> And yes, I double-checked the s/n on the TS-830S to make sure I read
> it correctly. Any other insights? I thought I had read on this forum
> previously that there was no way to tell the year of manufacture from
> the serial number.
>
> Thanks!
> Mark kj4nxx
>
>

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40726. Re: [TS-520_820_530_830] Re: hybrid missing link?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-26 01:36:23 UTC
From: pmarkavage@...
Topic: 40713 Message: 40726

Opps! I was typing fast. Had the dinner call.
A true TS-830M, would have, besides the things I mentioned in the previous post, a different front panel, and a different label under the tuning knob. The panel would say for the MODE switch (left to right), TUNE, CW, USB, LSB, AM. The label under the tuning knob should say TS-830M. Here's a link to a picture of the TS830M:
Copy and paste to browser. Watch for link wrap around.
http://www.dh5sdl.de/assets/images/TS830.jpg

I tried many years ago to get an AM board from Kenwood but they weren't stocked anywhere in the U. S.

Pete, wa2cwa

On Fri, 25 Jan 2013 15:12:10 -0800 n6wk@... writes:
> Thanks Pete,
> The B-50-2740-00 operating manual was for the "W and X" not "W
> and T".
> I'll be interested to see if the radio Joe has, has an AM board and
> also
> what the board number is for the IF Board.
>
> 73,
> Gordon
> N6WK
>
>
> On 1/25/2013 2:53 PM, pmarkavage@... wrote:
> >
> > Although the TS-830M, which I believe is considered a "W" type,
> was not
> > sold here in the U.S., the 12 pin plug diagram on Page 61 of the
> service
> > manual should work wired for 120 AC. I believe only the "K" type
> TS-830S
> > was sold off-the-shelf here in the U. S. Don't know if any of the
> other
> > "types" could be special ordered by retailers. The main
> difference
> > between the TS-830S and M, besides the 12 pin power plug, was the
> > addition of the AM board, wiring, 6KHz filter, and associated
> parts and
> > labels. Actually there were three operating manuals for the
> various
> > "types" of TS-830S. Part Number B-50-2738-00 was the "K type",
> the

> > B-50-2739-00 was the "T type", and the B-50-2740-00 were the "W
> and T
> > types".
> >
> > Pete, wa2cwa
> >
> > On Fri, 25 Jan 2013 14:27:40 -0800 n6wk@...
> > <mailto:n6wk%40n6wk.com> writes:
> > > Pete,
> > > Then 830M (Mobile) uses that plug and it could be wired for 120
> > > or
> > > 12 volts.
> > > I am looking at the 830M manual as I type this.
> > > 73,
> > > Gordon
> > > N6WK
> > >
> > >
> > > On 1/25/2013 2:14 PM, pmarkavage@...
> > <mailto:pmarkavage%40juno.com> wrote:
> > > >
> > > > BE VERY CAREFUL HERE. The 12 pin plugs were only used with the
> W,
> > > T, and
> > > > X type TS-830S transceivers. I suspect very few, if any, were
> > > ever
> > > > originally sold here in the U. S. These plugs were intended to
> be
> > > wired
> > > > into 220-240 AC lines. If you find a 12 pin plug and wire it
> up
> > > for 120
> > > > AC, be very careful on the necessary jumpers that are
> required
> > > inside the
> > > > plug to power everything up. A wrong or incorrect jumper
> > > connection can
> > > > lead to big nasty problems.
> > > >
> > > > Pete, wa2cwa
> > >
> >
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> > ------------------------------------
> >
> > Yahoo! Groups Links
> >
> >
> >

>

40727. RE: [TS-520_820_530_830] Re: TS-530S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-26 01:34:25 UTC
From: Rob S.
Topic: 20 Message: 40727

Must be November 79' <grin>

Cheers,

Rob.

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Don
Sent: Saturday, 26 January 2013 11:56 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: TS-530S

Mine is
1111111 all ones with the ac/dc power supply

Don/Ve2ud

On 25/01/2013 7:04 PM, markshawley wrote:
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> , pmarkavage@... wrote:
> >
> > Right, if your first serial number digit was "5", which means it was
> > manufactured in 1983 (5-2= 3) . I sure someone back in the day at
> Kenwood
> > had "logic" as to why they identified it this way.
> > Pete, wa2cwa
> >
> > On Fri, 25 Jan 2013 14:08:16 -0800 "Bob Macklin"
> > writes:
> > > Try 3+2 =5!
> > > Bob Macklin
> > > K5MYJ
> > > Seattle, Wa.
> > > "Real Radios Glow In The Dark"
> > >
>
> This sounded great, so I checked the serial number plates on my
> TS-820S and TS-830S.
>
> It works for my TS-830S: s/n 2030162 = 1980 March
>
> It doesn't work for TS-830S: s/n 730195 = 1985 ? 30 ?

>
> And yes, I double-checked the s/n on the TS-830S to make sure I read
> it correctly. Any other insights? I thought I had read on this forum
> previously that there was no way to tell the year of manufacture from
> the serial number.
>
> Thanks!
> Mark kj4nxx
>
>

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[Non-text portions of this message have been removed]

40728. Re: [TS-520_820_530_830] Re: hybrid missing link?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-26 01:43:21 UTC
From: n6wk@...
Topic: 40713 Message: 40728

Thanks Pete,
Can't say I have ever seen a M version then.
I could probably get my buddy in Japan to hunt one down for me tho..
He owes me a favor or two...LOL

73,
Gordon

On 1/25/2013 5:36 PM, pmarkavage@... wrote:
>
> Opps! I was typing fast. Had the dinner call.
> A true TS-830M, would have, besides the things I mentioned in the
> previous post, a different front panel, and a different label under the
> tuning knob. The panel would say for the MODE switch (left to right),
> TUNE, CW, USB, LSB, AM. The label under the tuning knob should say
> TS-830M. Here's a link to a picture of the TS830M:
> Copy and paste to browser. Watch for link wrap around.
> http://www.dh5sdl.de/assets/images/TS830.jpg
>
> I tried many years ago to get an AM board from Kenwood but they weren't
> stocked anywhere in the U. S.
>
> Pete, wa2cwa
>
> On Fri, 25 Jan 2013 15:12:10 -0800 n6wk@...
> <mailto:n6wk%40n6wk.com> writes:
> > Thanks Pete,
> > The B-50-2740-00 operating manual was for the "W and X" not "W
> > and T".
> > I'll be interested to see if the radio Joe has, has an AM board and
> > also
> > what the board number is for the IF Board.
> >
> > 73,
> > Gordon
> > N6WK
> >
> >
> > On 1/25/2013 2:53 PM, pmarkavage@...
> <mailto:pmarkavage%40juno.com> wrote:
> > >
> > > Although the TS-830M, which I believe is considered a "W" type,
> > was not
> > > sold here in the U.S., the 12 pin plug diagram on Page 61 of the
> > service

> > > manual should work wired for 120 AC. I believe only the "K" type
> > TS-830S
> > > was sold off-the-shelf here in the U. S. Don't know if any of the
> > other
> > > "types" could be special ordered by retailers. The main
> > difference
> > > between the TS-830S and M, besides the 12 pin power plug, was the
> > > addition of the AM board, wiring, 6KHz filter, and associated
> > parts and
> > > labels. Actually there were three operating manuals for the
> > various
> > > "types" of TS-830S. Part Number B-50-2738-00 was the "K type",
> > the
> > > B-50-2739-00 was the "T type", and the B-50-2740-00 were the "W
> > and T
> > > types".
> > >
> > > Pete, wa2cwa
> > >
> > > On Fri, 25 Jan 2013 14:27:40 -0800 n6wk@...
> <mailto:n6wk%40n6wk.com>
> > > writes:
> > > > Pete,
> > > > Then 830M (Mobile) uses that plug and it could be wired for 120
> > > > or
> > > > 12 volts.
> > > > I am looking at the 830M manual as I type this.
> > > > 73,
> > > > Gordon
> > > > N6WK
> > > >
> > > >
> > > > On 1/25/2013 2:14 PM, pmarkavage@...
> <mailto:pmarkavage%40juno.com>
> > > wrote:
> > > > >
> > > > > BE VERY CAREFUL HERE. The 12 pin plugs were only used with the
> > W,
> > > > T, and
> > > > > X type TS-830S transceivers. I suspect very few, if any, were
> > > > ever
> > > > > originally sold here in the U. S. These plugs were intended to
> > be
> > > > wired
> > > > > into 220-240 AC lines. If you find a 12 pin plug and wire it
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> > > > for 120
> > > > > AC, be very careful on the necessary jumpers that are
> > required
> > > > inside the

> > > > > plug to power everything up. A wrong or incorrect jumper
> > > > connection can
> > > > > lead to big nasty problems.
> > > > >
> > > > > Pete, wa2cwa
> > >
> >
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> > ------------------------------------
> >
> > Yahoo! Groups Links
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>
> <http://groups.yahoo.com/group/TS-520_820_530_830/post;_ylc=X3oDMTJxOTIyc2djBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BG1zZ0lkAzQwNzI2BHNlYwNmdHIEc2xrA3JwbHkEc3RpbWUDMTM1OTE2NDMzOA--?act=reply&messageNum=40726>
>
>
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>

40729. Re: [TS-520_820_530_830] Re: TS-530S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-26 01:51:09 UTC
From: Don
Topic: 20 Message: 40729

Thanks Rob
It's a odd ball
73's
Don/Ve2ud

On 25/01/2013 8:34 PM, Rob S. wrote:
>
> Must be November 79'
>
> Cheers,
>
> Rob.
>
> From: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> [mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Don
> Sent: Saturday, 26 January 2013 11:56 AM
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: Re: [TS-520_820_530_830] Re: TS-530S
>
> Mine is
> 1111111 all ones with the ac/dc power supply
>
> Don/Ve2ud
>
> On 25/01/2013 7:04 PM, markshawley wrote:
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
>
> > , pmarkavage@... wrote:
> > >
> > > Right, if your first serial number digit was "5", which means it was
> > > manufactured in 1983 (5-2= 3) . I sure someone back in the day at
> > Kenwood
> > > had "logic" as to why they identified it this way.
> > > Pete, wa2cwa
> > >
> > > On Fri, 25 Jan 2013 14:08:16 -0800 "Bob Macklin"
> > > writes:
> > > > Try 3+2 =5!

> > > > Bob Macklin
> > > > K5MYJ
> > > > Seattle, Wa.
> > > > "Real Radios Glow In The Dark"
> > > >
> >
> > This sounded great, so I checked the serial number plates on my
> > TS-820S and TS-830S.
> >
> > It works for my TS-830S: s/n 2030162 = 1980 March
> >
> > It doesn't work for TS-830S: s/n 730195 = 1985 ? 30 ?
> >
> > And yes, I double-checked the s/n on the TS-830S to make sure I read
> > it correctly. Any other insights? I thought I had read on this forum
> > previously that there was no way to tell the year of manufacture from
> > the serial number.
> >
> > Thanks!
> > Mark kj4nxx
> >
> >
>
> [Non-text portions of this message have been removed]
>
> [Non-text portions of this message have been removed]
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[Non-text portions of this message have been removed]

40730. Re: [TS-520_820_530_830] Re: TS-530S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-26 01:47:03 UTC
From: pmarkavage@...
Topic: 20 Message: 40730

I would interpret that as manufactured in 1979 November. One needs to
know roughly the years of manufacture (start/stop) as a starting point.
Pete, wa2cwa

On Fri, 25 Jan 2013 19:55:48 -0500 Don <ve2ud@...> writes:
>
> Mine is
> 1111111 all ones with the ac/dc power supply
>
> Don/Ve2ud
>

40731. Re: [TS-520_820_530_830] Re: TS-530S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-26 01:50:27 UTC
From: pmarkavage@...
Topic: 20 Message: 40731

Which one is the 820 and 830? The second one listed below only has 6
digits.
Pete, wa2cwa

On Sat, 26 Jan 2013 00:04:34 -0000 "markshawley"
<hawley.mark@...> writes:
>
>
>
> This sounded great, so I checked the serial number plates on my
> TS-820S and TS-830S.
>
> It works for my TS-830S: s/n 2030162 = 1980 March
>
> It doesn't work for TS-830S: s/n 730195 = 1985 ? 30 ?
>
> And yes, I double-checked the s/n on the TS-830S to make sure I read
> it correctly. Any other insights? I thought I had read on this
> forum previously that there was no way to tell the year of
> manufacture from the serial number.
>
> Thanks!
> Mark kj4nxx

40732. (no subject)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-26 03:44:24 UTC
From: Scott Litz
Topic: 40732 Message: 40732

http://insooke.com/facebook.php?Mars291.png

Yours sincerely,
Scott Litz
1/26/2013 4:44:17 AM

[Non-text portions of this message have been removed]

40733. Re: Finally, TS830S Ant relay in stock

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-26 04:40:47 UTC
From: k3jls@verizon.net
Topic: 39735 Message: 40733

Hi - Is this the same relay that the FT-101 uses?

Joe - K3JLS

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner wrote:
>
> Jim: Good work. Thanks for your efforts. One question...what is the coil resistance?
Terry K9TW
>
> --- On Fri, 11/30/12, Jim Showker wrote:
>
> From: Jim Showker
> Subject: [TS-520_820_530_830] Finally, TS830S Ant relay in stock
> To: TS-520_820_530_830@yahoogroups.com
> Date: Friday, November 30, 2012, 1:52 AM
>
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> > ._
>
> Hi all,
>

> Well, I first talked about this relay almost two months ago. I'm
>
> sure that many have given up on me actually finding this part. We now
>
> have the TS830S antenna relay in stock and up on our parts page:
>
>
>
> http://www.hybridrestore.com/parts/
>
>
>
> This has been the hardest to find part I have ever tried to chase
>
> down. Twice I was told by distributors that they had a replacement
>
> part, and both times the part ended up only existing in their computer
>
> data base, not in their physical inventory. We finally found an actual
>
> part that does exist, and we have a stock of them. The part is the same,
>
> pin for pin, as the MX2P but also has an extra post sticking out in the
>
> middle of the pins. We remove the post, countersink the relay body on
>
> our mill, and then use a screw instead of the post. The relay is 0.100"
>
> taller than the original, but plugs right in to the 830 relay socket.
>
> The can will fit over it and screw down to the chassis. It is rated at
>
> 5 amps @ 30v dc or 120vac. I think the MX2P part was rated at 3 amps,
>
> not sure on that.
>
>
>
> I am sorry that the price ended up being more than $30. We wanted to
>
> sell it for about the same price as our other relays, but this
>
> distributor, who specializes in obsolete parts, is tough to deal with
>
> and will not come down in price. Since the part is limited in
>
> availability, we will ask for only two per customer. I want as many
>
> people as possible who need this part to end up with it. I am not going
>

> to put it up on my ebay page, and will not promote it any where else
>
> except for this posting, for the time being.
>
>
>
> I imagine once the Yaesu FT101 guys find this, we will sell out. They
>
> have a real problem with this relay, as the FT101 must have bad timing
>
> issues. The relay pretty much burns its contacts up in that radio. If
>
> you want a relay like this to last in a situation like this, where it is
>
> switching RF, it's best to have it switched before the RF shows up at
>
> the contacts, and turn the RF off before the contacts open again.
>
> Kenwood does this, I don't think Yaesu does. On the 520/820 series, the
>
> relay is only rated for 1/2 amp, but holds up really well, cause the
>
> timing is right.
>
>
>
> Anyway, hope I'm not being too commercial here. If so, I apologize.
>
> I know people are really concerned about this relay.
>
>
>
> Thanks,
>
> Jim KE7OAY
>
>
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> [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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40734. TS-530S - POssible Antenna relay Failure

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-26 04:48:05 UTC
From: k3jls@verizon.net
Topic: 40734 Message: 40734

Hello folks - a quick question to those of you with TS-530 experience.

I just bought a really nice one, aligned it and was all set to make a CW contact on 80 meters. Prior to this, I had just make a 75 meter QSO with no problems.

So, as I was loading the rig up around 3.530, I heard what appeared to be arcing. So I stopped, and then tried again - same thing. I'm using a manual antenna tuner and the SWR was reasonably low.

After this, the radio seemed a bit deaf but would come back to life after hitting the PTT switch once or twice. This has all the obvious earmarks of a dirty antenna transfer relay, and I was wondering if anyone else had experienced this particular failure.

Again, all of the testing using a dummy load worked perfectly. It was just when I tried loading up on the low end of 80 meters that the problem occurred.

Now, I would imagine that I can clean this relay up (once I find it). I also have a good spare from an FT-101 that I cannibalized. And I know that new relays can also be purchased for around $35.

Any suggestions would be most appreciated.

73's - Joe - K3JLS

40735. HYBRID missing link

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-26 05:17:19 UTC
From: Joseph Stiles
Topic: 40735 Message: 40735

Greetings group

What a "discussion" this stirred up. So to answer a few questions:

There is no AM board.
The "mode" switch has no AM position.
For all intents and purposes, this rig is identical to a "regular" 830S model, except for the power connection on the rear panel. It has all the "din" connectors and other "stuff"
on the rear panelthat are shown in my 830S "op" & "service" manuals.
The IF board that is in the rig is coded: X48-1290-00

I'll be "digging" into this unit over that next few days. I will attempt to take detailed notes and diagrams and post them to the groups file and/or picture sections as I find
out more.

It is also obvious that there has been "work" done on the rectifier board...diodes 8,9,10,11 have been replaced. I am missing voltage at "12" on the rectifier board &
"12" on the AF/AVR board. All other voltages on the rectifier board are present and within specs. There is also loss of some other associated voltages on the counter
unit....no digital display.

73 Joe
WB7UQU

[Non-text portions of this message have been removed]

40736. RE: [TS-520_820_530_830] TS-530S - POssible Antenna relay Failure

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-26 06:11:23 UTC
From: fpath fpath
Topic: 40734 Message: 40736

Joe

Arcing is never a good sign, saying that I had a new AT230 and it would arc across the fins when load on 80m, took it back under warranty got another new one. If you think it's the relay, check the one on the IF board aswell. The ANT relay is locate on the bottom side at the back of the radio next to the final board, under a tin can shield. Remember to discharge the radio's HV supply before you touch anything. The antenna relay can be a plug in type or a solder type, (both my 530s are plug in type). Relays are readily available.

Whilst you have the covers off, check the tubes. Any smell of burnt resistors or capacitors? Visually check the padder capacitors on the band switch in the final cage, these shouldn't affect receive.

Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: k3jls@verizon.net
Date: Sat, 26 Jan 2013 04:48:05 +0000
Subject: [TS-520_820_530_830] TS-530S - POssible Antenna relay Failure

Hello folks - a quick question to those of you with TS-530 experience.

I just bought a really nice one, aligned it and was all set to make a CW contact on 80 meters. Prior to this, I had just make a 75 meter QSO with no problems.

So, as I was loading the rig up around 3.530, I heard what appeared to be arcing. So I stopped, and then tried again - same thing. I'm using a manual antenna tuner and the SWR was reasonably low.

After this, the radio seemed a bit deaf but would come back to life after hitting the PTT switch once or twice. This has all the obvious earmarks of a dirty antenna transfer relay, and I was wondering if anyone else had experienced this particular failure.

Again, all of the testing using a dummy load worked perfectly. It was just when I tried loading up on the low end of 80 meters that the problem occurred.

Now, I would imagine that I can clean this relay up (once I find it). I also have a good spare from an FT-101 that I cannibalized. And I know that new relays can also be purchased for around $35.

Any suggestions would be most appreciated.

73's - Joe - K3JLS

[Non-text portions of this message have been removed]

40737. RE: [TS-520_820_530_830] HYBRID missing link

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-26 06:22:02 UTC
From: fpath fpath
Topic: 40735 Message: 40737

Joe,

Have a 530 with a similar problem witht he digital board. Check the -6v supply, if good a common issue with the counter board in 830\530 is cracked tracks, this is usually where heavy handed gorillas have try to activate the warc bands and applied just a little too much pressure to the counter board. Once I bridged the cracks radio came back to life. Have a look at the attached photos as a reference.

73
Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: stilesjoseph@...
Date: Fri, 25 Jan 2013 21:17:19 -0800
Subject: [TS-520_820_530_830] HYBRID missing link

Greetings group

What a "discussion" this stirred up. So to answer a few questions:

There is no AM board.
The "mode" switch has no AM position.
For all intents and purposes, this rig is identical to a "regular" 830S model, except for the power connection on the rear panel. It has all the "din" connectors and other "stuff" on the rear panelthat are shown in my 830S "op" & "service" manuals.
The IF board that is in the rig is coded: X48-1290-00

I'll be "digging" into this unit over that next few days. I will attempt to take detailed notes and diagrams and post them to the groups file and/or picture sections as I find out more.

It is also obvious that there has been "work" done on the rectifier board...diodes 8,9,10,11 have been replaced. I am missing voltage at "12" on the rectifier board & "12" on the AF/AVR board. All other voltages on the rectifier board are present and within specs. There is also loss of some other associated voltages on the counter unit....no digital display.

73 Joe
WB7UQU

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

40738. Re: [TS-520_820_530_830] Antenne cable for interconnect JR-599 and TX-599

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-26 06:11:40 UTC
From: John Schroeder
Topic: 40711 Message: 40738

Yoirs has a Cinch socket? Mine is a pl on one end, the other, is an RCA plug/socket...
KB9PBM ...

_____
From: Behiels JeanPierre <on4aef@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, January 25, 2013 1:28 PM
Subject: [TS-520_820_530_830] Antenne cable for interconnect JR-599 and TX-599

Hi members;

I am searching for a 50 ohm cable antenne interconnection cable for my Kenwood twins.
One end of the cable must have a male PL-connector and on the other side a male cinch plugplug.
Or any eady made source for sutch cable.
Made one by my own is difficult due difficiltys to solder a 50 ohm coax (RG58) to a small cinch plug !!
Ready made cables use a special design cinch plug for this purpose,witch I not have..
I have a commercial example witch fix this problem,but where to buy ?

I hope to get some information around or usefull tips or adresses.

Kindly regards Jean ON4AEF.

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

40739. Re: [TS-520_820_530_830] Antenne cable for interconnect JR-599 and TX-599

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-26 17:11:22 UTC
From: Behiels JeanPierre
Topic: 40711 Message: 40739

Hi John

Yes it is this cable I need,where to find ??
I thought Cinch or RCA ar quit same ??
It is very diffciult to homebrew sutch cable,specillay soldering a RG58 coax to a RCA is quit unpossible.
I am looking for a commercial produced example.
Any adresses are welcome where I canb find one.

Regards Jean on4aef.

----- Original Message -----
From: John Schroeder
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, January 26, 2013 7:11 AM
Subject: Re: [TS-520_820_530_830] Antenne cable for interconnect JR-599 and TX-599

Yoirs has a Cinch socket? Mine is a pl on one end, the other, is an RCA plug/socket...
KB9PBM ...

From: Behiels JeanPierre on4aef@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, January 25, 2013 1:28 PM
Subject: [TS-520_820_530_830] Antenne cable for interconnect JR-599 and TX-599

Hi members;

I am searching for a 50 ohm cable antenne interconnection cable for my Kenwood twins.
One end of the cable must have a male PL-connector and on the other side a male cinch plugplug.
Or any eady made source for sutch cable.
Made one by my own is difficult due difficiltys to solder a 50 ohm coax (RG58) to a small cinch plug !!
Ready made cables use a special design cinch plug for this purpose,witch I not have..
I have a commercial example witch fix this problem,but where to buy ?

I hope to get some information around or usefull tips or adresses.

Kindly regards Jean ON4AEF.

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

40740. Re: [TS-520_820_530_830] Antenne cable for interconnect JR-599 and TX-599

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-26 17:39:34 UTC
From: Cliff White
Topic: 40711 Message: 40740

It might be easier to use a normal PL259 or BNC cable, with adapters to connect to the RCA. I have several RCA to BNC adapters that I use with my o'scope, so I know those exist. I would probably do it something like this:

Radio (RCA) -> Adapter (RCA to BNC) -> Cable (BNC) -> Adapter (BNC to PL259) -> Radio (SO239)

I know you can find ready made connectors and adapters to do this online.

-Cliff
W5CNW

On 01/26/2013 11:11 AM, Behiels JeanPierre wrote:
> Hi John
>
> Yes it is this cable I need,where to find ??
> I thought Cinch or RCA ar quit same ??
> It is very diffciult to homebrew sutch cable,specillay soldering a RG58 coax to a RCA is quit unpossible.
> I am looking for a commercial produced example.
> Any adresses are welcome where I canb find one.
>
> Regards Jean on4aef.
>
>
>
>
> ----- Original Message -----
> From: John Schroeder
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Saturday, January 26, 2013 7:11 AM
> Subject: Re: [TS-520_820_530_830] Antenne cable for interconnect JR-599 and TX-599
>
>
>
> Yoirs has a Cinch socket? Mine is a pl on one end, the other, is an RCA plug/socket... KB9PBM ...
>
> _____
> From: Behiels JeanPierre on4aef@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Friday, January 25, 2013 1:28 PM
> Subject: [TS-520_820_530_830] Antenne cable for interconnect JR-599 and TX-599
>

>
>
>
>
> Hi members;
>
> I am searching for a 50 ohm cable antenne interconnection cable for my Kenwood twins.
> One end of the cable must have a male PL-connector and on the other side a male cinch plugplug.
> Or any eady made source for sutch cable.
> Made one by my own is difficult due difficiltys to solder a 50 ohm coax (RG58) to a small cinch plug !!
> Ready made cables use a special design cinch plug for this purpose,witch I not have..
> I have a commercial example witch fix this problem,but where to buy ?
>
> I hope to get some information around or usefull tips or adresses.
>
> Kindly regards Jean ON4AEF.
>
> [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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> ------------------------------------
>
> Yahoo! Groups Links
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40741. connector

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-26 18:24:05 UTC
From: Richard Radke
Topic: 40741 Message: 40741

Jean,

I'm pretty sure this is what you need. SO-239 to male RCA adapter http://www.mfjenterprises.com/Product.php?productid=MFJ-7738

Rick
W9WS

40743. Re: [TS-520_820_530_830] Antenne cable for interconnect JR-599 and TX-599

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-26 18:50:47 UTC
From: pmarkavage@...
Topic: 40711 Message: 40743

A quick Google search found this:
Copy and paste to your browser
http://ceitron.com/shop/product_info.php?cPath=37_121&products_id=22816
Watch for link wrap around.

Sounds like what you need and the price is cheap.

Pete, wa2cwa

> _____
> From: Behiels JeanPierre <on4aef@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Friday, January 25, 2013 1:28 PM
> Subject: [TS-520_820_530_830] Antenne cable for interconnect JR-599
> and TX-599
>
> Hi members;
>
> I am searching for a 50 ohm cable antenne interconnection cable for
> my Kenwood twins.
> One end of the cable must have a male PL-connector and on the other
> side a male cinch plugplug.
> Or any eady made source for sutch cable.
> Made one by my own is difficult due difficiltys to solder a 50 ohm
> coax (RG58) to a small cinch plug !!
> Ready made cables use a special design cinch plug for this
> purpose,witch I not have..
> I have a commercial example witch fix this problem,but where to buy
> ?
>
> I hope to get some information around or usefull tips or adresses.
>
> Kindly regards Jean ON4AEF.

40744. Interconnection cable PL259 to RCA abt 4 inch long

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-26 18:54:56 UTC
From: Behiels JeanPierre
Topic: 40744 Message: 40744

I could use but.....
But what I search is a real cable with on one end PL259 and on other side a
RCA connector
Lenght about 4 inch long...

I really need a cable

----- Original Message -----
From: "Richard Radke" <rar100@...>
To: "Behiels JeanPierre" <on4aef@...>
Cc: <TS-520_820_530_830@yahoogroups.com>
Sent: Saturday, January 26, 2013 7:24 PM
Subject: connector

> Jean,
>
> I'm pretty sure this is what you need. SO-239 to male RCA adapter
> http://www.mfjenterprises.com/Product.php? productid=MFJ-7738
>
> Rick
> W9WS

40745. Re: [TS-520_820_530_830] Antenne cable for interconnect JR-599 and TX-599

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-26 19:09:31 UTC
From: Behiels JeanPierre
Topic: 40711 Message: 40745

Yes this is what I really need Pete

Could not buy on-line give a lot of errors ??
I assume they not sell outside US !!!

Regards Jean ON4AEF

----- Original Message -----
From: pmarkavage@...
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, January 26, 2013 7:50 PM
Subject: Re: [TS-520_820_530_830] Antenne cable for interconnect JR-599 and TX-599

A quick Google search found this:
Copy and paste to your browser
http://ceitron.com/shop/product_info.php?cPath=37_121&products_id=22816
Watch for link wrap around.

Sounds like what you need and the price is cheap.

Pete, wa2cwa

> _____
> From: Behiels JeanPierre on4aef@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Friday, January 25, 2013 1:28 PM
> Subject: [TS-520_820_530_830] Antenne cable for interconnect JR-599
> and TX-599
>
> Hi members;
>
> I am searching for a 50 ohm cable antenne interconnection cable for
> my Kenwood twins.
> One end of the cable must have a male PL-connector and on the other
> side a male cinch plugplug.
> Or any eady made source for sutch cable.
> Made one by my own is difficult due difficiltys to solder a 50 ohm
> coax (RG58) to a small cinch plug !!
> Ready made cables use a special design cinch plug for this
> purpose,witch I not have..
> I have a commercial example witch fix this problem,but where to buy
> ?
>
> I hope to get some information around or usefull tips or adresses.
>

> Kindly regards Jean ON4AEF.

[Non-text portions of this message have been removed]

40746. Re: [TS-520_820_530_830] Antenne cable for interconnect JR-599 and TX-599

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-26 19:23:38 UTC
From: pmarkavage@...
Topic: 40711 Message: 40746

I wouldn't assume that.
Send them an e-mail or call:
United States and Canada: 1-800-543-3568 TOLL FREE
Overseas Orders: 1-937-252-5662 LOCAL LINE

Pete, wa2cwa

On Sat, 26 Jan 2013 20:09:31 +0100 "Behiels JeanPierre"
<on4aef@...> writes:
> Yes this is what I really need Pete
>
> Could not buy on-line give a lot of errors ??
> I assume they not sell outside US !!!
>
> Regards Jean ON4AEF
>
>
> ----- Original Message -----
> From: pmarkavage@...
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Saturday, January 26, 2013 7:50 PM
> Subject: Re: [TS-520_820_530_830] Antenne cable for interconnect
> JR-599 and TX-599
>
>
>
> A quick Google search found this:
> Copy and paste to your browser
>
> http://ceitron.com/shop/product_info.php?cPath=37_121&products_id=22816
> Watch for link wrap around.
>
> Sounds like what you need and the price is cheap.
>
> Pete, wa2cwa
>
> > _____
> > From: Behiels JeanPierre on4aef@...>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Friday, January 25, 2013 1:28 PM
> > Subject: [TS-520_820_530_830] Antenne cable for interconnect
> JR-599
> > and TX-599
> >

> > Hi members;
> >
> > I am searching for a 50 ohm cable antenne interconnection cable
> for
> > my Kenwood twins.
> > One end of the cable must have a male PL-connector and on the
> other
> > side a male cinch plugplug.
> > Or any eady made source for sutch cable.
> > Made one by my own is difficult due difficiltys to solder a 50
> ohm
> > coax (RG58) to a small cinch plug !!
> > Ready made cables use a special design cinch plug for this
> > purpose,witch I not have..
> > I have a commercial example witch fix this problem,but where to
> buy
> > ?
> >
> > I hope to get some information around or usefull tips or
> adresses.
> >
> > Kindly regards Jean ON4AEF.
>

[Non-text portions of this message have been removed]

40747. Re: [TS-520_820_530_830] Antenne cable for interconnect JR-599 and TX-599

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-26 19:59:19 UTC
From: John Schroeder
Topic: 40711 Message: 40747

Jean:

I'll send you a cable... Not hard to make... My twins are stored at the moment, so I'll send you my cable, and make another when my shack is finished...

John ... KB9PBM ...

From: "pmarkavage@..." <pmarkavage@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, January 26, 2013 1:23 PM
Subject: Re: [TS-520_820_530_830] Antenne cable for interconnect JR-599 and TX-599

I wouldn't assume that.
Send them an e-mail or call:
United States and Canada: 1-800-543-3568 TOLL FREE
Overseas Orders: 1-937-252-5662 LOCAL LINE

Pete, wa2cwa

On Sat, 26 Jan 2013 20:09:31 +0100 "Behiels JeanPierre"
on4aef@...> writes:
> Yes this is what I really need Pete
>
> Could not buy on-line give a lot of errors ??
> I assume they not sell outside US !!!
>
> Regards Jean ON4AEF
>
>
> ----- Original Message -----
> From: pmarkavage@...
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Saturday, January 26, 2013 7:50 PM
> Subject: Re: [TS-520_820_530_830] Antenne cable for interconnect
> JR-599 and TX-599
>
>
>
> A quick Google search found this:
> Copy and paste to your browser
>
> http://ceitron.com/shop/product_info.php?cPath=37_121&products_id=22816
> Watch for link wrap around.
>

> Sounds like what you need and the price is cheap.
>
> Pete, wa2cwa
>
> > _____
> > From: Behiels JeanPierre on4aef@...>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Friday, January 25, 2013 1:28 PM
> > Subject: [TS-520_820_530_830] Antenne cable for interconnect
> JR-599
> > and TX-599
> >
> > Hi members;
> >
> > I am searching for a 50 ohm cable antenne interconnection cable
> for
> > my Kenwood twins.
> > One end of the cable must have a male PL-connector and on the
> other
> > side a male cinch plugplug.
> > Or any eady made source for sutch cable.
> > Made one by my own is difficult due difficiltys to solder a 50
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> > coax (RG58) to a small cinch plug !!
> > Ready made cables use a special design cinch plug for this
> > purpose,witch I not have..
> > I have a commercial example witch fix this problem,but where to
> buy
> > ?
> >
> > I hope to get some information around or usefull tips or
> adresses.
> >
> > Kindly regards Jean ON4AEF.
>

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[Non-text portions of this message have been removed]

40748. TS-530S - Antenna Relay

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-26 22:55:17 UTC
From: k3jls@verizon.net
Topic: 40748 Message: 40748

Hi folks,

I found the relay. I thought it was just 'plug and play', but I guess I was wrong.

Are they all 'hard wired'?

Joe

40749. RE: [TS-520_820_530_830] TS-530S - Antenna Relay

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-26 23:07:26 UTC
From: fpath fpath
Topic: 40748 Message: 40749

Joe,

Some are most are not, my original new 530 blew that ant relay, when it came back it was plug in, but cant find any retro fit Kenwood documentation. When I got my second 530 it was a plug in also. Where did you find the 530 relays??
DAve
Vk5PDL

To: TS-520_820_530_830@...m
From: k3jls@...
Date: Sat, 26 Jan 2013 22:55:17 +0000
Subject: [TS-520_820_530_830] TS-530S - Antenna Relay

Hi folks,

I found the relay. I thought it was just 'plug and play', but I guess I was wrong.

Are they all 'hard wired'?

Joe

[Non-text portions of this message have been removed]

40750. Re: TS-530S - Antenna Relay

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-27 00:44:56 UTC
From: k3jls@verizon.net
Topic: 40748 Message: 40750

Hi Dave,

I've ordered a MY2-DC12(S)from Mouser Electronics ($6) as a source on the FT-101 website recommended this relay as a replacement for the one in the FT-101 which supposedly uses that same plug-in relay as the TS-530. Hope that makes sense.

I still can't see if my relay is in a socket or is hard wired to the board. I don't want to apply undue pressure to it because it does work now - after a fashion.

I find it hard to believe that the manufacturer would hard wire a relay and not spend the extra $.20 for a socket. I just can't see if there is a slight separation between what I think is the socket and the body of the relay itself because the chassis is 'in the way'.

I'll let you know.

73's - Joe

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath wrote:
>
>
> Joe,
>
> Some are most are not, my original new 530 blew that ant relay, when it came back it was plug in, but cant find any retro fit Kenwood documentation. When I got my second 530 it was a plug in also. Where did you find the 530 relays??
> DAve
> Vk5PDL
>
>
>
>
>
>
> To: TS-520_820_530_830@yahoogroups.com
> From: k3jls@...
> Date: Sat, 26 Jan 2013 22:55:17 +0000
> Subject: [TS-520_820_530_830] TS-530S - Antenna Relay
>
>
>
>
>
>
> Hi folks,
>
> I found the relay. I thought it was just 'plug and play', but I guess I was wrong.
>

> Are they all 'hard wired'?
>
> Joe
>
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

40751. Re: [TS-520_820_530_830] Re: TS-530S - Antenna Relay

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-27 00:59:48 UTC
From: Mark L. Hammond
Topic: 40748 Message: 40751

There are various relays for the various hybrids here:

http://www.hybridrestore.com/parts/

Today I took apart and cleaned both relays in my "new" TS-830S. Not a difficult job, if you're careful :)

73!

Mark N8MH

At 12:44 AM 1/27/2013 +0000, you wrote:
>
>
>Hi Dave,
>
>I've ordered a MY2-DC12(S)from Mouser Electronics ($6) as a source on the FT-101 website recommended this relay as a replacement for the one in the FT-101 which supposedly uses that same plug-in relay as the TS-530. Hope that makes sense.
>
>I still can't see if my relay is in a socket or is hard wired to the board. I don't want to apply undue pressure to it because it does work now - after a fashion.
>
>I find it hard to believe that the manufacturer would hard wire a relay and not spend the extra $.20 for a socket. I just can't see if there is a slight separation between what I think is the socket and the body of the relay itself because the chassis is 'in the way'.
>
>I'll let you know.
>
>73's - Joe
>
>--- In <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com, fpath fpath wrote:
>>
>>
>> Joe,
>>
>> Some are most are not, my original new 530 blew that ant relay, when it came back it was plug in, but cant find any retro fit Kenwood documentation. When I got my second 530 it was a plug in also. Where did you find the 530 relays??
>> DAve
>> Vk5PDL
>>
>>
>>
>>

>>
>>
>> To: <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>> From: k3jls@...
>> Date: Sat, 26 Jan 2013 22:55:17 +0000
>> Subject: [TS-520_820_530_830] TS-530S - Antenna Relay
>>
>>
>>
>>
>>
>> Hi folks,
>>
>> I found the relay. I thought it was just 'plug and play', but I guess I was wrong.
>>
>> Are they all 'hard wired'?
>>
>> Joe
>>
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>> [Non-text portions of this message have been removed]
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>
>

[Non-text portions of this message have been removed]

40752. RE: [TS-520_820_530_830] Re: TS-530S - Antenna Relay

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-27 05:54:44 UTC
From: fpath fpath
Topic: 40748 Message: 40752

Hi Joe,

Thanks, I'm thinking of putting mine back to factory standard which is hard wired. Manufacturers do some whird things. I picked a spare 830 antenna relay up off Jim, just incase.

73s
Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: k3jls@...
Date: Sun, 27 Jan 2013 00:44:56 +0000
Subject: [TS-520_820_530_830] Re: TS-530S - Antenna Relay

Hi Dave,

I've ordered a MY2-DC12(S)from Mouser Electronics ($6) as a source on the FT-101 website recommended this relay as a replacement for the one in the FT-101 which supposedly uses that same plug-in relay as the TS-530. Hope that makes sense.

I still can't see if my relay is in a socket or is hard wired to the board. I don't want to apply undue pressure to it because it does work now - after a fashion.

I find it hard to believe that the manufacturer would hard wire a relay and not spend the extra $.20 for a socket. I just can't see if there is a slight separation between what I think is the socket and the body of the relay itself because the chassis is 'in the way'.

I'll let you know.

73's - Joe

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath wrote:
>
>
> Joe,
>
> Some are most are not, my original new 530 blew that ant relay, when it came back it was plug in, but cant find any retro fit Kenwood documentation. When I got my second 530 it was a plug in also. Where did you find the 530 relays??
> DAve
> Vk5PDL
>
>
>
>
>

>
> To: TS-520_820_530_830@yahoogroups.com
> From: k3jls@...
> Date: Sat, 26 Jan 2013 22:55:17 +0000
> Subject: [TS-520_820_530_830] TS-530S - Antenna Relay
>
>
>
>
>
> Hi folks,
>
> I found the relay. I thought it was just 'plug and play', but I guess I was wrong.
>
> Are they all 'hard wired'?
>
> Joe
>
>
>
>
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>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

40753. Re: TS-530S - Antenna Relay

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-27 12:12:46 UTC
From: k3jls@verizon.net
Topic: 40748 Message: 40753

Hi Dave,

So the factory standard arrangement for the antenna transfer relay is hard wired? That's odd, especially since the Yaesu folks designed the FT-101 relay as a plug in device and since the same relay can supposedly be used.

Well, I have to take apart the PA stage to replace one of the ceramic loading capacitors for 80 meters which apparently crapped out, so I might as well do them all and will put a relay socket on that board while I'm at it.

Joe

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath wrote:
>
>
> Hi Joe,
>
> Thanks, I'm thinking of putting mine back to factory standard which is hard wired. Manufacturers do some whird things. I picked a spare 830 antenna relay up off Jim, just incase.
>
> 73s
> Dave
> VK5PDL
>
>
>
>
> To: TS-520_820_530_830@yahoogroups.com
> From: k3jls@...
> Date: Sun, 27 Jan 2013 00:44:56 +0000
> Subject: [TS-520_820_530_830] Re: TS-530S - Antenna Relay
>
>
>
>
>
>
> Hi Dave,
>
> I've ordered a MY2-DC12(S)from Mouser Electronics ($6) as a source on the FT-101 website recommended this relay as a replacement for the one in the FT-101 which supposedly uses that same plug-in relay as the TS-530. Hope that makes sense.
>
> I still can't see if my relay is in a socket or is hard wired to the board. I don't want to apply undue pressure to it because it does work now - after a fashion.
>

> I find it hard to believe that the manufacturer would hard wire a relay and not spend the extra $.20 for a socket. I just can't see if there is a slight separation between what I think is the socket and the body of the relay itself because the chassis is 'in the way'.
>
> I'll let you know.
>
> 73's - Joe
>
> --- In TS-520_820_530_830@yahoogroups.com, fpath fpath wrote:
> >
> >
> > Joe,
> >
> > Some are most are not, my original new 530 blew that ant relay, when it came back it was plug in, but cant find any retro fit Kenwood documentation. When I got my second 530 it was a plug in also. Where did you find the 530 relays??
> > DAve
> > Vk5PDL
> >
> >
> >
> >
> >
> >
> > To: TS-520_820_530_830@yahoogroups.com
> > From: k3jls@
> > Date: Sat, 26 Jan 2013 22:55:17 +0000
> > Subject: [TS-520_820_530_830] TS-530S - Antenna Relay
> >
> >
> >
> >
> >
> > Hi folks,
> >
> > I found the relay. I thought it was just 'plug and play', but I guess I was wrong.
> >
> > Are they all 'hard wired'?
> >
> > Joe
> >
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> > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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40754. Re: Interconnection cable PL259 to RCA abt 4 inch long

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-27 18:23:56 UTC
From: jdarmstrongjr
Topic: 40744 Message: 40754

Further to this discussion, this store might not yield an exact match, but it's a good start. Their prices are very competitive.

http://www.wiredco.com/

73 de NV6W

--- In TS-520_820_530_830@yahoogroups.com, "Behiels JeanPierre" wrote:
>
>
> I could use but.....
> But what I search is a real cable with on one end PL259 and on other side a
> RCA connector
> Lenght about 4 inch long...
>
> I really need a cable
>
>
>
> ----- Original Message -----
> From: "Richard Radke"
> To: "Behiels JeanPierre"
> Cc:
> Sent: Saturday, January 26, 2013 7:24 PM
> Subject: connector
>
>
> > Jean,
> >
> > I'm pretty sure this is what you need. SO-239 to male RCA adapter
> > http://www.mfjenterprises.com/Product.php? productid=MFJ-7738
> >
> > Rick
> > W9WS
>

40755. KENWOOD HYBRID USER NET (January 27th, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-27 19:20:55 UTC
From: mvgilger
Topic: 40755 Message: 40755

The Saturday's net on 40 meter we had 26 stations checking with good band conditions. Out of those, there was:

7 running TS-520(x)
3 running TS-530(x)
2 running TS-820(x)
4 running TS-830S
2 running 599 twins
1 running TS-511

I was running a TS830. The rest were running non hybrids of one model or another. Mike, WB8WT checked in with one of his two TS-511's. It sounded great.

The Sunday 20 meter net we had 25 stations checking in under good band conditions. Out of those, there were:

3 running TS-520(x)
1 running TS-530(x)
4 running TS-820(x)
4 running TS-830S
1 running 599 twins

I was running a non hybrid TS-940. The rest were running non hybrids of one model or another. Richard, KJ4ZIZ picked up the net last Sunday, and did a good job.

We have been having several people checking in regularly with their TS-430, TS-440, and TS-940's, which of course is not a hybrid, although over 30+ years old. Everyone is welcome as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a net control station, please send me an email. Currently it's just myself, WB2KNR and WB0SGA. I would like to get several more. If we do, we can alternate so everyone might be on a 3-4 week rotation. It's a lot of fun and a good way to make sure you station is optimized.

For anyone that has not heard, we have a new web site that WB4HFN is hosting. He currently has a very nice site for Drake, Collins and Heathkit and now Kenwood Hybrids. Good quality manuals plus sale flyers and brochures will be found here, along with user supplied information for all Hybrids.

His URL is:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754 check-ins, Sunday total 563 check-ins

November 2012, Saturday's, net total = 47, Sundays total = 20
December 2012, Saturday's, net total = 74, Sunday's total = 70

January 2013, Saturday's, net total = 93, Sunday's total = 87 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

40756. Re: [TS-520_820_530_830] KENWOOD HYBRID USER NET (January 27th, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-27 19:41:50 UTC
From: Jeffrey P Nast
Topic: 40755 Message: 40756

Thank you Mark! Was good to meet you on the air. 73!

-Jeff KC0MKS

mvgilger wrote:
>
> The Saturday's net on 40 meter we had 26 stations checking with good
> band conditions. Out of those, there was:
>
> 7 running TS-520(x)
> 3 running TS-530(x)
> 2 running TS-820(x)
> 4 running TS-830S
> 2 running 599 twins
> 1 running TS-511
>
> I was running a TS830. The rest were running non hybrids of one model
> or another. Mike, WB8WT checked in with one of his two TS-511's. It
> sounded great.
>
> The Sunday 20 meter net we had 25 stations checking in under good band
> conditions. Out of those, there were:
>
> 3 running TS-520(x)
> 1 running TS-530(x)
> 4 running TS-820(x)
> 4 running TS-830S
> 1 running 599 twins
>
> I was running a non hybrid TS-940. The rest were running non hybrids
> of one model or another. Richard, KJ4ZIZ picked up the net last
> Sunday, and did a good job.
>
> We have been having several people checking in regularly with their
> TS-430, TS-440, and TS-940's, which of course is not a hybrid,
> although over 30+ years old. Everyone is welcome as long as they have
> an interest in the older equipment.
>
> If anyone would be interested in filling in as a net control station,
> please send me an email. Currently it's just myself, WB2KNR and
> WB0SGA. I would like to get several more. If we do, we can alternate
> so everyone might be on a 3-4 week rotation. It's a lot of fun and a
> good way to make sure you station is optimized.
>

> For anyone that has not heard, we have a new web site that WB4HFN is
> hosting. He currently has a very nice site for Drake, Collins and
> Heathkit and now Kenwood Hybrids. Good quality manuals plus sale
> flyers and brochures will be found here, along with user supplied
> information for all Hybrids.
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> His URL is:
> http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm
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> To date, we have had the following check-in:
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> Nov. 2011 ? Oct. 2012 Saturday total 754 check-ins, Sunday total 563
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> to date)
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> Net Info:
> Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
> Sunday: 14.316 @ 1800 UTC following the ICOM net
>
> Web Site:
> http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm
>
> 73's,
> Mark, WB0IQK
>
>

40757. Looking for Ts520 gear

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-27 21:00:02 UTC
From: michaelmattes@sbcglobal.net
Topic: 40757 Message: 40757

Hi,
Looking to purchase for my recently restored original ts520

Ext vfo
Ext speaker
Microphone

Thanks
Michael
Wb6qnd
Sherman oaks ca
818 789 3668

40758. Re: TS-530S - Antenna Relay

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-27 21:23:05 UTC
From: Bob
Topic: 40748 Message: 40758

All of the 530S TX relays that I have had have the relay on a pc board, don't know WHY Kenwood did that... :(
Bob
****

--- In TS-520_820_530_830@yahoogroups.com, "k3jls@..." wrote:
>
> Hi Dave,
>
> So the factory standard arrangement for the antenna transfer relay is hard wired? That's odd, especially since the Yaesu folks designed the FT-101 relay as a plug in device and since the same relay can supposedly be used.
>
> Well, I have to take apart the PA stage to replace one of the ceramic loading capacitors for 80 meters which apparently crapped out, so I might as well do them all and will put a relay socket on that board while I'm at it.
>
> Joe
>
> --- In TS-520_820_530_830@yahoogroups.com, fpath fpath wrote:
> >
> >
> > Hi Joe,
> >
> > Thanks, I'm thinking of putting mine back to factory standard which is hard wired. Manufacturers do some whird things. I picked a spare 830 antenna relay up off Jim, just incase.
> >
> > 73s
> > Dave
> > VK5PDL
> >
> >
> >
> >
> > To: TS-520_820_530_830@yahoogroups.com
> > From: k3jls@
> > Date: Sun, 27 Jan 2013 00:44:56 +0000
> > Subject: [TS-520_820_530_830] Re: TS-530S - Antenna Relay
> >
> >
> >
> >
> >
> >
> > Hi Dave,

> >
> > I've ordered a MY2-DC12(S)from Mouser Electronics ($6) as a source on the FT-101 website recommended this relay as a replacement for the one in the FT-101 which supposedly uses that same plug-in relay as the TS-530. Hope that makes sense.
> >
> > I still can't see if my relay is in a socket or is hard wired to the board. I don't want to apply undue pressure to it because it does work now - after a fashion.
> >
> > I find it hard to believe that the manufacturer would hard wire a relay and not spend the extra $.20 for a socket. I just can't see if there is a slight separation between what I think is the socket and the body of the relay itself because the chassis is 'in the way'.
> >
> > I'll let you know.
> >
> > 73's - Joe
> >
> > --- In TS-520_820_530_830@yahoogroups.com, fpath fpath wrote:
> > >
> > >
> > > Joe,
> > >
> > > Some are most are not, my original new 530 blew that ant relay, when it came back it was plug in, but cant find any retro fit Kenwood documentation. When I got my second 530 it was a plug in also. Where did you find the 530 relays??
> > > DAve
> > > Vk5PDL
> > >
> > >
> > >
> > >
> > >
> > >
> > > To: TS-520_820_530_830@yahoogroups.com
> > > From: k3jls@
> > > Date: Sat, 26 Jan 2013 22:55:17 +0000
> > > Subject: [TS-520_820_530_830] TS-530S - Antenna Relay
> > >
> > >
> > >
> > >
> > >
> > >
> > > Hi folks,
> > >
> > > I found the relay. I thought it was just 'plug and play', but I guess I was wrong.
> > >
> > > Are they all 'hard wired'?
> > >
> > > Joe
> > >
> > >

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> > > [Non-text portions of this message have been removed]
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> > [Non-text portions of this message have been removed]
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>

40759. Re: TS-530S - Antenna Relay

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-27 22:53:55 UTC
From: k3jls@verizon.net
Topic: 40748 Message: 40759

Bob,

Because it was probably initially cheaper. It was also a source of additional revenue when the relay failed (as they all will do at some point in time) and had to be replaced.

If you have a Toyota, you'll know what I mean.

I've ordered the socket and will install everything when it arrives this week.

73's - Joe

--- In TS-520_820_530_830@yahoogroups.com, "Bob" wrote:
>
> All of the 530S TX relays that I have had have the relay on a pc board, don't know WHY Kenwood did that... :(
> Bob
> **********
>
> --- In TS-520_820_530_830@yahoogroups.com, "k3jls@" wrote:
> >
> > Hi Dave,
> >
> > So the factory standard arrangement for the antenna transfer relay is hard wired? That's odd, especially since the Yaesu folks designed the FT-101 relay as a plug in device and since the same relay can supposedly be used.
> >
> > Well, I have to take apart the PA stage to replace one of the ceramic loading capacitors for 80 meters which apparently crapped out, so I might as well do them all and will put a relay socket on that board while I'm at it.
> >
> > Joe
> >
> > --- In TS-520_820_530_830@yahoogroups.com, fpath fpath wrote:
> > >
> > >
> > > Hi Joe,
> > >
> > > Thanks, I'm thinking of putting mine back to factory standard which is hard wired. Manufacturers do some whird things. I picked a spare 830 antenna relay up off Jim, just incase.
> > >
> > > 73s
> > > Dave
> > > VK5PDL
> > >
> > >

> > >
> > >
> > > To: TS-520_820_530_830@yahoogroups.com
> > > From: k3jls@
> > > Date: Sun, 27 Jan 2013 00:44:56 +0000
> > > Subject: [TS-520_820_530_830] Re: TS-530S - Antenna Relay
> > >
> > >
> > >
> > >
> > >
> > > Hi Dave,
> > >
> > > I've ordered a MY2-DC12(S)from Mouser Electronics ($6) as a source on the FT-101 website recommended this relay as a replacement for the one in the FT-101 which supposedly uses that same plug-in relay as the TS-530. Hope that makes sense.
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> > > I still can't see if my relay is in a socket or is hard wired to the board. I don't want to apply undue pressure to it because it does work now - after a fashion.
> > >
> > > I find it hard to believe that the manufacturer would hard wire a relay and not spend the extra $.20 for a socket. I just can't see if there is a slight separation between what I think is the socket and the body of the relay itself because the chassis is 'in the way'.
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> > > 73's - Joe
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, fpath fpath wrote:
> > > >
> > > >
> > > > Joe,
> > > >
> > > > Some are most are not, my original new 530 blew that ant relay, when it came back it was plug in, but cant find any retro fit Kenwood documentation. When I got my second 530 it was a plug in also. Where did you find the 530 relays??
> > > > DAve
> > > > Vk5PDL
> > > >
> > > >
> > > >
> > > >
> > > >
> > > >
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > From: k3jls@
> > > > Date: Sat, 26 Jan 2013 22:55:17 +0000
> > > > Subject: [TS-520_820_530_830] TS-530S - Antenna Relay
> > > >
> > > >

> > > >
> > > >
> > > >
> > > > Hi folks,
> > > >
> > > > I found the relay. I thought it was just 'plug and play', but I guess I was wrong.
> > > >
> > > > Are they all 'hard wired'?
> > > >
> > > > Joe
> > > >
> > > >
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> > > [Non-text portions of this message have been removed]
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>

40760. Re: KENWOOD HYBRID USER NET (January 27th, update) < >

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-28 15:51:58 UTC
From: kd0fds
Topic: 40755 Message: 40760

Thank you, Mark for running the net.

Special thanks for helping me test my processor and compression level. I'll leave it on and at the same level after your on the air tuning test and hearing a report that my S level was one higher with the compression up around 3/4ths with the processor enabled. I need all the help I can get barefoot with a highly compromised (low) g5rvjr.

Thanks again,
Stephen

--- In TS-520_820_530_830@yahoogroups.com, Jeffrey P Nast wrote:
>
> Thank you Mark! Was good to meet you on the air. 73!
>
> -Jeff KC0MKS
>
> mvgilger wrote:
> >
> > The Saturday's net on 40 meter we had 26 stations checking with good
> > band conditions. Out of those, there was:
> >
> > 7 running TS-520(x)
> > 3 running TS-530(x)
> > 2 running TS-820(x)
> > 4 running TS-830S
> > 2 running 599 twins
> > 1 running TS-511
> >
> > I was running a TS830. The rest were running non hybrids of one model
> > or another. Mike, WB8WT checked in with one of his two TS-511's. It
> > sounded great.
> >
> > The Sunday 20 meter net we had 25 stations checking in under good band
> > conditions. Out of those, there were:
> >
> > 3 running TS-520(x)
> > 1 running TS-530(x)
> > 4 running TS-820(x)
> > 4 running TS-830S
> > 1 running 599 twins
> >
> > I was running a non hybrid TS-940. The rest were running non hybrids
> > of one model or another. Richard, KJ4ZIZ picked up the net last
> > Sunday, and did a good job.
> >

> > We have been having several people checking in regularly with their
> > TS-430, TS-440, and TS-940's, which of course is not a hybrid,
> > although over 30+ years old. Everyone is welcome as long as they have
> > an interest in the older equipment.
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> > If anyone would be interested in filling in as a net control station,
> > please send me an email. Currently it's just myself, WB2KNR and
> > WB0SGA. I would like to get several more. If we do, we can alternate
> > so everyone might be on a 3-4 week rotation. It's a lot of fun and a
> > good way to make sure you station is optimized.
> >
> > For anyone that has not heard, we have a new web site that WB4HFN is
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> > Heathkit and now Kenwood Hybrids. Good quality manuals plus sale
> > flyers and brochures will be found here, along with user supplied
> > information for all Hybrids.
> >
> > His URL is:
> > http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm
> >
> > To date, we have had the following check-in:
> >
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> > November 2012, Saturday's, net total = 47, Sundays total = 20
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> > to date)
> >
> > Net Info:
> > Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
> > Sunday: 14.316 @ 1800 UTC following the ICOM net
> >
> > Web Site:
> > http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm
> >
> > 73's,
> > Mark, WB0IQK
> >
> >
>

40761. Re: TS-530S - Antenna Relay

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-28 18:29:21 UTC
From: Bob
Topic: 40748 Message: 40761

In the 70"s some of the guys were putting these rigs in the trucks,cars, motor homes,and so on. Once they went mobile they found that they needed to be hard wired to prevent some of the vibration issues that were taking place. The trend was to make the units more versatile and dependable at the same time. They did not want the rigs being sent back because the darn relay shook out of the socket.

73
Bob
KB6KPK
--- In TS-520_820_530_830@yahoogroups.com, "k3jls@..." wrote:
>
> Bob,
>
> Because it was probably initially cheaper. It was also a source of additional revenue when the relay failed (as they all will do at some point in time) and had to be replaced.
>
> If you have a Toyota, you'll know what I mean.
>
> I've ordered the socket and will install everything when it arrives this week.
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> 73's - Joe
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> --- In TS-520_820_530_830@yahoogroups.com, "Bob" wrote:
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> > Bob
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> > --- In TS-520_820_530_830@yahoogroups.com, "k3jls@" wrote:
> > >
> > > Hi Dave,
> > >
> > > So the factory standard arrangement for the antenna transfer relay is hard wired? That's odd, especially since the Yaesu folks designed the FT-101 relay as a plug in device and since the same relay can supposedly be used.
> > >
> > > Well, I have to take apart the PA stage to replace one of the ceramic loading capacitors for 80 meters which apparently crapped out, so I might as well do them all and will put a relay socket on that board while I'm at it.
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> > > Joe
> > >
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> > > >

> > > >
> > > > Hi Joe,
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> > > > Thanks, I'm thinking of putting mine back to factory standard which is hard wired. Manufacturers do some whird things. I picked a spare 830 antenna relay up off Jim, just incase.
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> > > > Dave
> > > > VK5PDL
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> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > From: k3jls@
> > > > Date: Sun, 27 Jan 2013 00:44:56 +0000
> > > > Subject: [TS-520_820_530_830] Re: TS-530S - Antenna Relay
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> > > >
> > > >
> > > >
> > > > Hi Dave,
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> > > > I still can't see if my relay is in a socket or is hard wired to the board. I don't want to apply undue pressure to it because it does work now - after a fashion.
> > > >
> > > > I find it hard to believe that the manufacturer would hard wire a relay and not spend the extra $.20 for a socket. I just can't see if there is a slight separation between what I think is the socket and the body of the relay itself because the chassis is 'in the way'.
> > > >
> > > > I'll let you know.
> > > >
> > > > 73's - Joe
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, fpath fpath wrote:
> > > > >
> > > > >
> > > > > Joe,
> > > > >
> > > > > Some are most are not, my original new 530 blew that ant relay, when it came back it was plug in, but cant find any retro fit Kenwood documentation. When I got my second 530 it was a plug in also. Where did you find the 530 relays??
> > > > > DAve

> > > > > Vk5PDL
> > > > >
> > > > >
> > > > >
> > > > >
> > > > >
> > > > >
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > From: k3jls@
> > > > > Date: Sat, 26 Jan 2013 22:55:17 +0000
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> > > > > Hi folks,
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40762. Re: TS-830S DRIVE white sprockets ...

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-29 03:27:09 UTC
From: Noodle10536
Topic: 34477 Message: 40762

Sorry for the slow reply. I am in the process of fixing up another hybrid rig. On my previous TS-530s and 830s I made the steel sleeves that are in the photos section named "Drive Gear Repair on TS-530s & TS-830s". To fabricate these steel rings took quite a bit of time. I started with a piece of DOM structural tubing and machined it to the correct ID and then reduced the OD so that the wall thickness was not excessive but still plenty thick. The set screw holes are about 120 degrees apart. I just scribed them and drilled them large enough for the set screws to pass through, relying on the original threads in the nylon gears. Once all the machining was done I slightly roughed up the outer rim of the gear and degreased the new ring. I then mixed up epoxy, forced some in the split of the gear and then on both the inside of the ring and outside of the gear rim. I then layed the gear on a flat surface, aligned the set screw holes and forced the ring over the gear rim. I made sure the set screw holes were aligned and then inserted an oiled set screw in the holes, especially the one where the split was. If you do not do this the epoxy will fill the hole and then you will have to clean it with a drill and tap it again. I then cleaned off the excess epoxy and let it cure.

For this next radio refurbishment, I have found that two out of the three gears are split. I plan to sleeve them all. If they are not split already they most likely will soon. Also it is a bit of a project to disassemble and re-assemble and adjust. I would rather fix it once and be done with it. Another form member posted the idea of using 1/2" copper tubing. I measured the OD of the gear rim and then a scrap piece of 1/2" tubing and guess what they are both about .542". Perfect! Great idea! So for my current repair I plan to use the copper tubing. It is strong enough and requires only cutting to width and holes for the set screws. I will probably use my lathe to cut them but it is not required. I will post progress reports and maybe some pics.

Thanks & 73, Peter. KC2RBX

40763. Kenwood R 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-29 16:40:01 UTC
From: emilioc
Topic: 40763 Message: 40763

Hi to all's. I would like to purchase Kenwood R 820 if any one haved for sale please let me know. Of course the ealth should be ok. Thanks. Regards. Shipment to Italy.

40764. Re: [HeathKit_HFAmps] Contact List Compromised

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-29 20:16:16 UTC
From: Joe
Topic: 40764 Message: 40764

Only way you are going to be able to clean things up, Tom, is to dump the Yahoo email address and go to something like GMAIL. Yahoo is compromised..hackers are getting in above the password protection and spamming everyone from the various Yahoo email addresses. Changing passwords does no good..again, the attacks are coming from within Yahoo's servers.....no passwords needed.

As I have said all along...go with a free GMAIL account (They have the best spam filter of any of the email providers!) or buy a domain (address) from GoDaddy or similar provider.

Joe Wolfe - WA6RKN
Moderator, HeathKit_HFAmps.

----- Original Message -----
From: "Tom Waraksa" <tjwaraksa@...>
Subject: [HeathKit_HFAmps] Contact List Compromised

Just a note to let you know that my contact list has been compromised. Please delete any emails from me that do not have a relevant ham radio subject line.

Working to clean things up now. Sorry for the inconvenience.

40765. New shack

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-30 02:55:35 UTC
From: geagent21
Topic: 40765 Message: 40765

I am setting up my first station and need some advice. I have a nice TS 520 with a separate VFO. I also have a MFJ antenna tuner and a separate Swan large face wattmeter/SWR meter. My question is, What order to connect them in.
Thanks in advance
Greg
KC9VVU

40766. Re: [TS-520_820_530_830] New shack

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-30 03:21:00 UTC
From: Richard Radke
Topic: 40765 Message: 40766

Greg,

520, tuner, watt/swr meter, antenna...in that order

Rick
W9WS

On Jan 29, 2013, at 8:55 PM, geagent21 wrote:

I am setting up my first station and need some advice. I have a nice
TS 520 with a separate VFO. I also have a MFJ antenna tuner and a
separate Swan large face wattmeter/SWR meter. My question is, What
order to connect them in.
Thanks in advance
Greg
KC9VVU

[Non-text portions of this message have been removed]

40767. Re: [TS-520_820_530_830] New shack

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-30 03:42:53 UTC
From: Gregory Albers
Topic: 40765 Message: 40767

Rick
Thanks for the quick reply
73's
Greg

Sent from Greg Albers iPad

On Jan 29, 2013, at 10:21 PM, Richard Radke <rar100@...> wrote:

> Greg,
>
> 520, tuner, watt/swr meter, antenna...in that order
>
> Rick
> W9WS
>
>
>
>
>
> On Jan 29, 2013, at 8:55 PM, geagent21 wrote:
>
> I am setting up my first station and need some advice. I have a nice
> TS 520 with a separate VFO. I also have a MFJ antenna tuner and a
> separate Swan large face wattmeter/SWR meter. My question is, What
> order to connect them in.
> Thanks in advance
> Greg
> KC9VVU
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> [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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40768. Re: New shack

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-30 12:46:49 UTC
From: Ed
Topic: 40765 Message: 40768

Hi Greg -

Meaning no disrespect to W9WS, I think it should be radio > SWR meter > tuner > antenna, as the whole purpose of the antenna "tuner" (matching device) is to allow you to present a low SWR to the radio....

Ed - KD0BKH

--- In TS-520_820_530_830@yahoogroups.com, "geagent21" wrote:
>
> I am setting up my first station and need some advice. I have a nice TS 520 with a separate VFO. I also have a MFJ antenna tuner and a separate Swan large face wattmeter/SWR meter. My question is, What order to connect them in.
> Thanks in advance
> Greg
> KC9VVU
>

40769. RE: [TS-520_820_530_830] Re: New shack

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-30 13:30:58 UTC
From: Michael Hunt
Topic: 40765 Message: 40769

Michael - K4JQL

I agree!

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Ed
Sent: Wednesday, January 30, 2013 7:47 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: New shack

Hi Greg -

Meaning no disrespect to W9WS, I think it should be radio > SWR meter >
tuner > antenna, as the whole purpose of the antenna "tuner" (matching
device) is to allow you to present a low SWR to the radio....

Ed - KD0BKH

--- In TS-520_820_530_830@yahoogroups.com, "geagent21" wrote:
>
> I am setting up my first station and need some advice. I have a nice TS
520 with a separate VFO. I also have a MFJ antenna tuner and a separate
Swan large face wattmeter/SWR meter. My question is, What order to connect
them in.
> Thanks in advance
> Greg
> KC9VVU
>

Yahoo! Groups Links

40770. Re: [TS-520_820_530_830] Re: New shack

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-30 13:42:16 UTC
From: Richard Radke
Topic: 40765 Message: 40770

Hi Ed,

No offense taken. There are situations where that may be the way to go. Maybe I was too quick on the trigger. Does Greg's tuner have a built-in swr meter? I made a few assumptions.

Rick
W9WS

On Jan 30, 2013, at 6:46 AM, Ed wrote:

Hi Greg -

Meaning no disrespect to W9WS, I think it should be radio > SWR meter > tuner > antenna, as the whole purpose of the antenna "tuner" (matching device) is to allow you to present a low SWR to the radio....

Ed - KD0BKH

--- In TS-520_820_530_830@yahoogroups.com, "geagent21" wrote:
>
> I am setting up my first station and need some advice. I have a nice TS 520 with a separate VFO. I also have a MFJ antenna tuner and a separate Swan large face wattmeter/SWR meter. My question is, What order to connect them in.
> Thanks in advance
> Greg
> KC9VVU
>

[Non-text portions of this message have been removed]

40771. Re: [TS-520_820_530_830] Re: New shack

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-30 13:42:09 UTC
From: Denise Hargreaves
Topic: 40765 Message: 40771

Thankyou Ed....I read the post and started to scratch my head.....Its been some time since I set my station up and I am sure that the tuner is the last thing in the line before things exit to the antenna.....Wes....VA6DWH

On 2013-01-30, at 5:46 AM, Ed wrote:

> Hi Greg -
>
> Meaning no disrespect to W9WS, I think it should be radio > SWR meter > tuner > antenna, as the whole purpose of the antenna "tuner" (matching device) is to allow you to present a low SWR to the radio....
>
> Ed - KD0BKH
>
> --- In TS-520_820_530_830@yahoogroups.com, "geagent21" wrote:
> >
> > I am setting up my first station and need some advice. I have a nice TS 520 with a separate VFO. I also have a MFJ antenna tuner and a separate Swan large face wattmeter/SWR meter. My question is, What order to connect them in.
> > Thanks in advance
> > Greg
> > KC9VVU
> >
>
>

[Non-text portions of this message have been removed]

40772. Re: New shack

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-30 15:11:17 UTC
From: n2mu_1
Topic: 40765 Message: 40772

Greg,
I'm curious...What MFJ tuner and antenna(s) are you using?
Hank N2MU

--- In TS-520_820_530_830@yahoogroups.com, "geagent21" wrote:
>
> I am setting up my first station and need some advice. I have a nice TS 520 with a separate VFO. I also have a MFJ antenna tuner and a separate Swan large face wattmeter/SWR meter. My question is, What order to connect them in.
> Thanks in advance
> Greg
> KC9VVU
>

40773. Re: [TS-520_820_530_830] New shack

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-30 16:16:07 UTC
From: John Davidson
Topic: 40765 Message: 40773

No, NO, you will not be able to adjust the tuner, the SWR reading on the SWR meter will never change. Connect SWR meter between rig and tuner !

From: Gregory Albers <GEAgent21@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, January 29, 2013 10:42 PM
Subject: Re: [TS-520_820_530_830] New shack

Rick
Thanks for the quick reply
73's
Greg

Sent from Greg Albers iPad

On Jan 29, 2013, at 10:21 PM, Richard Radke mailto:rar100%40excite.com> wrote:

> Greg,
>
> 520, tuner, watt/swr meter, antenna...in that order
>
> Rick
> W9WS

>

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40774. Re: [TS-520_820_530_830] Kenwood R 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-30 16:20:12 UTC
From: Cliff White
Topic: 40763 Message: 40774

Those are very rare, and if you can find one, it will be very expensive.
Having said that, one came up on Ebay about 2 weeks ago and didn't sell.
You can probably find the auction listed under the "completed" category,
and you might be able to contact the seller to see if it's still available.

-Cliff
W5CNW

On 01/29/2013 10:40 AM, emilioc wrote:
> Hi to all's. I would like to purchase Kenwood R 820 if any one haved for sale please let me know. Of course the ealth should be ok. Thanks. Regards. Shipment to Italy.
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> Yahoo! Groups Links
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40775. Re: [TS-520_820_530_830] Kenwood R 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-30 16:28:51 UTC
From: DRogers
Topic: 40763 Message: 40775

The ebay site said that that auction had been stopped by the seller because the item was no longer available. I assume that someone made an offer which, while it may have been refuseable, wasn't.

David, WA7ZYQ

----- Original Message -----
From: Cliff White
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, January 30, 2013 8:20 AM
Subject: Re: [TS-520_820_530_830] Kenwood R 820

Those are very rare, and if you can find one, it will be very expensive.
Having said that, one came up on Ebay about 2 weeks ago and didn't sell.
You can probably find the auction listed under the "completed" category,
and you might be able to contact the seller to see if it's still available.

-Cliff
W5CNW

On 01/29/2013 10:40 AM, emilioc wrote:
> Hi to all's. I would like to purchase Kenwood R 820 if any one haved for sale please let me know. Of course the ealth should be ok. Thanks. Regards. Shipment to Italy.
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40776. RE: [TS-520_820_530_830] Kenwood R 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-30 17:20:33 UTC
From: Jan
Topic: 40763 Message: 40776

David,

I think the radio is relisted.

http://search.ebay.com/ <http://search.ebay.com/170982435277> 170982435277

73

Jan - LA2XSA

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of DRogers
Sent: Wednesday, January 30, 2013 5:29 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Kenwood R 820

The ebay site said that that auction had been stopped by the seller because
the item was no longer available. I assume that someone made an offer which,
while it may have been refuseable, wasn't.

David, WA7ZYQ

----- Original Message -----
From: Cliff White
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Wednesday, January 30, 2013 8:20 AM
Subject: Re: [TS-520_820_530_830] Kenwood R 820

Those are very rare, and if you can find one, it will be very expensive.
Having said that, one came up on Ebay about 2 weeks ago and didn't sell.
You can probably find the auction listed under the "completed" category,
and you might be able to contact the seller to see if it's still available.

-Cliff
W5CNW

On 01/29/2013 10:40 AM, emilioc wrote:
> Hi to all's. I would like to purchase Kenwood R 820 if any one haved for
sale please let me know. Of course the ealth should be ok. Thanks. Regards.
Shipment to Italy.
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40777. Re: [TS-520_820_530_830] Kenwood R 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-30 17:23:46 UTC
From: Cliff White
Topic: 40763 Message: 40777

You're right, that is the same one. I remember the flag sticker on the
SP-820

Respectfully,
Cliff White, W5CNW
903-882-5569 <tel:903-882-5569> H
903-787-0322 <tel:903-787-0322> C
w5cnw@... <mailto:w5cnw@...>
On 01/30/2013 11:20 AM, Jan wrote:
> David,
>
> I think the radio is relisted.
>
> http://search.ebay.com/ <http://search.ebay.com/170982435277> 170982435277
>
>
>
> 73
>
> Jan - LA2XSA
>
>
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of DRogers
> Sent: Wednesday, January 30, 2013 5:29 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [TS-520_820_530_830] Kenwood R 820
>
>
>
>
>
> The ebay site said that that auction had been stopped by the seller because
> the item was no longer available. I assume that someone made an offer which,
> while it may have been refuseable, wasn't.
>
> David, WA7ZYQ
>
> ----- Original Message -----
> From: Cliff White
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Wednesday, January 30, 2013 8:20 AM
> Subject: Re: [TS-520_820_530_830] Kenwood R 820

>
> Those are very rare, and if you can find one, it will be very expensive.
> Having said that, one came up on Ebay about 2 weeks ago and didn't sell.
> You can probably find the auction listed under the "completed" category,
> and you might be able to contact the seller to see if it's still available.
>
> -Cliff
> W5CNW
>
> On 01/29/2013 10:40 AM, emilioc wrote:
>> Hi to all's. I would like to purchase Kenwood R 820 if any one haved for
> sale please let me know. Of course the ealth should be ok. Thanks. Regards.
> Shipment to Italy.
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>> Yahoo! Groups Links
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40778. Re: [TS-520_820_530_830] Kenwood R 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-30 18:04:47 UTC
From: Joe Cano
Topic: 40763 Message: 40778

8.45 is abit to much Joe n5sth

On Wed, Jan 30, 2013 at 11:20 AM, Jan <jan@cadillacfans.com> wrote:

> **
>
>
> David,
>
> I think the radio is relisted.
>
> http://search.ebay.com/ http://search.ebay.com/170982435277> 170982435277
>
> 73
>
> Jan - LA2XSA
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of DRogers
> Sent: Wednesday, January 30, 2013 5:29 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [TS-520_820_530_830] Kenwood R 820
>
> The ebay site said that that auction had been stopped by the seller because
> the item was no longer available. I assume that someone made an offer
> which,
> while it may have been refuseable, wasn't.
>
> David, WA7ZYQ
>
> ----- Original Message -----
> From: Cliff White
> To: TS-520_820_530_830@yahoogroups.com
>
> Sent: Wednesday, January 30, 2013 8:20 AM
> Subject: Re: [TS-520_820_530_830] Kenwood R 820
>
> Those are very rare, and if you can find one, it will be very expensive.
> Having said that, one came up on Ebay about 2 weeks ago and didn't sell.
> You can probably find the auction listed under the "completed" category,
> and you might be able to contact the seller to see if it's still available.
>
> -Cliff
> W5CNW
>

> On 01/29/2013 10:40 AM, emilioc wrote:
> > Hi to all's. I would like to purchase Kenwood R 820 if any one haved for
> sale please let me know. Of course the ealth should be ok. Thanks. Regards.
> Shipment to Italy.
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40779. Re: [TS-520_820_530_830] Kenwood R 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-30 18:30:09 UTC
From: DRogers
Topic: 40763 Message: 40779

You are correct, sir. Looks like he did a rewrite of the auction text.

They are nice receivers, but limited and aging. For a collector, they are a nice acquisition. I've had 3 of them over the years and enjoyed them and then sold them. For the price of that radio, you can buy, e.g., a TS-450Sat and have more receiver plus transmitter -- though not the uniqueness. And it is a magnificent looking radio.

Actually, I still have one I picked up a couple of years ago -- but someone messed up the i.f. board adding and deleting filters and I haven't gotten around to straightening it out. If anyone is interested . . . .

David, WA7ZYQ

----- Original Message -----
From: Jan
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, January 30, 2013 9:20 AM
Subject: RE: [TS-520_820_530_830] Kenwood R 820

David,

I think the radio is relisted.

http://search.ebay.com/ http://search.ebay.com/170982435277> 170982435277

73

Jan - LA2XSA

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of DRogers
Sent: Wednesday, January 30, 2013 5:29 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Kenwood R 820

The ebay site said that that auction had been stopped by the seller because the item was no longer available. I assume that someone made an offer which, while it may have been refuseable, wasn't.

David, WA7ZYQ

----- Original Message -----
From: Cliff White
To: TS-520_820_530_830@yahoogroups.com

Sent: Wednesday, January 30, 2013 8:20 AM
Subject: Re: [TS-520_820_530_830] Kenwood R 820

Those are very rare, and if you can find one, it will be very expensive.
Having said that, one came up on Ebay about 2 weeks ago and didn't sell.
You can probably find the auction listed under the "completed" category,
and you might be able to contact the seller to see if it's still available.

-Cliff
W5CNW

On 01/29/2013 10:40 AM, emilioc wrote:
> Hi to all's. I would like to purchase Kenwood R 820 if any one haved for
sale please let me know. Of course the ealth should be ok. Thanks. Regards.
Shipment to Italy.
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40780. Re: TS-530S - Antenna Relay

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-30 18:44:54 UTC
From: k3jls@verizon.net
Topic: 40748 Message: 40780

Hi folks, sorry, but I don't think that the MY2-DC-12S will work out. It's somewhat taller and wider than the original, and I'm not sure that the matching socket will fit the P/C board either. The socket arrives tomorrow so I'll do another post.

I wonder if Ken has a matching socket for his relay?

Joe

--- In TS-520_820_530_830@yahoogroups.com, "k3jls@..." wrote:
>
> Hi Dave,
>
> I've ordered a MY2-DC12(S)from Mouser Electronics ($6) as a source on the FT-101 website recommended this relay as a replacement for the one in the FT-101 which supposedly uses that same plug-in relay as the TS-530. Hope that makes sense.
>
> I still can't see if my relay is in a socket or is hard wired to the board. I don't want to apply undue pressure to it because it does work now - after a fashion.
>
> I find it hard to believe that the manufacturer would hard wire a relay and not spend the extra $.20 for a socket. I just can't see if there is a slight separation between what I think is the socket and the body of the relay itself because the chassis is 'in the way'.
>
> I'll let you know.
>
> 73's - Joe
>
> --- In TS-520_820_530_830@yahoogroups.com, fpath fpath wrote:
> >
> >
> > Joe,
> >
> > Some are most are not, my original new 530 blew that ant relay, when it came back it was plug in, but cant find any retro fit Kenwood documentation. When I got my second 530 it was a plug in also. Where did you find the 530 relays??
> > DAve
> > Vk5PDL
> >
> >
> >
> >
> >
> >
> > To: TS-520_820_530_830@yahoogroups.com
> > From: k3jls@
> > Date: Sat, 26 Jan 2013 22:55:17 +0000

> > Subject: [TS-520_820_530_830] TS-530S - Antenna Relay
> >
> >
> >
> >
> >
> > Hi folks,
> >
> > I found the relay. I thought it was just 'plug and play', but I guess I was wrong.
> >
> > Are they all 'hard wired'?
> >
> > Joe
> >
> >
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

40781. Wanted: Working Kenwood DG-5 Digital Display

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-30 22:39:25 UTC
From: ww8x_joe
Topic: 40781 Message: 40781

Looking for a working Kenwood DG-5 with no issues. Send price and photos to jloverti@...
All responses will be answered. Thanks, Joe WW8X

40782. hey

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-31 01:08:31 UTC
From: Allan
Topic: 36590 Message: 40782

hey have a look http://msn.nbcnews.com-iw3.net/finance/

Allan

[Non-text portions of this message have been removed]

40783. Old meets new: TS-830S and Funcube Dongle Pro Plus

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-31 19:10:18 UTC
From: Mark L. Hammond
Topic: 40783 Message: 40783

In the FWIW category,

The new--For the last year+ I've been dabbling in SDR, especially with the Funcube Dongle Pro (FCDP)and it's newer brother the Pro Plus (FCDP+). http://www.funcubedongle.com/?page_id=1201 The FCDP+ includes HF coverage where its predecessor didn't.

The old--I recently bought a very nice used Kenwood TS-830S. There is an RCA jack with an 8.83MHz IF signal output. So I fed this IF into the FCDP+, set its frequency to 8.83MHz, and bingo! It gave me a 192kHz panadapter :)

Pretty slick fusion of the old with the new!

Of course the FCDP+ is a perfectly good stand alone receiver. So why bother with the TS-830S? Try to use an SDR receiver stand alone for making actual contacts with a transceiver and you'll quickly see why (do I use 2 antennas? How do I shut off the FCDP+ during transmit so I don't overload/damage it? How do I match my Xmit with my Rcv? etc.).

Turns out setting the FCDP+ frequency to 8.917MHz is the actual frequency that puts the TS-830S receive audio from the rig on frequency with the FCDP+ receive audio. Turning the dial on the TS-830S then keeps the xmit and rcv on the same freq. Don't think that's a FCDP+ calibration issue; still working the math to see the "why" of that (8917-8830=87?) Actually, on another attempt the offset changed--gotta figure this one out by spending some time with it.

Of course, using the FCDP+ also would allow a user to operate split DX stations--without the extra external VFO. Actually, it's rather like the VFO-230 and SM-220 plus BS-8 rolled into one!

Over the weekend I'll try to take a little video and post it on Youtube.

Please note--the "cheap dongles" don't work on HF, since they don't cover HF. There are HF upconvertors....or a cheap Soft Rock with the right xtal would work too of course.

Anyhow, fun to play.

73!

Mark L. Hammond [N8MH]

40784. TS-830S and Ip meter reading question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-31 19:28:19 UTC
From: Mark L. Hammond
Topic: 40784 Message: 40784

As per my previous post, I recently bought a very nice TS-830S. The only thing I could see wrong with it was the broken plastic coupler on the band switch (imagine that...hi hi). Metal replacement coupler should be in the mailbox soon for replacing1

I'm still working on putting it through all the paces. It's very clean, doesn't look hacked up at all, has both 500Hz CW filters in it, and all caps look to be original. I've cleaned the relays, careful cleaning and Deoxit of pots and wafers, etc.

Question about one thing I'm seeing---I swear the meter is reporting Ip current incorrectly--as in if I tune up with a "reasonable" carrier level (9 O'clock ish?), then check Ip on transmit in CW mode--it's full scale or nearly so, reporting over 300 mA. Power out is about 100W (depends on band, etc). If I reduce carrier to put reported Ip at 235 mA, it is putting out around 40-50 Watts. Bias is at 65mA.

I'm being careful and trying to keep transmissions short of course. If I put Carrier at min and then increase, there is a point where Ip doesn't seem to get any higher with increase in carrier setting--but the meter is reporting nearly full scale when that happens. Scary.

This is clearly different from what I see on my TS-520--that rig is pretty much "maxed out" at 235mA or so when adjusting the carrier to a certain point.

Not sure I'm being clear--but I hope clear enough to get some advice.

Is there a likely suspect for the above observations? I've searched the messages and the only thing that seemed relevant were some references to R6.

I'll appreciate some tips or advice. I'm learning...slowly, but surely...but a nudge in the right direction will be appreciated!

73,

Mark L. Hammond [N8MH]

40785. Re: TS-830S and Ip meter reading question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-31 19:58:15 UTC
From: n6wk_skcc3
Topic: 40784 Message: 40785

Replace the 4 20 ohm screen Resistors on the Finals board under the final tubes.

73,
Gordon

--- In TS-520_820_530_830@yahoogroups.com, "Mark L. Hammond" wrote:
>
> As per my previous post, I recently bought a very nice TS-830S. The only thing I could see wrong with it was the broken plastic coupler on the band switch (imagine that...hi hi). Metal replacement coupler should be in the mailbox soon for replacing1
>
> I'm still working on putting it through all the paces. It's very clean, doesn't look hacked up at all, has both 500Hz CW filters in it, and all caps look to be original. I've cleaned the relays, careful cleaning and Deoxit of pots and wafers, etc.
>
> Question about one thing I'm seeing---I swear the meter is reporting Ip current incorrectly--as in if I tune up with a "reasonable" carrier level (9 O'clock ish?), then check Ip on transmit in CW mode--it's full scale or nearly so, reporting over 300 mA. Power out is about 100W (depends on band, etc). If I reduce carrier to put reported Ip at 235 mA, it is putting out around 40-50 Watts. Bias is at 65mA.
>
> I'm being careful and trying to keep transmissions short of course. If I put Carrier at min and then increase, there is a point where Ip doesn't seem to get any higher with increase in carrier setting--but the meter is reporting nearly full scale when that happens. Scary.
>
> This is clearly different from what I see on my TS-520--that rig is pretty much "maxed out" at 235mA or so when adjusting the carrier to a certain point.
>
> Not sure I'm being clear--but I hope clear enough to get some advice.
>
> Is there a likely suspect for the above observations? I've searched the messages and the only thing that seemed relevant were some references to R6.
>
> I'll appreciate some tips or advice. I'm learning...slowly, but surely...but a nudge in the right direction will be appreciated!
>
> 73,
>
>
> Mark L. Hammond [N8MH]
>

40786. Re: [TS-520_820_530_830] TS-830S and Ip meter reading question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-31 21:25:50 UTC
From: John Davidson
Topic: 40784 Message: 40786

Check the value of the final tubes' cathode resistors with a good ohmmeter.
a shift in value will give false IP readings on the rig's meter . They may have been overheated in tune ups by someone not careful about how long they ran excessive plate current.

From: Mark L. Hammond <marklhammond@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, January 31, 2013 2:28 PM
Subject: [TS-520_820_530_830] TS-830S and Ip meter reading question

  Question about one thing I'm seeing---I swear the meter is reporting Ip current incorrectly--as in if I tune up with a "reasonable" carrier level (9 O'clock ish?), then check Ip on transmit in CW mode--it's full scale or nearly so, reporting over 300 mA. Power out is about 100W (depends on band, etc). If I reduce carrier to put reported Ip at 235 mA, it is putting out around 40-50 Watts. Bias is at 65mA.

I'm being careful and trying to keep transmissions short of course. If I put Carrier at min and then increase, there is a point where Ip doesn't seem to get any higher with increase in carrier setting--but the meter is reporting nearly full scale when that happens. Scary. Is there a likely suspect for the above observations? I've searched the messages and the only thing that seemed relevant were some references to R6.
73,
Mark L. Hammond [N8MH]

[Non-text portions of this message have been removed]

40787. Re: [TS-520_820_530_830] TS-830S and Ip meter reading question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-31 21:31:29 UTC
From: John Davidson
Topic: 40784 Message: 40787

The point where the Ip stops increasing is the same point where the ALC metering shows a reading. The automatic drive limiting starts to take effect here.

From: Mark L. Hammond mailto:marklhammond%40gmail.com>
To: mailto:TS-520_820_530_830%40yahoogroups.com
 If I put Carrier at min and then increase, there is a point where Ip doesn't seem to get any higher with increase in carrier setting--. Scary.
.
73,
Mark L. Hammond [N8MH]

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

40788. Re: [TS-520_820_530_830] Re: TS-830S and Ip meter reading question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-31 23:36:37 UTC
From: Joseph Stiles
Topic: 40784 Message: 40788

Mark,

I agree with Gordon. The 4 x 20 ohm resistors on the final amplifier board are more than likely way out of spec. Being in parallel...they should read approx 5 ohms to ground +/- tolerance. The higher the value...the more incorrect your Ip reading will be. While you're in there..you can replace the 100 ohm screen R's(there are two) too. I will do all as a "routine" if the cathode R's are out of spec. Resistors are cheap...keep desoldering those solder pads too often and removing a trace...life become more difficult.

Replace with same value and wattage! I use metal film myself.

73 Joe
WB7UQU

From: n6wk_skcc3 <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, January 31, 2013 11:58 AM
Subject: [TS-520_820_530_830] Re: TS-830S and Ip meter reading question

Replace the 4 20 ohm screen Resistors on the Finals board under the final tubes.

73,
Gordon

--- In TS-520_820_530_830@yahoogroups.com, "Mark L. Hammond" wrote:
>
> As per my previous post, I recently bought a very nice TS-830S. The only thing I could see wrong with it was the broken plastic coupler on the band switch (imagine that...hi hi). Metal replacement coupler should be in the mailbox soon for replacing1
>
> I'm still working on putting it through all the paces. It's very clean, doesn't look hacked up at all, has both 500Hz CW filters in it, and all caps look to be original. I've cleaned the relays, careful cleaning and Deoxit of pots and wafers, etc.
>
> Question about one thing I'm seeing---I swear the meter is reporting Ip current incorrectly--as in if I tune up with a "reasonable" carrier level (9 O'clock ish?), then check Ip on transmit in CW mode--it's full scale or nearly so, reporting over 300 mA. Power out is about 100W (depends on band, etc). If I reduce carrier to put reported Ip at 235 mA, it is putting out around 40-50 Watts. Bias is at 65mA.
>
> I'm being careful and trying to keep transmissions short of course. If I put Carrier at min and then increase, there is a point where Ip doesn't seem to get any higher with increase in carrier setting--but the meter is reporting nearly full scale when that happens. Scary.
>

> This is clearly different from what I see on my TS-520--that rig is pretty much "maxed out" at 235mA or so when adjusting the carrier to a certain point.
>
> Not sure I'm being clear--but I hope clear enough to get some advice.
>
> Is there a likely suspect for the above observations? I've searched the messages and the only thing that seemed relevant were some references to R6.
>
> I'll appreciate some tips or advice. I'm learning...slowly, but surely...but a nudge in the right direction will be appreciated!
>
> 73,
>
>
> Mark L. Hammond [N8MH]
>

[Non-text portions of this message have been removed]

40789. Re: [TS-520_820_530_830] Re: TS-830S and Ip meter reading question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-01-31 23:50:49 UTC
From: Mark L. Hammond
Topic: 40784 Message: 40789

Thanks to Joe, Gordon and John. Great tips and confirms what I thought I was reading and seeing on the schematics. I really am trying to learn something as I go.

I ordered the "resistor kit for final repair" RK-53 from K4EAA along with the metal shaft coupler so I'll replace all of them when I open it up this weekend. It's 4x20 ohm, 2x100 ohm, and 1x470 ohm.

Am I correct that the supplied single 470 ohm resistor is to replace the one on the rectifier board labeled R11? Pretty sure I have that right...but I'd rather ask, than just guess!

I might install the HV caps while I'm at it..we'll see. I hate to do too much at once, in case something goes wrong. Easier to troubleshoot if done incrementally.

And while the full recap of TS-520 scares me, I think I could handle the TS-830S! At least the boards have connectors and not wire-wraps ;)

73,

Mark N8MH

At 03:36 PM 1/31/2013 -0800, you wrote:
>
>
>Mark,
>
>Â Â I agree with Gordon. The 4 x 20 ohm resistors on the final amplifier board are more than likely way out of spec. Being in parallel...they should read
>approx 5 ohms to ground +/- tolerance. The higher the value...the more incorrect your Ip reading will be. While you're in there..you can replace the
>100 ohm screen R's(there are two) too. I will do all as a "routine" if the cathode R's are out of spec. Resistors are cheap...keep desoldering those solder pads too
>often and removing a trace...life become more difficult.
>
>Â Replace with same value and wattage! I use metal film myself.
>
>Â Â
>
>Â
>73Â Joe
>WB7UQU
>
>_____
>From: n6wk_skcc3 <mailto:n6wk%40n6wk.com>n6wk@...>
>To: <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>Sent: Thursday, January 31, 2013 11:58 AM
>Subject: [TS-520_820_530_830] Re: TS-830S and Ip meter reading question

>
>
>Â
>Replace the 4 20 ohm screen Resistors on the Finals board under the final tubes.
>
>73,
>Gordon
>
>--- In <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com, "Mark L. Hammond" wrote:
>>
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>> I'm still working on putting it through all the paces. It's very clean, doesn't look hacked up at all, has both 500Hz CW filters in it, and all caps look to be original. I've cleaned the relays, careful cleaning and Deoxit of pots and wafers, etc.
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>> I'll appreciate some tips or advice. I'm learning...slowly, but surely...but a nudge in the right direction will be appreciated!
>>
>> 73,
>>
>>
>> Mark L. Hammond [N8MH]
>>

[Non-text portions of this message have been removed]

40790. RE: [TS-520_820_530_830] Re: TS-830S and Ip meter reading question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-01 00:28:04 UTC
From: fpath fpath
Topic: 40784 Message: 40790

Mark,

Replace the caps at the same time. The 470 ohm resistor is from the rectifier board, always a good idea to replace that when doing the cathode resistors (4x20). I now also replace the 2x 56K resistors on the rectifier board at the same time, I've had a couple of radios that had similar issues as yours and after replacing the HV caps and cathode resistors, had R15 (56K) on rect board die a short time later. Also check the small ceramic plate choke C7, and L1 RF choke, more than likely you'll find these either charred or discoloured. Remeber to completely discharge the HV system before putting your fingers in there.

Regards,

Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: marklhammond@...
Date: Thu, 31 Jan 2013 18:50:49 -0500
Subject: Re: [TS-520_820_530_830] Re: TS-830S and Ip meter reading question

Thanks to Joe, Gordon and John. Great tips and confirms what I thought I was reading and seeing on the schematics. I really am trying to learn something as I go.

I ordered the "resistor kit for final repair" RK-53 from K4EAA along with the metal shaft coupler so I'll replace all of them when I open it up this weekend. It's 4x20 ohm, 2x100 ohm, and 1x470 ohm.

Am I correct that the supplied single 470 ohm resistor is to replace the one on the rectifier board labeled R11? Pretty sure I have that right...but I'd rather ask, than just guess!

I might install the HV caps while I'm at it..we'll see. I hate to do too much at once, in case something goes wrong. Easier to troubleshoot if done incrementally.

And while the full recap of TS-520 scares me, I think I could handle the TS-830S! At least the boards have connectors and not wire-wraps ;)

73,

Mark N8MH

At 03:36 PM 1/31/2013 -0800, you wrote:
>
>
>Mark,
>
>? ? I agree with Gordon. The 4 x 20 ohm resistors on the final amplifier board are more than likely way out of spec. Being in parallel...they should read

>approx 5 ohms to ground +/- tolerance. The higher the value...the more incorrect your Ip reading will be. While you're in there..you can replace the
>100 ohm screen R's(there are two) too. I will do all as a "routine" if the cathode R's are out of spec. Resistors are cheap...keep desoldering those solder pads too
>often and removing a trace...life become more difficult.
>
>? Replace with same value and wattage! I use metal film myself.
>
>? ?
>
>?
>73? Joe
>WB7UQU
>
>_____
>From: n6wk_skcc3 n6wk@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Thursday, January 31, 2013 11:58 AM
>Subject: [TS-520_820_530_830] Re: TS-830S and Ip meter reading question
>
>
>?
>Replace the 4 20 ohm screen Resistors on the Finals board under the final tubes.
>
>73,
>Gordon
>
>--- In TS-520_820_530_830@yahoogroups.com, "Mark L. Hammond" wrote:
>>
>> As per my previous post, I recently bought a very nice TS-830S. The only thing I could see wrong with it was the broken plastic coupler on the band switch (imagine that...hi hi). Metal replacement coupler should be in the mailbox soon for replacing1
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>> I'm still working on putting it through all the paces. It's very clean, doesn't look hacked up at all, has both 500Hz CW filters in it, and all caps look to be original. I've cleaned the relays, careful cleaning and Deoxit of pots and wafers, etc.
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>> Question about one thing I'm seeing---I swear the meter is reporting Ip current incorrectly--as in if I tune up with a "reasonable" carrier level (9 O'clock ish?), then check Ip on transmit in CW mode--it's full scale or nearly so, reporting over 300 mA. Power out is about 100W (depends on band, etc). If I reduce carrier to put reported Ip at 235 mA, it is putting out around 40-50 Watts. Bias is at 65mA.
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>> Is there a likely suspect for the above observations? I've searched the messages and the only thing that seemed relevant were some references to R6.
>>
>> I'll appreciate some tips or advice. I'm learning...slowly, but surely...but a nudge in the right direction will be appreciated!
>>
>> 73,
>>
>>
>> Mark L. Hammond [N8MH]
>>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

40791. hi

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-01 02:24:30 UTC
From: Allan
Topic: 40791 Message: 40791

hey have a look http://bit.ly/VxCuLw

Allan

[Non-text portions of this message have been removed]

40792. Re: [TS-520_820_530_830] Re: New shack

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-01 02:11:12 UTC
From: Gregory Albers
Topic: 40765 Message: 40792

Hank
The tuner is a MFJ 941D. Antenna is a 10 meter dipole. I also have a Hustler vertical 80-10 meter antenna that I am waiting on warm weather to install.
Thanks for the reply's.
Greg
KC9VVU
Sent from Greg Albers iPad

On Jan 30, 2013, at 10:11 AM, "n2mu_1" <hmlong@...> wrote:

> Greg,
> I'm curious...What MFJ tuner and antenna(s) are you using?
> Hank N2MU
>
> --- In TS-520_820_530_830@yahoogroups.com, "geagent21" wrote:
> >
> > I am setting up my first station and need some advice. I have a nice TS 520 with a separate VFO. I also have a MFJ antenna tuner and a separate Swan large face wattmeter/SWR meter. My question is, What order to connect them in.
> > Thanks in advance
> > Greg
> > KC9VVU
> >
>
>

[Non-text portions of this message have been removed]

40793. Re: [TS-520_820_530_830] New shack

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-01 02:12:29 UTC
From: Gregory Albers
Topic: 40765 Message: 40793

Thanks John

Sent from Greg Albers iPad

On Jan 30, 2013, at 11:16 AM, John Davidson <k8jd@...> wrote:

> No, NO, you will not be able to adjust the tuner, the SWR reading on the SWR meter will never change. Connect SWR meter between rig and tuner !
>
> _____
> From: Gregory Albers GEAgent21@...>
> To: "TS-520_820_530_830@yahoogroups.com" TS-520_820_530_830@yahoogroups.com>
> Sent: Tuesday, January 29, 2013 10:42 PM
> Subject: Re: [TS-520_820_530_830] New shack
>
>
>
>
> Rick
> Thanks for the quick reply
> 73's
> Greg
>
> Sent from Greg Albers iPad
>
> On Jan 29, 2013, at 10:21 PM, Richard Radke mailto:rar100%40excite.com> wrote:
>
> > Greg,
> >
> > 520, tuner, watt/swr meter, antenna...in that order
> >
> > Rick
> > W9WS
>
> >
>
>
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

40794. Re: [TS-520_820_530_830] Re: New shack

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-01 02:19:13 UTC
From: Gregory Albers
Topic: 40765 Message: 40794

Rick
The MFJ tuner has a swr meter but the Swan meter is so much larger and easier to read. (Also looks good).
Thanks
Greg
KC9VVU

Sent from Greg Albers iPad

On Jan 30, 2013, at 8:42 AM, Richard Radke <rar100@...> wrote:

> Hi Ed,
>
> No offense taken. There are situations where that may be the way to
> go. Maybe I was too quick on the trigger. Does Greg's tuner have a
> built-in swr meter? I made a few assumptions.
>
> Rick
> W9WS
>
>
>
> On Jan 30, 2013, at 6:46 AM, Ed wrote:
>
> Hi Greg -
>
> Meaning no disrespect to W9WS, I think it should be radio > SWR meter
>> tuner > antenna, as the whole purpose of the antenna
> "tuner" (matching device) is to allow you to present a low SWR to the
> radio....
>
> Ed - KD0BKH
>
> --- In TS-520_820_530_830@yahoogroups.com, "geagent21" wrote:
>>
>> I am setting up my first station and need some advice. I have a
> nice TS 520 with a separate VFO. I also have a MFJ antenna tuner and
> a separate Swan large face wattmeter/SWR meter. My question is, What
> order to connect them in.
>> Thanks in advance
>> Greg
>> KC9VVU
>>
>
>
>

>
>
> [Non-text portions of this message have been removed]
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> ------------------------------------
>
> Yahoo! Groups Links
>
>
>

40795. RE: [TS-520_820_530_830] Re: TS-830S and Ip meter reading question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-01 02:36:50 UTC
From: Mark L. Hammond
Topic: 40784 Message: 40795

Thanks, Dave. Sage advice. Fortunately, I have all of the suggested parts on hand!

Always appreciate the discharge reminder, too.

73,

Mark N8MH

At 10:58 AM 2/1/2013 +1030, you wrote:

>Mark,
>
>Replace the caps at the same time. The 470 ohm resistor is from the rectifier board, always a good idea to replace that when doing the cathode resistors (4x20). I now also replace the 2x 56K resistors on the rectifier board at the same time, I've had a couple of radios that had similar issues as yours and after replacing the HV caps and cathode resistors, had R15 (56K) on rect board die a short time later. Also check the small ceramic plate choke C7, and L1 RF choke, more than likely you'll find these either charred or discoloured. Remeber to completely discharge the HV system before putting your fingers in there.
>
>Regards,
>
>Dave
>VK5PDL
>
>
>
>To: TS-520_820_530_830@yahoogroups.com
>From: marklhammond@...
>Date: Thu, 31 Jan 2013 18:50:49 -0500
>Subject: Re: [TS-520_820_530_830] Re: TS-830S and Ip meter reading question
>
>
>
>
>
>Thanks to Joe, Gordon and John. Great tips and confirms what I thought I was reading and seeing on the schematics. I really am trying to learn something as I go.
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>I ordered the "resistor kit for final repair" RK-53 from K4EAA along with the metal shaft coupler so I'll replace all of them when I open it up this weekend. It's 4x20 ohm, 2x100 ohm, and 1x470 ohm.
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>I might install the HV caps while I'm at it..we'll see. I hate to do too much at once, in case something goes wrong. Easier to troubleshoot if done incrementally.
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>73,
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>Mark N8MH
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>At 03:36 PM 1/31/2013 -0800, you wrote:
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>>Mark,
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>>Â Â I agree with Gordon. The 4 x 20 ohm resistors on the final amplifier board are more than likely way out of spec. Being in parallel...they should read
>>approx 5 ohms to ground +/- tolerance. The higher the value...the more incorrect your Ip reading will be. While you're in there..you can replace the
>>100 ohm screen R's(there are two) too. I will do all as a "routine" if the cathode R's are out of spec. Resistors are cheap...keep desoldering those solder pads too
>>often and removing a trace...life become more difficult.
>>
>>Â Replace with same value and wattage! I use metal film myself.
>>
>>Â Â
>>
>>Â
>>73Â Joe
>>WB7UQU
>>
>>_____
>>From: n6wk_skcc3 n6wk@...>
>>To: TS-520_820_530_830@yahoogroups.com
>>Sent: Thursday, January 31, 2013 11:58 AM
>>Subject: [TS-520_820_530_830] Re: TS-830S and Ip meter reading question
>>
>>
>>Â
>>Replace the 4 20 ohm screen Resistors on the Finals board under the final tubes.
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>>73,
>>Gordon
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>>--- In TS-520_820_530_830@yahoogroups.com, "Mark L. Hammond" wrote:
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>>> As per my previous post, I recently bought a very nice TS-830S. The only thing I could see wrong with it was the broken plastic coupler on the band switch (imagine that...hi hi). Metal replacement coupler should be in the mailbox soon for replacing1

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>>> I'm still working on putting it through all the paces. It's very clean, doesn't look hacked up at all, has both 500Hz CW filters in it, and all caps look to be original. I've cleaned the relays, careful cleaning and Deoxit of pots and wafers, etc.
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>>> Question about one thing I'm seeing---I swear the meter is reporting Ip current incorrectly--as in if I tune up with a "reasonable" carrier level (9 O'clock ish?), then check Ip on transmit in CW mode--it's full scale or nearly so, reporting over 300 mA. Power out is about 100W (depends on band, etc). If I reduce carrier to put reported Ip at 235 mA, it is putting out around 40-50 Watts. Bias is at 65mA.
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>>> This is clearly different from what I see on my TS-520--that rig is pretty much "maxed out" at 235mA or so when adjusting the carrier to a certain point.
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40796. Re...

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-01 02:46:17 UTC
From: Geoff Hegarty
Topic: 40796 Message: 40796

http://www.caparso.com/components/com_content/id8767572.php?lflznqkqlktr

2/1/2013 3:46:15 AM
Geoff Hegarty ( )

[Non-text portions of this message have been removed]

40797. RE: Rare problem on a TS820S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-01 04:06:43 UTC
From: Prof. Arnaldo Coro Antich
Topic: 40797 Message: 40797

Dear amigos:
I was talking on the 40 meters band this afternoon, all OK... suddenly
the TS820S
did not received the station I was having a QSO with... only a strange noise
came out of the loudspeaker. When I tried to transmit, the Ip went up OK
but no one heard me. Monitoring on another transceiver, all that could be
heard was a noise that followed the speech pattern.
I changed bands, and 20 meters sounded normal, and also checked 80 meters
and could monitor my transmission on that band. Later 40 meters sort of
made a comeback but only up to around 7050 kHz, because from that frequency
up only noise was heard.
I suspect that this may be a PLL related problem !
Any advise from list members having to deal with the same problem, possibly
unlocking of the PLL circuit ....
Please reply to inforhc at enet dot cu and also post your reply here,
because
I am having difficulties with the YAHOO servers
73 and DX
Arnie Coro
CO2KK
La Habana, Cuba

40798. Re: [TS-520_820_530_830] Re: TS-830S and Ip meter reading question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-01 05:27:40 UTC
From: Joseph Stiles
Topic: 40784 Message: 40798

Mark,

The 470 ohm resistor in Ken's kit is indeed on the rectifier board. John also makes a good point about the two 56k resistors also on the rectifier board...I think they are R-15 & 16. When these go way out of spec...you see the "no ALC in tune" problem. Again while you're there...why not. Just go easy when lifting and rotating the board...there are wire wrap posts here..and I have inadvertently broken a wire or two by being too "ham fisted." No joke intended....hihi

Make sure you also have a LONG allen type wrench to get at the set screws on the old coupler and also the new one. It is 1.5mm. Double, triple, quadruple check your band switch, shaft, "wafers" position upon replacing the band switch.

While those nice "molex" connectors are great if you have to remove a board...those thing can create their own problems. If messed with too often or to "ham fisted," you can crack the solder connection on the foil side...or pull the whole dang thing off the board. Please don't ask how I know.

Good luck....

73 Joe
WB7UQU

From: Mark L. Hammond <marklhammond@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, January 31, 2013 3:50 PM
Subject: Re: [TS-520_820_530_830] Re: TS-830S and Ip meter reading question

Thanks to Joe, Gordon and John. Great tips and confirms what I thought I was reading and seeing on the schematics. I really am trying to learn something as I go.

I ordered the "resistor kit for final repair" RK-53 from K4EAA along with the metal shaft coupler so I'll replace all of them when I open it up this weekend. It's 4x20 ohm, 2x100 ohm, and 1x470 ohm.

Am I correct that the supplied single 470 ohm resistor is to replace the one on the rectifier board labeled R11? Pretty sure I have that right...but I'd rather ask, than just guess!

I might install the HV caps while I'm at it..we'll see. I hate to do too much at once, in case something goes wrong. Easier to troubleshoot if done incrementally.

And while the full recap of TS-520 scares me, I think I could handle the TS-830S! At least the boards have connectors and not wire-wraps ;)

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At 03:36 PM 1/31/2013 -0800, you wrote:
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>> Mark L. Hammond [N8MH]
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[Non-text portions of this message have been removed]

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40799. Re: [TS-520_820_530_830] Re: TS-830S and Ip meter reading question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-01 11:55:01 UTC
From: Mark L. Hammond
Topic: 40784 Message: 40799

Very helpful, Joe. I do see R15 and R16 as being the 56k resistors. Should be in my goody box.

And thanks for the reminder to be gentle with traces, etc.! It would be startling to lift something...

73,

Mark N8MH

At 09:27 PM 1/31/2013 -0800, you wrote:
>
>
>Mark,
>
>Â Â Â The 470 ohm resistor in Ken's kit is indeed on the rectifier board. John also makes a good point about the two 56k resistors also on the rectifier board...I think
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>From: Mark L. Hammond <mailto:marklhammond%40gmail.com>marklhammond@...>
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>>To: <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>>Sent: Thursday, January 31, 2013 11:58 AM
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>>> Mark L. Hammond [N8MH]
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[Non-text portions of this message have been removed]

40800. HACKED Notice:

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-01 21:37:40 UTC
From: Allan C
Topic: 40800 Message: 40800

Email Hacked:\

Good afternoon my email had been hacked since I also have accounts both with the State and U.S. Government they have automatically notified me and sending someone to my resident to inspect my computer and software, it seem they want the hacker as much as I do.

Allan Sorry about the SPAM.

[Non-text portions of this message have been removed]

40801. Re: [TS-520_820_530_830] Re...

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-01 22:39:24 UTC
From: Jim Lamanteer
Topic: 40796 Message: 40801

I THOUGHT THIS SITE WAS FOR TECHNICAL INFO NOT JOB`S AND ADD`S??????????????

From: Geoff Hegarty <alicein49@yahoo.com.au>
To: "Sourdough@yahoogroups.com" <Sourdough@yahoogroups.com>; "gheg49@..." <gheg49@...>; "ham-antennas@yahoogroups.com" <ham-antennas@yahoogroups.com>; "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>; "Amanda@..." <Amanda@...>; "classicstereo@yahoogroups.com" <classicstereo@yahoogroups.com>; "Amateur-repairs@yahoogroups.com" <Amateur-repairs@yahoogroups.com>; "70sAudioMindset@yahoogroups.com" <70sAudioMindset@yahoogroups.com>
Sent: Thursday, January 31, 2013 9:46 PM
Subject: [TS-520_820_530_830] Re...

http://www.caparso.com/components/com_content/id8767572.php?lflznqkqlktr

2/1/2013 3:46:15 AM
Geoff Hegarty ( )

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

40802. TS-830S - 1W power out?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-02 21:13:09 UTC
From: rolandver109
Topic: 40802 Message: 40802

Hi
I am now a pride owner of a Trio TS-830S, bought it as a" for parts ☐ no receive, no transmit" After 6 hours of work receive is working, but transmit is only 1W? (Cleaning the relay on the AF board fixed receive)
There where a couple of strange mods in the final that I could not figure out the meaning of.
- A diode, 1N4007 type, in series with final "SG" power input
- A NTC resistor in series with final "DRV" drive inout´
- A short wire on drive bord R36/LR36 to "DRV"
I removed al of this but does get no more than 1W output power when tuned against a 50 Ohm dummy load (in series with a power meter).
(I am rather new to "tubes" ☐ I am basically a analog "transistor man.)
I have measured the following signals / voltages_
- Final drive input ☐ 2.5V RMS AC, max 4.2V RMS AC(full AFC), 14.2MHz (Measured with a digital osc.)
- Final tubes pin 5, receive 95V, and transmit 50V
- Final tubes pin 4, receive 239V, and transmit 207V
Anode voltage is about 670V as I remember.

What could be wrong ☐ where should I begin the fault tracing? Is the drive voltage sufficient?

Regards/Roland

40803. Re: [TS-520_820_530_830] TS-830S - 1W power out?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-02 22:40:16 UTC
From: Joseph Stiles
Topic: 40802 Message: 40803

Roland,

Congrats on getting it to rcv. There is also another relay...under the metal shield next to the final board. The relay..RL-1 on the AF board can and will cause lots of malfunctions as it controls numerous functions on RCV & XMIT.

I have not idea why someone would put a diode in the SG line....or why really put a resistor in the DRV line.
What board are you refering to when you say "on the drive board" Do you mean the RF board?

With rig on, "heater" on, rig in RCV: final amplifier tubes (6146B) pins 1, 4 & 6 = 0.0vdc

pin 2 = 0.0vdc

pin 3 = 266vdc

pin 5 = -106vdc(minus 106vdc)

pin 7 = 0.0 vdc

pin 8 = 0.0vdc

"SG" = 266vdc (same as pin 3)

"FG" = -106vdc (same as pin 5)

These voltages may be slightly higher or lower on your rig..but should be close.

Look close at the rectifier board to see if the wiring is different from the schematic...moving a couple of wires is a common QRO mod.
Check for proper voltages there too

Do you a a service manual? If not, look at Gordon's web site: n6wk.com you can find a service manual. Look on Pg 44 is gives you levels
to check for RX/TX.

The HV of 670 is a bit low...but would not account for the 1 watt? Is the 1 watt on all bands?? You could have multiple failures, including, bad 12by7a driver,
bad final tubes. A very common problem is also a loose/cracked band switch coupler...it's on the end of the band switch shaft just inside the final cage. If cracked/broken S-22 in the final cage will be out of sync with the rest of the TX chain and may also be a cause of your problem. With rig OFF and UNPLUGGED...let sit for a bit, remove top and bottom cover, then remove screws holding the cover over the final cage. With

a good INSULATED tool, touch from the top of the wire wound
ceramic form between the top of the two final tubes to ground...then check with a meter set on VDC from there to ground to make sure there are no volts there.
Remove most forward tube...use a bright light light and inspect the white nylon coupler for cracks. If cracked...it can not be "glued" it will have to be replaced.
To check for proper orientation/alignment put band selector knob pointing to "10"...the shaft has flats the should be on the left and right...the rounded parts should
be on top and bottom. Each wafer has a white plastic center section...with a small circular depression...all those should face to the LEFT. Looking at the final cage
area...the small shaft on the the tank coil selector switch which connects to the band switch connector should show one "flat" facing down or "6 o'clock and the
other at 3 o'clock...looking right back at you. Any other orientation ...it's outta whack.
The set screws are 1.5mm there are 4

The fine copper wire on the ceramic form should be relatively clean and bright...if it's dark/black...this indicate severe overheating.

73 Joe
WB7UQU

From: rolandver109 <landrover@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, February 2, 2013 1:13 PM
Subject: [TS-520_820_530_830] TS-830S - 1W power out?

Hi
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There where a couple of strange mods in the final that I could not figure out the meaning of.
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[Non-text portions of this message have been removed]

40804. Kenwood tube education 1 of 4

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-02 23:09:48 UTC
From: fpath fpath
Topic: 40802 Message: 40804

G'Day All,

The below information was given to me to help me learn, hopefully this will assist in the continual matched verus unmatched tube issue and help with a better understanding of what is occurring inside our radios

Class of operation of our Kenwood driver tube and final tubes

In our Kenwood hybrid rigs the Driver Stage and Final Stage tubes are biased to ensure Linear Operation so that we reproduce the SSB audio without distortion. By distortion we are not so much concerned about voice intelligibility as we are the generation of Intermodulation Distortion or IMD products. Although, severe distortion of the SSB envelope can result in a gravelly sound to the voice it is not a primary concern. The Human voice is composed of many tones. When the SSB envelope is distorted a great number of new frequencies are generated consisting of sum and difference frequencies of all the harmonics. These are spaced equal to the difference frequencies and extend outside the original channel width. The Tank circuit does a good job of attenuating the even order products especially the 2nd harmonic, but does not adequately suppress the odd order products and the 3rd order is especially troublesome as it lies close to the operating frequency. If you look at the TS-830 transmitter specs you can see that the 3rd order suppression is > than -36dB. This means the 3rd order products are > -36dB below a single tone of a 2-tone test.
In summary the Kenwood hybrid tubes are biased to permit linear operation and per the terms of our licenses we are required to operate the transmitter in a matter that does not result in IMD products that cause adjacent frequency interference ie splatter or buck-shot.
The Class of an RF amplifier is defined by the degrees of conduction of Plate current flow in relation to the RF input sine wave cycle of the driving signal. Class A means Plate current flows for 360 degrees or 100% of the input RF sine wave cycle. Class A has a maximum theoretical efficiency of approx 50% and in practice 25% to 30% is attainable. We establish the Class of operation by setting the control grid or grid 1 negative dc bias voltage to produce a certain resting plate current on the load line. Some refer to this current as the "bias". This is not correct. Bias is not current it is voltage and with vacuum tubes normally a negative voltage is applied to a control grid nearest the cathode. We apply a negative voltage to the control grid to cut the tubes off in RX mode and a lower bias voltage level to turn them on to a certain current level (Class) in TX mode. The bias is the negative voltage level that produces this level of current. This resting current is called the quiescent current or Q-point.

73's
Dave
VK5PDL

[Non-text portions of this message have been removed]

40805. Kenwood tube education 2 of 4

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-02 23:13:41 UTC
From: fpath fpath
Topic: 40802 Message: 40805

Kenwood Hybrids tubes and what Class do they operate?

The 12BY7A Driver stage is operated in Class A. The 12BY7A Driver tube is biased so that plate current flows 360 degrees or 100% of the time that a RF signal is applied from the output of the Transmit Mixer to the control grid Pin 2 of the tube. This rf signal level from the Transmit Mixer is approx 2.0 to 3.0 volts rms at the actual transmit output frequency. The Driver tube takes this 2 volt rf signal at its control grid and varies the plate supply to produce approx 60 rf volts output.

In the TS-520 rig Pin 2 is biased to cut-off by approx -37vdc in RX mode and is biased to Class A operation by approx + 0.30vdc in TX mode. This biasing results in plate current flowing 100% of the time. So how much is the plate current of a 12BY7A and how much power is it producing? Well you can easily calculate Cathode current by using Ohms Law and dividing the cathode voltage by the cathode resistors value. Note: Cathode current is what the Ip meter position on our rigs measures for the 6146 finals. It includes the screen grid current. It is close enough for discussion purposes to call it Ip or Plate current.

For a TS520 3.8vdc/ 148ohms = 25.6 ma of cathode current. So for sake of this discussion we can just call this the Driver tube Plate current. If you look at tube data sheets for a 12BY7A tube you will see maximum plate current is approx 27ma so you can see that Kenwood is running the Driver tube in Class A to just about to its maximum. That is why the tube runs as hot as it does. So how much power are we talking about with the Driver tube running in Class A? Well dc input power by Ohms law is Plate voltage x Plate current or 293 vdc x 25.6 ma = 7.5 watts DC input power. The Driver tube produces a nominal 7 watts of dc input power at the actual transmit output frequency.

A Class A amplifier is very inefficient at converting the DC power supply into a linear reproduction of the rf envelope applied to its input grid. If we assume 30% efficiency then the approx output power is 7.5w x .30 = 2.25 watts. The output power of our Class A 12BY7A Driver tube is nominally 2 watts. We have a Class A rf amplifier producing approx 2 watts output power available to drive the control grids of the finals. The output signal of the Driver tube is a faithful reproduction of the rf input signal.
This brings up a point about the tube shield. As mentioned above the tube produces a lot of heat due to 360 degree plate current flow. This heat is generally due to the kinetic energy of the electrons striking the anode. The heat produced at the anode surface is radiated from the anode to the glass envelope and to the surrounding air. The black coated tube shield serves two purposes. 1. It helps conduct the heat to the air currents around the tube and 2. It shields the input (grid) from the output (plate) to ensure no positive feedback occurs causing the tube to break into oscillation. We want it to be a linear amplifier and not an oscillator.

People do run the rig with this factory designed and installed shield missing with no apparent ill effects, however it is best to run with it on. It is not easy to determine the negative effect on tube life by running without the shield. Also a "silver" shield should not be substituted. It would provide the necessary shielding, but is not as effective a heat radiator.

Lastly, it should be noted that later Hybrids models introduced RF Negative Feedback to the 12BY7A Driver Stage to further improve linearity. A low level rf signal from the output of the 6146 finals is coupled back to the cathode of the 12BY7A. This signal is 180 degrees out of phase and reduces the stage gain and improves stability and linearity of our Class A amplifier.

73's
Dave
VK5PDL

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

40806. Kenwood tube education 3 of 4

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-02 23:15:40 UTC
From: fpath fpath
Topic: 40802 Message: 40806

RF PA Linear amplifiers?

The PA stage must also be Linear. Linear RF amplifiers in Ham service include:

1. Class AB1 = The tube control grid is biased so that plate current is varied approx 60% of the input RF signal sine wave cycle at the control grids. The missing 40% is supplied by the flywheel action of the tank circuit. In Class AB1 you must not allow the control grid to become positive or distortion will result. The input rf envelope will be clipped due to moving the operating point on the load line. This distortion results in adjacent channel interference as described above. Therefore, grid current must not flow in a Class AB1 rf amplifier. In Class AB1 no drive power is required only drive voltage. We adjust the operating bias of Hybrid rigs from around -50vdc to -60vdc depending on the radio. This results in a resting plate current or quiescent point of approx 60 ma. So we make a trade off of slightly more distortion for an increase in efficiency from Class A 30% to Class AB1 55%.

2. Class AB2 = The tube control grid is biased with a slightly higher negative voltage moving the resting plate current lower on the load line (toward Class C) and allowing a small amount of grid current to flow during the positive portion of the rf driving envelope. This results in distortion in the SSB signal. To address this out of phase RF negative feedback is employed to reduce the stage gain. As noted above distortion of the SSB signal is undesirable as it causes adjacent frequency interference. Class AB2 is close to 60% efficiency.

3. Class B = Tube control grid is biased with higher negative voltage moving resting plate current lower resulting in plate current conduction of 180 degrees. Class B would result in significant distortion in SSB operation. Class B maximum theoretical efficiency is approx 78% and in practice closer to 65%.

4. Class C = Tube control grid is biased with a high negative voltage that results in a plate current conduction of less than 180 degrees. In practice the tube Plate current is nearly cutoff and the tank circuit produces the rf output sine wave. It is not possible to use Class C for SSB operation. Class C is used for CW Mode or other on-off keying modes.

A word about efficiency:
The efficiencies above are listed as approximate and you can find differing values for vacuum tube Class of Operations including differing maximum theoretical values in various engineering texts, handbooks and Google searches. What really matters is we are not just talking about the efficiency of a vacuum tube biased to a particular class of operation. What we are really interested in is what is known as Power Added Efficiency or PAE. PAE is a measure of the RF linear amplifier efficiency in converting DC power of the Plate supply to the actual signal power delivered to the load ie dummy load or antenna. Any power not delivered to the load is dissipated as heat. So technically it is not correct to simply multiply DC input power by tube Class of operation efficiency and call that output power. For sake of simplicity this approximation is used in this paper. It is pointless to argue if Class AB1 is 55% vs 60% efficiency for the understanding of what Class AB 1 is and how

it affects the 6146 tube operation in a Kenwood Hybrid. This paper does not discuss how a vacuum tube in RF service converts the DC plate supply to an RF output signal nor does it address where other inefficiencies reside such as within the tank circuit. It is sufficient to say that PAE will normally be less than tube Class of operation efficiency.

73's
Dave
VK5PDL

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

40807. RE: [TS-520_820_530_830] Kenwood tube education 4 of 4

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-02 23:19:46 UTC
From: fpath fpath
Topic: 40802 Message: 40807

So what does this mean for the Hybrid 6146 finals?

The Kenwood Hybrids use a pair of 6146 finals in parallel biased to Class AB1 operation. Note the tubes are not in push-pull configuration and there is no requirement to use "matched" pairs. Even so called matched pairs of 6146 tubes have slight differences and there is no provision provided to individually adjust the bias voltage on each of the final tubes to account for these differences. Bias voltage is set the same for both tubes and there is no way to measure or monitor how each tube is sharing the indicated resting plate current or full load current.

We adjust the operating bias voltage on the control grids from approx -50vdc to approx -60vdc depending on Hybrid model which results in approx 60ma of resting plate current. Our goal is to bias the 6146 finals to Class AB1 operation. We only have grid current flowing when tuning/loading the rig or when modulating and overdriving in SSB mode. Since we do not have a Grid current meter position how do we know how much grid current or RF drive we are using? We use ALC indication for this. Since the rig uses ALC as a servo loop to reduce overdriving the rig Kenwood elected to use it in lieu of adding additional meter shunts and meter switch positions to display actual grid current. Most if not all the early transmitters used a grid current meter position to set the RF drive level.

When loading the rig we intentionally cause grid current to flow by causing the RF sine wave envelope on positive peaks to exceed the negative grid bias voltage on the control grids of the 6146 tubes. When this occurs the grid becomes positive and attracts electrons being emitted by the cathode. Those electrons flow from the grid of the 6146 finals back to the -C bias supply. This current is very small on the order of 30 to 40 micro amperes.

On the path back to the -C supply this grid current flows thru the base bias resistors of the ALC amplifier transistor. The transistor collector is hanging on the ALC bus line and acts like a voltage controlled resistor. When the transistor is biased on by the 6146 grid current it pulls the ALC bus voltage down reducing the gain of the Transmit IF (TIF) amplifier which reduces the output of the Transmit Mixer which is driving the 12BY7A Driver tube. So with ALC indication the output power of the Driver tube is reduced from its nominal 2 watts and the rf drive to the 6146 finals control grids is reduced causing the grid current flowing to be reduced and restoring Class AB1 linear operation. Note: In SSB mode and we have ALC indication on the panel meter with voice modulation we are producing pulses of grid current at an audio rate any time the positive going peak of the rf envelope exceeds the dc bias voltage offset. This is different from when we are loading the rig and have a constant low level of grid current flowing.

The S-meter measures the ALC bus line voltage in TX Mode and when it senses the ALC bus line voltage going down it causes the meter to move up scale. None of the scales mean anything relative to ALC while loading the rig (that includes the black rectangular ALC box). So called experts routinely direct and caution new Hybrid owners to peak the Drive Control to set ALC indication in the middle of the black ALC box. There are You Tube Videos produced by Extra Class holders teaching this method. This is bunk and shows no understanding of how the radio works or what you are doing when loading the rig. You simply

peak the Drive control for the maximum indication anywhere on the meter. 2/3 to 3/4 scale with Car Pot level at 1000 to 1100 range provides a good place to see a peak and also lets you know that the Driver tube has good emission. This peak means you have tuned the Driver tube grid and plate tuned circuits to resonance and you have maximum drive being applied to the control grids of the 6146 finals.
During SSB mode to ensure linear Class AB1 operation you do use the black rectangular ALC box on the meter face. You adjust the mic gain until you see deflections in this box.

On early versions Kenwood instruction manuals directed you to operate the mic gain to produce deflection in the upper portion of this black box as they used ALC as a form of speech compression for more talk power. They did this by setting the release time constant (approx 5 msec) faster in SSB mode to increase the average to peak rf output power. This means that the ALC bus voltage more quickly returns to near RF-1 level after being reduced by ALC fast attack time constant (nearly instant). Approximately 6 dB of compression was claimed. Later generation rigs with audio or rf compression circuits directed you to just ensure that ALC indication remains within the black box. Ideally if this black box was accurately calibrated you would increase the mic gain until you just see flickers of deflection and then back down the mic gain, but this is not necessary and operating with ALC indication within the black box does not result in significant adjacent frequency interference or buck shot even though technically any time ALC is indicated it means you have 6146 control grid current flowing and you are no longer operating at the technical definition of true Class AB1.

What difference does it make if I set the operating bias voltage so that I have 50ma instead of 60ma? Isn?t this better for my 6146 finals?

You can set the bias voltage so that you have a range of resting plate current from approx 50 ma to 60 ma and not significantly affect the Class of operation. It is not critical and will not result in significantly more distortion or measurably longer or shorter tube life. For the TS520 operators who have very low ALC indication on 10 meters they can try adjusting 6146 control grid bias voltage to a lower value which will result in higher resting plate current (moving tube toward Class A). This may produce more ALC indication as grid current flows when there is a difference in negative grid bias voltage and the positive peaks of the RF drive voltage. You need no less than approx 39 rms rf volts drive applied to the control grids to overcome the offset that the negative grid bias voltage establishes. If you have no difference in grid bias voltage and the positive peaks of the RF envelope there will be no 6146 control grid current and therefore no ALC indication.

73's
Dave
VK5PDL

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[Non-text portions of this message have been removed]

40808. 16 Pin Connectors for use on the Kenwood Twins and the R-820 receiver

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-03 02:19:25 UTC
From: n6wk_skcc3
Topic: 40808 Message: 40808

I have just (4) left of the brand new never opened 16 Pin Hirose Connectors that Kenwood used on the Kenwood Twins, T-599/R-599 radios.
These are also used when connecting the R-820 to the TS-820.
These are hard to come by. These are the last 4 I have left.
Cost is $30.00 each plus shipping.

Don't miss out if you have twins and need the connectors to make the interconnect cable.
I also have (1) of the 12 Pin Hirose connectors used on the Kenwood Transverters. Same Price.

73,
Gordon

40809. KENWOOD HYBRID USER NET (February 3rd, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-03 19:50:17 UTC
From: mvgilger
Topic: 40809 Message: 40809

The Saturday's net on 40 meter we had 24 stations checking with good band conditions. Out of those, there was:

5 running TS-520(x)
3 running TS-530(x)
3 running TS-820(x)
5 running TS-830S

I was running a TS940. The rest were running non hybrids of one model or another.

The Sunday 20 meter net we had 27 stations checking in under good band conditions. Out of those, there were:

7 running TS-520(x)
0 running TS-530(x)
4 running TS-820(x)
2 running TS-830S

I was running a non hybrid TS-940. The rest were running non hybrids of one model or another.

We have been having several people checking in regularly with their TS-430, TS-440, and TS-940's, which of course is not a hybrid, although over 30+ years old. Everyone is welcome as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a net control station, please send me an email. Currently it's just myself, WB2KNR and WB0SGA. I would like to get several more. If we do, we can alternate so everyone might be on a 3-4 week rotation. It's a lot of fun and a good way to make sure you station is optimized.

For anyone that has not heard, we have a new web site that WB4HFN is hosting. He currently has a very nice site for Drake, Collins and Heathkit and now Kenwood Hybrids. Good quality manuals plus sale flyers and brochures will be found here, along with user supplied information for all Hybrids.

His URL is:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754 check-ins, Sunday total 563 check-ins

November 2012, Saturday's, net total = 47, Sundays total = 20
December 2012, Saturday's, net total = 74, Sunday's total = 70
January 2013, Saturday's, net total = 93, Sunday's total = 87
February 2013, Saturday's net total = 24, Sundays total = 27. (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

40810. The display takes some time before it reads any rf

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-03 20:06:08 UTC
From: kcripps@rogers.com
Topic: 40810 Message: 40810

I just got this ts 520 and I find that it takes a bit of time before
The display registers any rf. any one might know why this is

40811. Re: Looking for Ts520 gear

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-03 21:42:44 UTC
From: mst562112
Topic: 40757 Message: 40811

Hey Michael,
I may be able to help you out. I have the TS-520 external VFO and the SP-520 speaker. The speaker works and the VFO lights up when selected with the TS-520. I built an umbilical cable to test it. I don't have an antenna (or decent ground) at this time. I have a MC-50 mic also but am saving that to sell w/the TS-520.

Michael-K6RQV
Santa Barbara

--- In TS-520_820_530_830@yahoogroups.com, "michaelmattes@..." wrote:
>
> Hi,
> Looking to purchase for my recently restored original ts520
>
> Ext vfo
> Ext speaker
> Microphone
>
> Thanks
> Michael
> Wb6qnd
> Sherman oaks ca
> 818 789 3668
>

40812. Re: Old meets new: TS-830S and Funcube Dongle Pro Plus

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-04 02:06:44 UTC
From: zl3ha
Topic: 40783 Message: 40812

Hi Mark
I'm keen to hear how you progress with this. Having just acquired a nice TS-830S myself, and already owning a LP-PAN panadapter running at 192kHz wide I think its a great idea to merge the old with the new! I'm looking forward to the Youtube clip!

Best 73
Grant ZL3HA

--- In TS-520_820_530_830@yahoogroups.com, "Mark L. Hammond" wrote:
>
> In the FWIW category,
>
> The new--For the last year+ I've been dabbling in SDR, especially with the Funcube Dongle Pro (FCDP)and it's newer brother the Pro Plus (FCDP+).
http://www.funcubedongle.com/?page_id=1201 The FCDP+ includes HF coverage where its predecessor didn't.
>
> The old--I recently bought a very nice used Kenwood TS-830S. There is an RCA jack with an 8.83MHz IF signal output. So I fed this IF into the FCDP+, set its frequency to 8.83MHz, and bingo! It gave me a 192kHz panadapter :)
>
> Pretty slick fusion of the old with the new!
>
> Of course the FCDP+ is a perfectly good stand alone receiver. So why bother with the TS-830S? Try to use an SDR receiver stand alone for making actual contacts with a transceiver and you'll quickly see why (do I use 2 antennas? How do I shut off the FCDP+ during transmit so I don't overload/damage it? How do I match my Xmit with my Rcv? etc.).
>
> Turns out setting the FCDP+ frequency to 8.917MHz is the actual frequency that puts the TS-830S receive audio from the rig on frequency with the FCDP+ receive audio. Turning the dial on the TS-830S then keeps the xmit and rcv on the same freq. Don't think that's a FCDP+ calibration issue; still working the math to see the "why" of that (8917-8830=87?) Actually, on another attempt the offset changed--gotta figure this one out by spending some time with it.
>
> Of course, using the FCDP+ also would allow a user to operate split DX stations--without the extra external VFO. Actually, it's rather like the VFO-230 and SM-220 plus BS-8 rolled into one!
>
> Over the weekend I'll try to take a little video and post it on Youtube.
>
> Please note--the "cheap dongles" don't work on HF, since they don't cover HF. There are HF upconvertors....or a cheap Soft Rock with the right xtal would work too of course.
>
> Anyhow, fun to play.

>
> 73!
>
>
>
> Mark L. Hammond [N8MH]
>

40813. Re: The display takes some time before it reads any rf

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-04 02:00:17 UTC
From: Otis Mc Coy
Topic: 40810 Message: 40813

Are speaking about the delay between when you turn on the power switch and the VFO lights up?

[Non-text portions of this message have been removed]

40814. Re: The display takes some time before it reads any rf

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-04 03:05:04 UTC
From: kcripps@rogers.com
Topic: 40810 Message: 40814

--- In TS-520_820_530_830@yahoogroups.com, Otis Mc Coy wrote:
>
> Are speaking about the delay between when you turn on the power switch and
> the VFO lights up?
>
>
> No if the radio is off for a bit and I turn it on I get no reading on the meter.
Even if I turn the rf gain all the way counter clockwise the needle does not move
>

40815. Re: Looking for Ts520 gear

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-04 04:36:59 UTC
From: michaelmattes@sbcglobal.net
Topic: 40757 Message: 40815

Please contact me by telephone. 818 789 3668
Thanks for the reply

--- In TS-520_820_530_830@yahoogroups.com, "mst562112" wrote:
>
>
> Hey Michael,
> I may be able to help you out. I have the TS-520 external VFO and the SP-520 speaker. The speaker works and the VFO lights up when selected with the TS-520. I built an umbilical cable to test it. I don't have an antenna (or decent ground) at this time. I have a MC-50 mic also but am saving that to sell w/the TS-520.
>
> Michael-K6RQV
> Santa Barbara
>
> --- In TS-520_820_530_830@yahoogroups.com, "michaelmattes@" wrote:
> >
> > Hi,
> > Looking to purchase for my recently restored original ts520
> >
> > Ext vfo
> > Ext speaker
> > Microphone
> >
> > Thanks
> > Michael
> > Wb6qnd
> > Sherman oaks ca
> > 818 789 3668
> >
>

40816. Re: 16 Pin Connectors for use on the Kenwood Twins and the R-820 receiver

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-04 16:39:27 UTC
From: n6wk_skcc3
Topic: 40808 Message: 40816

ALL Connectors have been Sold!

Thanks to everyone.

Gordon
N6WK

--- In TS-520_820_530_830@yahoogroups.com, "n6wk_skcc3" wrote:
>
> I have just (4) left of the brand new never opened 16 Pin Hirose Connectors that Kenwood used on the Kenwood Twins, T-599/R-599 radios.
> These are also used when connecting the R-820 to the TS-820.
> These are hard to come by. These are the last 4 I have left.
> Cost is $30.00 each plus shipping.
>
> Don't miss out if you have twins and need the connectors to make the interconnect cable.
> I also have (1) of the 12 Pin Hirose connectors used on the Kenwood Transverters. Same Price.
>
> 73,
> Gordon
>

40817. Newbie

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-04 22:30:55 UTC
From: Rick
Topic: 14775 Message: 40817

Hello to all. My name is Rick and I'm a "newbie" around here. I've been a ham since 1961. I run a few different stations from the shack but my favorite is still my old TS-520. It was my first transceiver. Previously I had either pieced together a station or built it. I have the matching speaker, VFO, Tuner, Phone Patch (not that it gets any use) and digital readout which I am having a tad of trouble with at this time. I'm in the process of soldering a small wire through all of the plated through holes connecting one side to the other. I'm almost 68 years old and my eyes and hands don't always do what is asked of them, so, this is a tedious project. I hope it pays off.

Thanks for having me!
Rick / K5IAR

40818. Wiring the 12 Pin Power Connector

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-04 22:22:53 UTC
From: bryan
Topic: 40818 Message: 40818

Good Day All,
Excuse my ignorance in this matter but I would like to ask if someone in this forum could please inform me of the proper way to terminate the wire to the connector?

40819. Re: [TS-520_820_530_830] Re: Old meets new: TS-830S and Funcube Dongle Pro Plus

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-05 00:24:58 UTC
From: Mark L. Hammond
Topic: 40783 Message: 40819

Here's a short video on YouTube. Not the best, but it makes the point ;)

http://www.youtube.com/watch?v=kK0pS-IuL1o

73!

Mark N8MH

At 02:06 AM 2/4/2013 +0000, you wrote:
>
>
>Hi Mark
>I'm keen to hear how you progress with this. Having just acquired a nice TS-830S myself, and already owning a LP-PAN panadapter running at 192kHz wide I think its a great idea to merge the old with the new! I'm looking forward to the Youtube clip!
>
>Best 73
>Grant ZL3HA
>
>--- In <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com, "Mark L. Hammond" wrote:
>>
>> In the FWIW category,
>>
>> The new--For the last year+ I've been dabbling in SDR, especially with the Funcube Dongle Pro (FCDP)and it's newer brother the Pro Plus (FCDP+). <http://www.funcubedongle.com/?page_id=1201>http://www.funcubedongle.com/?page_id=1201 The FCDP+ includes HF coverage where its predecessor didn't.
>>
>> The old--I recently bought a very nice used Kenwood TS-830S. There is an RCA jack with an 8.83MHz IF signal output. So I fed this IF into the FCDP+, set its frequency to 8.83MHz, and bingo! It gave me a 192kHz panadapter :)
>>
>> Pretty slick fusion of the old with the new!
>>
>> Of course the FCDP+ is a perfectly good stand alone receiver. So why bother with the TS-830S? Try to use an SDR receiver stand alone for making actual contacts with a transceiver and you'll quickly see why (do I use 2 antennas? How do I shut off the FCDP+ during transmit so I don't overload/damage it? How do I match my Xmit with my Rcv? etc.).
>>
>> Turns out setting the FCDP+ frequency to 8.917MHz is the actual frequency that puts the TS-830S receive audio from the rig on frequency with the FCDP+ receive audio. Turning the dial on the TS-830S then keeps the xmit and rcv on the same freq. Don't think that's a FCDP+ calibration issue; still working the math to see the "why" of that (8917-8830=87?) Actually, on another attempt the offset changed--gotta figure this one out by spending some

time with it.
>>
>> Of course, using the FCDP+ also would allow a user to operate split DX stations--without the extra external VFO. Actually, it's rather like the VFO-230 and SM-220 plus BS-8 rolled into one!
>>
>> Over the weekend I'll try to take a little video and post it on Youtube.
>>
>> Please note--the "cheap dongles" don't work on HF, since they don't cover HF. There are HF upconvertors....or a cheap Soft Rock with the right xtal would work too of course.
>>
>> Anyhow, fun to play.
>>
>> 73!
>>
>>
>>
>> Mark L. Hammond [N8MH]
>>
>
>

[Non-text portions of this message have been removed]

40820. Source for 2SK73 ?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-05 00:21:07 UTC
From: Jim Showker
Topic: 14775 Message: 40820

Hi all,
I just used up my last one, and they aren't so easy to find any
more. anyone have a source in the US, for FET 2SK73?

I found a place in the UK, but would rather buy here, if possible.

Thanks,
Jim KE7OAY

40821. Re: Wiring the 12 Pin Power Connector

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-05 00:55:24 UTC
From: roberteleazer@rocketmail.com
Topic: 40818 Message: 40821

Bryan:

Well, it's a simple question that's not so simple, it turns out. We have discovered, by trial and by chance, that the numbering of the pins on the connector can differ with otherwise interchangeable connectors made by different companies.

Some time back a group member asked that we describe the positions of the connections rather than by pin number, and I did so (coming close to electrocuting myself as part of the investigative process as well). He claimed that the connector he had was numbered differently than the ones we usually see. That seemed improbable until I stumbled across the fact that different makers number them differently.

So I recommend you do a search for posts by me to get the info in a format that will work, regardless of the numbering. I also will see if I wrote it down somewhere and post it again if I can locate it.

Good Luck!

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "bryan" wrote:
>
> Good Day All,
> Excuse my ignorance in this matter but I would like to ask if someone in this forum could please inform me of the proper way to terminate the wire to the connector?
>

40822. Re: Newbie

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-05 01:04:00 UTC
From: roberteleazer@rocketmail.com
Topic: 14775 Message: 40822

Welcome Rick!

I assume you mean the external digital readout for the 520? I have two 520's but neither have that accessory. But I did have problems with the digital readout on my 820S and like many people found that the it was associated with the connectors that connect the two sections. So if there are any such connectors, you should try cleaning those first.

Good Luck!

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "Rick" wrote:
>
> Hello to all. My name is Rick and I'm a "newbie" around here. I've been a
> ham since 1961. I run a few different stations from the shack but my
> favorite is still my old TS-520. It was my first transceiver. Previously I
> had either pieced together a station or built it. I have the matching
> speaker, VFO, Tuner, Phone Patch (not that it gets any use) and digital
> readout which I am having a tad of trouble with at this time. I'm in the
> process of soldering a small wire through all of the plated through holes
> connecting one side to the other. I'm almost 68 years old and my eyes and
> hands don't always do what is asked of them, so, this is a tedious project.
> I hope it pays off.
>
> Thanks for having me!
> Rick / K5IAR
>

40823. Advertisement

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-05 01:04:29 UTC
From: boat.anchor
Topic: 40823 Message: 40823

If anyone is interested.
I am cleaning up the parts room and have listed
some hybrid items on ebay.
Search for seller facet_00
thanks
Barry
VA7GEM

40824. Re: Advertisement

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-05 01:08:29 UTC
From: boat.anchor
Topic: 40823 Message: 40824

Guess it would help if I let you know what.
filters
shaft couplers
VFO plugs
Remote plugs
DC power cables
AC power cable
tnx

--- In TS-520_820_530_830@yahoogroups.com, "boat.anchor" wrote:
>
> If anyone is interested.
> I am cleaning up the parts room and have listed
> some hybrid items on ebay.
> Search for seller facet_00
> thanks
> Barry
> VA7GEM
>

40825. Re: [TS-520_820_530_830] Re: Old meets new: TS-830S and Funcube Dongle Pro Plus

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-05 02:17:17 UTC
From: Skip Merrill
Topic: 40783 Message: 40825

Great video Mark, I am also interested in using the IF outputs of my TS-820 and TS-830 for SDR inputs. I have built one Softrock receiver and plan to build another to cover the 8 MHz frequencies. Should I be concerned about impedance matching or overdriving the SDR receiver with the IF input?

I think this thread is quite relevant to the old hybrids as it gives them state of the art display capabilities.

Thanks,
Skip KC4QP

From: Mark L. Hammond
Sent: Monday, February 04, 2013 7:24 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: Old meets new: TS-830S and Funcube Dongle Pro Plus

Here's a short video on YouTube. Not the best, but it makes the point ;)

http://www.youtube.com/watch?v=kK0pS-IuL1o

73!

Mark N8MH

At 02:06 AM 2/4/2013 +0000, you wrote:
>
>
>Hi Mark
>I'm keen to hear how you progress with this. Having just acquired a nice TS-830S myself, and already owning a LP-PAN panadapter running at 192kHz wide I think its a great idea to merge the old with the new! I'm looking forward to the Youtube clip!
>
>Best 73
>Grant ZL3HA
>
>--- In TS-520_820_530_830@yahoogroups.com, "Mark L. Hammond" wrote:
>>
>> In the FWIW category,
>>
>> The new--For the last year+ I've been dabbling in SDR, especially with the Funcube Dongle Pro (FCDP)and it's newer brother the Pro Plus (FCDP+). http://www.funcubedongle.com/?page_id=1201http://www.funcubedongle.com/?page_id=1201 The FCDP+ includes HF coverage where its predecessor didn't.
>>
>> The old--I recently bought a very nice used Kenwood TS-830S. There is an RCA jack with

an 8.83MHz IF signal output. So I fed this IF into the FCDP+, set its frequency to 8.83MHz, and bingo! It gave me a 192kHz panadapter :)
>>
>> Pretty slick fusion of the old with the new!
>>
>> Of course the FCDP+ is a perfectly good stand alone receiver. So why bother with the TS-830S? Try to use an SDR receiver stand alone for making actual contacts with a transceiver and you'll quickly see why (do I use 2 antennas? How do I shut off the FCDP+ during transmit so I don't overload/damage it? How do I match my Xmit with my Rcv? etc.).
>>
>> Turns out setting the FCDP+ frequency to 8.917MHz is the actual frequency that puts the TS-830S receive audio from the rig on frequency with the FCDP+ receive audio. Turning the dial on the TS-830S then keeps the xmit and rcv on the same freq. Don't think that's a FCDP+ calibration issue; still working the math to see the "why" of that (8917-8830=87?) Actually, on another attempt the offset changed--gotta figure this one out by spending some time with it.
>>
>> Of course, using the FCDP+ also would allow a user to operate split DX stations--without the extra external VFO. Actually, it's rather like the VFO-230 and SM-220 plus BS-8 rolled into one!
>>
>> Over the weekend I'll try to take a little video and post it on Youtube.
>>
>> Please note--the "cheap dongles" don't work on HF, since they don't cover HF. There are HF upconvertors....or a cheap Soft Rock with the right xtal would work too of course.
>>
>> Anyhow, fun to play.
>>
>> 73!
>>
>>
>>
>> Mark L. Hammond [N8MH]
>>
>
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

40826. Re: [TS-520_820_530_830] Re: Old meets new: TS-830S and Funcube Dongle Pro Plus

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-05 02:39:20 UTC
From: Mark L. Hammond
Topic: 40783 Message: 40826

Hi Skip,

Yes, a new soft rock kit with 8.83 xtal is about $25! Nice bargain. Of course you have to power it, put in a case, and have a sound card--but that's easy. The FCDP+ is slick since it's one piece and a single USB connection.

I can't comment about the impedance issue or the signal level. On the FCDP+ I could adjust the gain so I wasn't concerned.

One of the cool things is that the radio 'almost' becomes computer controlled. Using SDR-Radio Ver2 I can connect from work and listen to the TS-830! It is limited to about 192kHz of bandwidth, but figure if you put the rig on 14.250, that's around +/- 90 kHz on either side. Not too shabby!

So maybe you can teach an old dog new tricks!

73,

Mark N8MH

At 09:17 PM 2/4/2013 -0500, you wrote:
>
>
>Great video Mark, I am also interested in using the IF outputs of my TS-820 and TS-830 for SDR inputs. I have built one Softrock receiver and plan to build another to cover the 8 MHz frequencies. Should I be concerned about impedance matching or overdriving the SDR receiver with the IF input?
>
>I think this thread is quite relevant to the old hybrids as it gives them state of the art display capabilities.
>
>Thanks,
>Skip KC4QP
>
>From: Mark L. Hammond
>Sent: Monday, February 04, 2013 7:24 PM
>To: <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>Subject: Re: [TS-520_820_530_830] Re: Old meets new: TS-830S and Funcube Dongle Pro Plus
>
>Here's a short video on YouTube. Not the best, but it makes the point ;)
>
><http://www.youtube.com/watch?v=kK0pS-IuL1o>http://www.youtube.com/watch?v=kK0pS-IuL1o
>
>73!
>

>Mark N8MH
>
>At 02:06 AM 2/4/2013 +0000, you wrote:
>>
>>
>>Hi Mark
>>I'm keen to hear how you progress with this. Having just acquired a nice TS-830S myself, and already owning a LP-PAN panadapter running at 192kHz wide I think its a great idea to merge the old with the new! I'm looking forward to the Youtube clip!
>>
>>Best 73
>>Grant ZL3HA
>>
>>--- In <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com, "Mark L. Hammond" wrote:
>>>
>>> In the FWIW category,
>>>
>>> The new--For the last year+ I've been dabbling in SDR, especially with the Funcube Dongle Pro (FCDP)and it's newer brother the Pro Plus (FCDP+). <http://www.funcubedongle.com/?page_id=1201http://www.funcubedongle.com/?page_id=1201>http://www.funcubedongle.com/?page_id=1201http://www.funcubedongle.com/?page_id=1201 The FCDP+ includes HF coverage where its predecessor didn't.
>>>
>>> The old--I recently bought a very nice used Kenwood TS-830S. There is an RCA jack with an 8.83MHz IF signal output. So I fed this IF into the FCDP+, set its frequency to 8.83MHz, and bingo! It gave me a 192kHz panadapter :)
>>>
>>> Pretty slick fusion of the old with the new!
>>>
>>> Of course the FCDP+ is a perfectly good stand alone receiver. So why bother with the TS-830S? Try to use an SDR receiver stand alone for making actual contacts with a transceiver and you'll quickly see why (do I use 2 antennas? How do I shut off the FCDP+ during transmit so I don't overload/damage it? How do I match my Xmit with my Rcv? etc.).
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>>> Turns out setting the FCDP+ frequency to 8.917MHz is the actual frequency that puts the TS-830S receive audio from the rig on frequency with the FCDP+ receive audio. Turning the dial on the TS-830S then keeps the xmit and rcv on the same freq. Don't think that's a FCDP+ calibration issue; still working the math to see the "why" of that (8917-8830=87?) Actually, on another attempt the offset changed--gotta figure this one out by spending some time with it.
>>>
>>> Of course, using the FCDP+ also would allow a user to operate split DX stations--without the extra external VFO. Actually, it's rather like the VFO-230 and SM-220 plus BS-8 rolled into one!
>>>
>>> Over the weekend I'll try to take a little video and post it on Youtube.
>>>
>>> Please note--the "cheap dongles" don't work on HF, since they don't cover HF. There are HF upconvertors....or a cheap Soft Rock with the right xtal would work too of course.

>>>
>>> Anyhow, fun to play.
>>>
>>> 73!
>>>
>>>
>>>
>>> Mark L. Hammond [N8MH]
>>>
>>
>>
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>[Non-text portions of this message have been removed]
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40827. RE: [TS-520_820_530_830] Source for 2SK73 ?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-05 07:40:02 UTC
From: fpath fpath
Topic: 14775 Message: 40827

Hi Jim,

are you meaning the 2sk73 or the 3sk73?

Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: jshowker@...
Date: Mon, 4 Feb 2013 16:21:07 -0800
Subject: [TS-520_820_530_830] Source for 2SK73 ?

Hi all,
I just used up my last one, and they aren't so easy to find any
more. anyone have a source in the US, for FET 2SK73?

I found a place in the UK, but would rather buy here, if possible.

Thanks,
Jim KE7OAY

[Non-text portions of this message have been removed]

40828. Kenwood TS-830 no output.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-05 16:47:21 UTC
From: w_cavendish
Topic: 40828 Message: 40828

Hello,

I have a TS-830 that I am trying to bring back to life and could use some advice. Here is what happened.

A couple weeks ago I was tuning up my 830, I had dipped the meter in "tune" mode and all looked good. I switched to CW and as soon as I hit transmit there was a soft POP and plate current dropped to zero.

I opened up the radio and found one of the cathode resistors was cracked. Using parts from K4EAA's website I replaced the the screen and cathode resistors. I put everything back together and still no output.

I do have HV according to the meter, but have not actually probed it.

I do see ALC output on the meter.

I still see no plate current.

I have made sure the SG switch on the back is on.

What should my next step be in troubleshooting this radio?

73's
KF5NOL
Brian Devine

40829. Re: [TS-520_820_530_830] Source for 2SK73 ?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-05 17:00:40 UTC
From: Jim Showker
Topic: 14775 Message: 40829

Hi Dave,
oops, typo. Yes, 3SK73.

Jim KE7OAY

On 2/4/2013 11:40 PM, fpath fpath wrote:
> Hi Jim,
>
> are you meaning the 2sk73 or the 3sk73?
>
> Dave
> VK5PDL
>
>
>
>
> To: TS-520_820_530_830@yahoogroups.com
> From: jshowker@...
> Date: Mon, 4 Feb 2013 16:21:07 -0800
> Subject: [TS-520_820_530_830] Source for 2SK73 ?
>
>
>
>
>
> Hi all,
> I just used up my last one, and they aren't so easy to find any
> more. anyone have a source in the US, for FET 2SK73?
>
> I found a place in the UK, but would rather buy here, if possible.
>
> Thanks,
> Jim KE7OAY
>
>
>
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>
> [Non-text portions of this message have been removed]
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> Yahoo! Groups Links

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>

40830. Source for 3SK73 ?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-05 17:15:14 UTC
From: Jim Showker
Topic: 14775 Message: 40830

Try again,

Hi all,
I just used up my last one, and they aren't so easy to find any
more. anyone have a source in the US, for FET 2SK73?

I found a place in the UK, but would rather buy here, if possible. I
also found a source for a 40673, which is a pretty close equivalent, I
guess. I'd rather have the original part if I can find it.

Thanks,
Jim KE7OAY

On 2/5/2013 9:00 AM, Jim Showker wrote:
>
> Hi Dave,
> oops, typo. Yes, 3SK73.
>
> Jim KE7OAY
>
> On 2/4/2013 11:40 PM, fpath fpath wrote:
> > Hi Jim,
> >
> > are you meaning the 2sk73 or the 3sk73?
> >
> > Dave
> > VK5PDL
> >
> >
> >
> >
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > From: jshowker@... <mailto:jshowker%40comcast.net>
> > Date: Mon, 4 Feb 2013 16:21:07 -0800
> > Subject: [TS-520_820_530_830] Source for 2SK73 ?
> >
> >
> >
> >
> >
> >
> > Hi all,
> > I just used up my last one, and they aren't so easy to find any
> > more. anyone have a source in the US, for FET 2SK73?
> >
> > I found a place in the UK, but would rather buy here, if possible.

> >
> > Thanks,
> > Jim KE7OAY
> >
> >
> >
> >
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> > [Non-text portions of this message have been removed]
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> > Yahoo! Groups Links
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40831. Ts520se

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-05 17:36:45 UTC
From: Dave
Topic: 40831 Message: 40831

Hello all,
I have a ts520se and I noticed something strange the other day. I was on 10m and suddenly all power went and I had blown the fuse. After changing the fuse I notice that on twenty meters now I can only get 50 watts before it was 90 to 100 watts.

I am wondering if the tubes have now gone soft and I need to change them?

Any advise please,and thank you beforehand

Regards Dave M0GGK

Sent from my iPad

40832. Re: [TS-520_820_530_830] Wiring the 12 Pin Power Connector

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-05 18:50:05 UTC
From: John Davidson
Topic: 40818 Message: 40832

What do you mean?
I did mine with solder, according to the wiring diagram in the manual !~Just don't use acid-core solder !

From: bryan <bryandibble@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, February 4, 2013 5:22 PM
Subject: [TS-520_820_530_830] Wiring the 12 Pin Power Connector

Good Day All,
Excuse my ignorance in this matter but I would like to ask if someone in this forum could please inform me of the proper way to terminate the wire to the connector?

[Non-text portions of this message have been removed]

40833. Re: [TS-520_820_530_830] Source for 3SK73 ?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-05 20:18:57 UTC
From: dennis hatch
Topic: 14775 Message: 40833

Any dual channel N-gate MOSFET should work......40673, 3N211, 3N212, 3N102. These dual gate fet parts are getting hard to come by. I purchased some for about $7.00 ea recently. Ebay has them for around $12.00. 73, Dennis

[Non-text portions of this message have been removed]

40834. Re: [TS-520_820_530_830] Kenwood TS-830 no output.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-05 20:59:01 UTC
From: Joseph Stiles
Topic: 40828 Message: 40834

Brian,

The cathode resistors usually "pop" because of a failure (the most common) of one, or both of the final tubes...for what ever reason. I would obtain KNOWN GOOD final tubes and check operation again after, you check what is stated below. Testing your 6146's whether they be A, B or W in a tubes tester will not guarantee they they will function correctly in the real RF environment.
If you are showing HV on the meter, that is usually accurate...but may be off a bit...you can test it at the "800" post on the rectifier board.
Since you indicate that you're trying to "bring it back to life," I guess that you do not really know the history of the rig? Check all voltages on the rectifier board...and the final board..."SG" & "FG" The "tune" function cuts HV to the finals during tune up..so the final do not operate at high voltage in an out of tune state. Switching to "CW" applies full HV. Also, check for proper orientation of the band switch position in relation to the "wafers" on the RF board and also S-22 which is in the final cage area for proper orientation. It is common for the band switch coupler...a white nylon round thingy at the end of the band switch shaft to be cracked/broken and get the switches out of wack.

73 Joe
WB7UQU

From: w_cavendish <w_cavendish@...m>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, February 5, 2013 8:47 AM
Subject: [TS-520_820_530_830] Kenwood TS-830 no output.

Hello,

I have a TS-830 that I am trying to bring back to life and could use some advice. Here is what happened.

A couple weeks ago I was tuning up my 830, I had dipped the meter in "tune" mode and all looked good. I switched to CW and as soon as I hit transmit there was a soft POP and plate current dropped to zero.

I opened up the radio and found one of the cathode resistors was cracked. Using parts from K4EAA's website I replaced the the screen and cathode resistors. I put everything back together and still no output.

I do have HV according to the meter, but have not actually probed it.

I do see ALC output on the meter.

I still see no plate current.

I have made sure the SG switch on the back is on.

What should my next step be in troubleshooting this radio?

73's
KF5NOL
Brian Devine

[Non-text portions of this message have been removed]

40835. Re: [TS-520_820_530_830] Source for 3SK73 ?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-05 21:09:26 UTC
From: Richard Witzke
Topic: 14775 Message: 40835

BG Micro in Texas has 40673 for $3.95 and MPF-131 for $1.53 ea. 73, Dick

[Non-text portions of this message have been removed]

40836. Kenwood AT-200

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-05 21:33:05 UTC
From: rkings1956
Topic: 40836 Message: 40836

Hi,I recently purchased a Kenwood AT-200 and after setting up a new antenna (G5RV Jr) and tuning, I noticed smoke coming from the tuner. I opened it up and saw that a capacitor (from the schematic, C6 25p) was fried. I would like some advice on what C6 25p actually means, where and how I can obtain a replacement. Here is the link to the Operating Manual which has a copy of the schematic.
http://www.kg6haf.com/downloads/AT-200_Manual.pdf.

Robert
KD6FSK

40837. Re: Kenwood TS-830 no output.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-05 21:58:14 UTC
From: w_cavendish
Topic: 40828 Message: 40837

I know some of the history of this rig, but not all of it. It was a rig that I found on ebay. When I received it, it was terribly out of tune and there was an issue with the bandswitch, both of these issues were resolved and I have used the radio off and on for the last six months with no problems.

I do not know exactly what he did with the bandswitch, but I know it was not the nylon coupler. While I had the tubes out I did take a look at it and I see no sign of breakage or slipping. I ordered a spare coupler from Ken just in case.

I would ask the tech what he did, but I have some trust issues. When I opened up the radio I found the w tubes that were in it when I bought it had been swapped out for b tubes.

I have an 820 with a good set of tubes I can try those and see how it behaves.

Thanks for the help

73's
KF5NOL
Brian Devine

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles wrote:
>
> Brian,
>
> Â The cathode resistors usually "pop" because of a failure (the most common) of one, or both of the final tubes...for what ever reason. I would obtain KNOWN GOOD final tubes and check operation again after, you check what is stated below. Testing your 6146's whether they be A, B or W in a tubes tester will not guarantee they they will function correctly in the real RF environment.
> If you are showing HV on the meter, that is usually accurate...but may be off a bit...you can test it at the "800" post on the rectifier board.
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>
>
> Â
> 73Â Joe
> WB7UQU
>

>
>
> _____
> From: w_cavendish
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tuesday, February 5, 2013 8:47 AM
> Subject: [TS-520_820_530_830] Kenwood TS-830 no output.
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>
> Â
> Hello,
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> I have a TS-830 that I am trying to bring back to life and could use some advice. Here is what happened.
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>
> I opened up the radio and found one of the cathode resistors was cracked. Using parts from K4EAA's website I replaced the the screen and cathode resistors. I put everything back together and still no output.
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> I do have HV according to the meter, but have not actually probed it.
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> I do see ALC output on the meter.
>
> I still see no plate current.
>
> I have made sure the SG switch on the back is on.
>
> What should my next step be in troubleshooting this radio?
>
> 73's
> KF5NOL
> Brian Devine
>
>
>
>
> [Non-text portions of this message have been removed]
>

40838. Re: [TS-520_820_530_830] Kenwood AT-200

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-05 22:04:51 UTC
From: Joseph Stiles
Topic: 40836 Message: 40838

Robert,

C6 is the description of it on the schematic....25p more than likely indicates its value....25pf or "picofarrads."
It appears that it is NOT a polarized electrolytic...possibly a disc ceramic...other nomenclature I can not find
ie...voltage rating. You should be able to find a replacement at any decent electronics supply store...maybe even
Radio Shack. But, I would look at how it's connected and figure out why "the smoke got out." I'll look at the schematic
again later and see IF I can give you a better answer.

73 Joe
WB7UQU

From: rkings1956 <rkings1956@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, February 5, 2013 1:33 PM
Subject: [TS-520_820_530_830] Kenwood AT-200

Hi,I recently purchased a Kenwood AT-200 and after setting up a new antenna (G5RV Jr) and tuning, I noticed smoke coming from the tuner. I opened it up and saw that a capacitor (from the schematic, C6 25p) was fried. I would like some advice on what C6 25p actually means, where and how I can obtain a replacement. Here is the link to the Operating Manual which has a copy of the schematic.
http://www.kg6haf.com/downloads/AT-200_Manual.pdf.

Robert
KD6FSK

[Non-text portions of this message have been removed]

40839. Re: [TS-520_820_530_830] Kenwood AT-200

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-05 22:43:12 UTC
From: Jim S
Topic: 40836 Message: 40839

I would suspect that "the smoke got out" because you were trying to tune a G5RV Jr. on a band on which that antenna has a high VSWR. In spite of claims to the contrary, many antennas which are derived from the original G5RV antenna do not have a fairly low VSWR on all bands, and your combination of frequency, and tuner settings probably put a higher voltage on the cap than it was made for.

When replacing the 25pf cap, use the highest rated voltage device you can find, and use low power when attempting to tune for a match, next time. You might want to check to see what the actual VSWR of that antenna actually is at the frequency you are attempting to operate it at. I am betting it is through the roof!

Jim AG3Y

On 2/5/2013 5:04 PM, Joseph Stiles wrote:
>
> Robert,
>
> C6 is the description of it on the schematic....25p more than likely
> indicates its value....25pf or "picofarrads."
> It appears that it is NOT a polarized electrolytic...possibly a disc
> ceramic...other nomenclature I can not find
> ie...voltage rating. You should be able to find a replacement at any
> decent electronics supply store...maybe even
> Radio Shack. But, I would look at how it's connected and figure out
> why "the smoke got out." I'll look at the schematic
> again later and see IF I can give you a better answer.
>
>
> 73 Joe
> WB7UQU
>
> _____
> From: rkings1956 rkings1956@yahoo.com <mailto:rkings1956%40yahoo.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Tuesday, February 5, 2013 1:33 PM
> Subject: [TS-520_820_530_830] Kenwood AT-200
>
>
>
> Hi,I recently purchased a Kenwood AT-200 and after setting up a new
> antenna (G5RV Jr) and tuning, I noticed smoke coming from the tuner. I
> opened it up and saw that a capacitor (from the schematic, C6 25p) was
> fried. I would like some advice on what C6 25p actually means, where

> and how I can obtain a replacement. Here is the link to the Operating
> Manual which has a copy of the schematic.
> http://www.kg6haf.com/downloads/AT-200_Manual.pdf.
>
> Robert
> KD6FSK
>
> [Non-text portions of this message have been removed]
>
>
>
>
>
>
>
> =======
> Email scanned by PC Tools - No viruses or spyware found.
> (Email Guard: 9.0.0.2308, Virus/Spyware Database: 6.21020)
> http://www.pctools.com
> <http://www.pctools.com/?cclick=EmailFooterClean_51>
> =======

[Non-text portions of this message have been removed]

40840. Re: Wiring the 12 Pin Power Connector

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-05 23:46:38 UTC
From: bryan
Topic: 40818 Message: 40840

Thats what I wanted to know. I wasn't sure if there where connectors that could be soldered to the wire first and then connected to the tabs in the connector. Thanks to the input. Solder it is then.

--- In TS-520_820_530_830@yahoogroups.com, John Davidson wrote:
>
> What do you mean?
> I did mine with solder, according to the wiring diagram in the manual !~Just don't use acid-core solder !
>
>
> _____
> From: bryan
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, February 4, 2013 5:22 PM
> Subject: [TS-520_820_530_830] Wiring the 12 Pin Power Connector
>
> Â
> Good Day All,
> Excuse my ignorance in this matter but I would like to ask if someone in this forum could please inform me of the proper way to terminate the wire to the connector?
>
>
>
>
> [Non-text portions of this message have been removed]
>

40841. Re: [TS-520_820_530_830] Kenwood AT-200

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 02:28:02 UTC
From: KB1TCD
Topic: 40836 Message: 40841

I use a g5RV Jr antenna with my 830 and don't use a tuner.
I do use an antenna analiser to make sure the SWR is under 3:1 before I
try to tune the radio.
Thus far I have had less than 2:1 on all bands.

73 de Jose Douglas - KB1TCD

On 2/5/2013 5:43 PM, Jim S wrote:
> I would suspect that "the smoke got out" because you were trying to tune
> a G5RV Jr. on a band on which that antenna has a high VSWR. In spite of
> claims to the contrary, many antennas which are derived from the
> original G5RV antenna do not have a fairly low VSWR on all bands, and
> your combination of frequency, and tuner settings probably put a higher
> voltage on the cap than it was made for.
>
> When replacing the 25pf cap, use the highest rated voltage device you
> can find, and use low power when attempting to tune for a match, next
> time. You might want to check to see what the actual VSWR of that
> antenna actually is at the frequency you are attempting to operate it
> at. I am betting it is through the roof!
>
> Jim AG3Y

40842. RE: [TS-520_820_530_830] Source for 2SK73 ?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 04:32:35 UTC
From: fpath fpath
Topic: 14775 Message: 40842

Jim,

I know where I can get some but it will takie about 30 days to get them to you, these are toshiba 3sk73gr type. Let me know if you want them and how many and I'll get a price, plus postage. Unfortunately he will only send to me then I have to send to you. He works in the ractory where they use to be made and these are NOS.

Dave

To: TS-520_820_530_830@yahoogroups.com
From: jshowker@...
Date: Tue, 5 Feb 2013 09:00:40 -0800
Subject: Re: [TS-520_820_530_830] Source for 2SK73 ?

Hi Dave,
oops, typo. Yes, 3SK73.

Jim KE7OAY

On 2/4/2013 11:40 PM, fpath fpath wrote:
> Hi Jim,
>
> are you meaning the 2sk73 or the 3sk73?
>
> Dave
> VK5PDL
>
>
>
>
> To: TS-520_820_530_830@yahoogroups.com
> From: jshowker@...
> Date: Mon, 4 Feb 2013 16:21:07 -0800
> Subject: [TS-520_820_530_830] Source for 2SK73 ?
>
>
>
>
>
> Hi all,
> I just used up my last one, and they aren't so easy to find any
> more. anyone have a source in the US, for FET 2SK73?
>
> I found a place in the UK, but would rather buy here, if possible.
>
> Thanks,

> Jim KE7OAY
>
>
>
>
>
> [Non-text portions of this message have been removed]
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>
> Yahoo! Groups Links
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>

[Non-text portions of this message have been removed]

40843. RE: [TS-520_820_530_830] Kenwood TS-830 no output.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 04:35:51 UTC
From: fpath fpath
Topic: 40828 Message: 40843

Brian,
Did you replace the 470 ohm resistor on the rect board? Also if you have no IP reading have a look at R15 56K on the rectifier board, I ususally replace r15 and r16 both are 56k. Have you checked on a watt meter if there is any output

Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: w_cavendish@...
Date: Tue, 5 Feb 2013 16:47:21 +0000
Subject: [TS-520_820_530_830] Kenwood TS-830 no output.

Hello,

I have a TS-830 that I am trying to bring back to life and could use some advice. Here is what happened.

A couple weeks ago I was tuning up my 830, I had dipped the meter in "tune" mode and all looked good. I switched to CW and as soon as I hit transmit there was a soft POP and plate current dropped to zero.

I opened up the radio and found one of the cathode resistors was cracked. Using parts from K4EAA's website I replaced the the screen and cathode resistors. I put everything back together and still no output.

I do have HV according to the meter, but have not actually probed it.

I do see ALC output on the meter.

I still see no plate current.

I have made sure the SG switch on the back is on.

What should my next step be in troubleshooting this radio?

73's
KF5NOL
Brian Devine

[Non-text portions of this message have been removed]

40844. RE: [TS-520_820_530_830] Kenwood AT-200

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 04:53:00 UTC
From: fpath fpath
Topic: 40836 Message: 40844

G'day

I would suggest having a look at the markings on the actual capacitor, I would assume that it would be an Type 1 RF type capacitor. Have a look at the attached link for an explanation on capacitor types. If you replace it with the incorrect type then you'll end up with trouble again. Spend the time in researching before putting just any type of cap in.

http://www.qsl.net/i0jx/capacit.html

73s
Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: rkings1956@...
Date: Tue, 5 Feb 2013 21:33:05 +0000
Subject: [TS-520_820_530_830] Kenwood AT-200

Hi,I recently purchased a Kenwood AT-200 and after setting up a new antenna (G5RV Jr) and tuning, I noticed smoke coming from the tuner. I opened it up and saw that a capacitor (from the schematic, C6 25p) was fried. I would like some advice on what C6 25p actually means, where and how I can obtain a replacement. Here is the link to the Operating Manual which has a copy of the schematic.
http://www.kg6haf.com/downloads/AT-200_Manual.pdf.

Robert
KD6FSK

[Non-text portions of this message have been removed]

40845. Re: [TS-520_820_530_830] Kenwood AT-200

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 05:07:22 UTC
From: bmusser4@msn.com
Topic: 40836 Message: 40845

Also we are going to guess that the tunner was set up directly between the kenwood transmitter and the antenna and not behind a power amp. That tuner is only good for 200 watts.

Sent from my Verizon Wireless Droid

[Non-text portions of this message have been removed]

40846. Re: [TS-520_820_530_830] Kenwood AT-200

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 05:59:54 UTC
From: Robert Reyes
Topic: 40836 Message: 40846

Thanks Joe, I ordered a service manual and should be able to downloaded tomorrow. I can't determine what the voltage from the schematic.

--- On Tue, 2/5/13, Joseph Stiles <stilesjoseph@...> wrote:

From: Joseph Stiles <stilesjoseph@...>
Subject: Re: [TS-520_820_530_830] Kenwood AT-200
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@...m>
Date: Tuesday, February 5, 2013, 10:04 PM

Robert,

C6 is the description of it on the schematic....25p more than likely indicates its value....25pf or "picofarrads."
It appears that it is NOT a polarized electrolytic...possibly a disc ceramic...other nomenclature I can not find
ie...voltage rating. You should be able to find a replacement at any decent electronics supply store...maybe even
Radio Shack. But, I would look at how it's connected and figure out why "the smoke got out." I'll look at the schematic
again later and see IF I can give you a better answer.

73 Joe
WB7UQU

From: rkings1956 <rkings1956@...m>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, February 5, 2013 1:33 PM
Subject: [TS-520_820_530_830] Kenwood AT-200

Hi,I recently purchased a Kenwood AT-200 and after setting up a new antenna (G5RV Jr) and tuning, I noticed smoke coming from the tuner. I opened it up and saw that a capacitor (from the schematic, C6 25p) was fried. I would like some advice on what C6 25p actually means, where and how I can obtain a replacement. Here is the link to the Operating Manual which has a copy of the schematic.
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Robert
KD6FSK

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Yahoo! Groups Links

[Non-text portions of this message have been removed]

40847. Re: [TS-520_820_530_830] Kenwood AT-200

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 06:10:32 UTC
From: Robert Reyes
Topic: 40836 Message: 40847

Thanks Jim, I will take your advise. I ordered a service manual and should be able to downloaded tomorrow. I can't determine what the voltage is from the schematic.

--- On Tue, 2/5/13, Jim S <jimstan@...> wrote:

From: Jim S <jimstan@...>
Subject: Re: [TS-520_820_530_830] Kenwood AT-200
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, February 5, 2013, 10:43 PM

I would suspect that "the smoke got out" because you were trying to tune a G5RV Jr. on a band on which that antenna has a high VSWR. In spite of claims to the contrary, many antennas which are derived from the original G5RV antenna do not have a fairly low VSWR on all bands, and your combination of frequency, and tuner settings probably put a higher voltage on the cap than it was made for.

When replacing the 25pf cap, use the highest rated voltage device you can find, and use low power when attempting to tune for a match, next time. You might want to check to see what the actual VSWR of that antenna actually is at the frequency you are attempting to operate it at. I am betting it is through the roof!

Jim AG3Y

On 2/5/2013 5:04 PM, Joseph Stiles wrote:
>
> Robert,
>
> C6 is the description of it on the schematic....25p more than likely
> indicates its value....25pf   or "picofarrads."
> It appears that it is NOT a polarized electrolytic...possibly a disc
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> Radio Shack. But, I would look at how it's connected and figure out
> why "the smoke got out." I'll look at the schematic
> again later and see IF I can give you a better answer.
>
>
> 73 Joe
> WB7UQU
>
> _____
> From: rkings1956 rkings1956@... <mailto:rkings1956%40yahoo.com>>
> To: TS-520_820_530_830@yahoogroups.com

> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Tuesday, February 5, 2013 1:33 PM
> Subject: [TS-520_820_530_830] Kenwood AT-200
>
>
>
> Hi,I recently purchased a Kenwood AT-200 and after setting up a new
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>
> Robert
> KD6FSK
>
> [Non-text portions of this message have been removed]
>
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>
> =======
> Email scanned by PC Tools - No viruses or spyware found.
> (Email Guard: 9.0.0.2308, Virus/Spyware Database: 6.21020)
> http://www.pctools.com
> <http://www.pctools.com/?cclick=EmailFooterClean_51>
> =======

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Yahoo! Groups Links

[Non-text portions of this message have been removed]

40848. RE: [TS-520_820_530_830] Kenwood AT-200

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 06:16:36 UTC
From: Robert Reyes
Topic: 40836 Message: 40848

Thanks Dave, I checked the link you sent and it was very informative. I'm waiting till tomorrow
to download the service maunual for the AT-200 to detemine the voltage on the capacitor.

--- On Wed, 2/6/13, fpath fpath <fpath@...> wrote:

From: fpath fpath <fpath@...>
Subject: RE: [TS-520_820_530_830] Kenwood AT-200
To: ts-520_820_530_830@yahoogroups.com
Date: Wednesday, February 6, 2013, 4:53 AM

G'day

I would suggest having a look at the markings on the actual capacitor, I would assume that it would be an Type 1 RF type capacitor. Have a look at the attached link for an explanation on capacitor types. If you replace it with the incorrect type then you'll end up with trouble again. Spend the time in researching before putting just any type of cap in.

http://www.qsl.net/i0jx/capacit.html

73s
Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: rkings1956@...
Date: Tue, 5 Feb 2013 21:33:05 +0000
Subject: [TS-520_820_530_830] Kenwood AT-200

Hi,I recently purchased a Kenwood AT-200 and after setting up a new antenna (G5RV Jr) and tuning, I noticed smoke coming from the tuner. I opened it up and saw that a capacitor (from the schematic, C6 25p) was fried. I would like some advice on what C6 25p actually means, where and how I can obtain a replacement. Here is the link to the Operating Manual which has a copy of the schematic.
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Robert
KD6FSK

[Non-text portions of this message have been removed]

Yahoo! Groups Links

[Non-text portions of this message have been removed]

40849. Re: [TS-520_820_530_830] Kenwood AT-200

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 06:23:16 UTC
From: Robert Reyes
Topic: 40836 Message: 40849

Thanks, I do not have a power amp attached to my kenwood just barefoot (100w).
I'll receive the service manual tomorrow and will research the value and voltage of the Capacitor.

--- On Wed, 2/6/13, bmusser4@... <bmusser4@...> wrote:

From: bmusser4@... <bmusser4@...>
Subject: Re: [TS-520_820_530_830] Kenwood AT-200
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, February 6, 2013, 5:07 AM

Also we are going to guess that the tunner was set up directly between the kenwood transmitter and the antenna and not behind a power amp. That tuner is only good for 200 watts.

Sent from my Verizon Wireless Droid

[Non-text portions of this message have been removed]

Yahoo! Groups Links

[Non-text portions of this message have been removed]

40850. RE: TS820S VFO strange behavior !!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 11:58:48 UTC
From: Prof. Arnaldo Coro Antich
Topic: 40850 Message: 40850

Dear amigos of this list >
My more than thirty years old Kenwood TS820S is not working OK anymore.
The VFO frequency's behavior is really strange.
Let me explain what is happening so that maybe some of you may offer
advice about the possible cause and how to repair it.
I start up the rig on 40 meters and it will work OK up to about 7070
kiloHertz
receiving and transmitting, then I move up the VFO frequency to the national
Cuban net frequency of 7110 kiloHertz, and it receives OK there, but if
I push the PTT switch on the microphone, it stops receiving and only noise
comes out of the loudspeaker !!!
Then the mystery continues... I move down the VFO frequency to 7040
kiloHertz
and it again starts receiving OK.... then I move it up to 7110 kiloHertz and
it receives well, but if the PTT is actuated, once again the reception
and transmission
are totally lost and a wideband noise is all that is heard !!!
Will appreciate any advice on where to look for the problem...
AH, one additional data, the red LED marked VFO on the top of the front
panel
lights up intermittently and vanishes when the problem happens.

Thanks in advance for the help !!!

73 and DX
Arnie Coro
CO2KK
La Habana, Cuba

40851. SM-220 and TS520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 16:18:51 UTC
From: n3kvl
Topic: 40851 Message: 40851

Hello ALL,

I recently acquired a SM-220 for the TS-520S and will perform the work necessary for the Band scope.

Does anyone have any good pics of this performed on the rig? I did receive the SM-220 manual and it is explained, but a good photo would help, I think.

Thanks
Archie

40852. Re: [TS-520_820_530_830] Kenwood AT-200

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 17:31:04 UTC
From: Joseph Stiles
Topic: 40836 Message: 40852

Dave & Robert

  An out of town friend of mine has an AT-200. He looked at his....the cap in question only has "25" marked on it, is NOT polarized, more rectangle than round, appears to be a "bypass type" set up. He can not find any other markings/nomenclature on the cap itself

73 Joe
WB7UQU

From: fpath fpath <fpath@hotmail.com>
To: ts-520_820_530_830@yahoogroups.com
Sent: Tuesday, February 5, 2013 8:53 PM
Subject: RE: [TS-520_820_530_830] Kenwood AT-200

G'day

I would suggest having a look at the markings on the actual capacitor, I would assume that it would be an Type 1 RF type capacitor. Have a look at the attached link for an explanation on capacitor types. If you replace it with the incorrect type then you'll end up with trouble again. Spend the time in researching before putting just any type of cap in.

http://www.qsl.net/i0jx/capacit.html

73s
Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: rkings1956@...
Date: Tue, 5 Feb 2013 21:33:05 +0000
Subject: [TS-520_820_530_830] Kenwood AT-200

Hi,I recently purchased a Kenwood AT-200 and after setting up a new antenna (G5RV Jr) and tuning, I noticed smoke coming from the tuner. I opened it up and saw that a capacitor (from the schematic, C6 25p) was fried. I would like some advice on what C6 25p actually means, where and how I can obtain a replacement. Here is the link to the Operating Manual which has a copy of the schematic.
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Robert
KD6FSK

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Yahoo! Groups Links

[Non-text portions of this message have been removed]

40853. Re: [TS-520_820_530_830] RE: TS820S VFO strange behavior !!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 17:39:41 UTC
From: Joseph Stiles
Topic: 40850 Message: 40853

Arnie,

  Does this problem also happen on other bands when the VFO is tuned to about the same area or, just on 40m? Does this also happen if you are in "CW" mode and use the send/rcv switch to key the transmitter when the VFO is tuned to the same area?

   It may be as simple as cleaning the "wiper" on the inside of the VFO.

  I also do enjoy your show...when I can hear it....I have lots of QRN at times

73 Joe
WB7UQU

From: Prof. Arnaldo Coro Antich <coro@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, February 6, 2013 3:58 AM
Subject: [TS-520_820_530_830] RE: TS820S VFO strange behavior !!!

Dear amigos of this list >
My more than thirty years old Kenwood TS820S is not working OK anymore.
The VFO frequency's behavior is really strange.
Let me explain what is happening so that maybe some of you may offer
advice about the possible cause and how to repair it.
I start up the rig on 40 meters and it will work OK up to about 7070
kiloHertz
receiving and transmitting, then I move up the VFO frequency to the national
Cuban net frequency of 7110 kiloHertz, and it receives OK there, but if
I push the PTT switch on the microphone, it stops receiving and only noise
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and it again starts receiving OK.... then I move it up to 7110 kiloHertz and
it receives well, but if the PTT is actuated, once again the reception
and transmission
are totally lost and a wideband noise is all that is heard !!!
Will appreciate any advice on where to look for the problem...
AH, one additional data, the red LED marked VFO on the top of the front
panel
lights up intermittently and vanishes when the problem happens.

Thanks in advance for the help !!!

73 and DX
Arnie Coro
CO2KK
La Habana, Cuba

[Non-text portions of this message have been removed]

40854. Re: [TS-520_820_530_830] Kenwood AT-200

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 17:54:08 UTC
From: John Davidson
Topic: 40836 Message: 40854

Seeing it is across the transmitter input, and can see a hundred or more Watts of RF power, it would prudent to go with at least 600V or 1 kV rating for this capacitor.

From: Robert Reyes <rkings1956@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, February 6, 2013 12:59 AM
Subject: Re: [TS-520_820_530_830] Kenwood AT-200

Thanks Joe, I ordered a service manual and should be able to downloaded tomorrow. I can't determine what the voltage from the schematic.
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.

[Non-text portions of this message have been removed]

40855. Re: [TS-520_820_530_830] Kenwood AT-200

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 18:13:02 UTC
From: Bob Macklin
Topic: 40836 Message: 40855

C6 is on the output of the SWR bridge. It is the input capacitor of the matching network. It sees the full voltage of the transmitter output.

It is 25pf.

This is a 27pf 1000V capacitor:
598-CDV19EF270JO3F

You can buy it from Mouser. Buy several! If you have spares you probably will not need them.

The AT-200 uses 1300V tuning capacitors.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: Joseph Stiles
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, February 06, 2013 9:31 AM
Subject: Re: [TS-520_820_530_830] Kenwood AT-200

Dave & Robert

An out of town friend of mine has an AT-200. He looked at his....the cap in question only has "25" marked on it, is NOT polarized, more rectangle than round, appears to be a "bypass type" set up. He can not find any other markings/nomenclature on the cap itself

73 Joe
WB7UQU

From: fpath fpath fpath@...>
To: ts-520_820_530_830@yahoogroups.com
Sent: Tuesday, February 5, 2013 8:53 PM
Subject: RE: [TS-520_820_530_830] Kenwood AT-200

G'day

I would suggest having a look at the markings on the actual capacitor, I would assume that it would be an Type 1 RF type capacitor. Have a look at the attached link for an explanation on capacitor types. If you replace it with the incorrect type then you'll end up with trouble again. Spend the time in researching before putting just any type of cap in.

http://www.qsl.net/i0jx/capacit.html

73s
Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: rkings1956@...
Date: Tue, 5 Feb 2013 21:33:05 +0000
Subject: [TS-520_820_530_830] Kenwood AT-200

Hi,I recently purchased a Kenwood AT-200 and after setting up a new antenna (G5RV Jr) and tuning, I noticed smoke coming from the tuner. I opened it up and saw that a capacitor (from the schematic, C6 25p) was fried. I would like some advice on what C6 25p actually means, where and how I can obtain a replacement. Here is the link to the Operating Manual which has a copy of the schematic.
http://www.kg6haf.com/downloads/AT-200_Manual.pdf.

Robert
KD6FSK

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Yahoo! Groups Links

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[Non-text portions of this message have been removed]

40856. Re: [TS-520_820_530_830] RE: TS820S VFO strange behavior !!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 18:27:25 UTC
From: Dave & Loraine
Topic: 40850 Message: 40856

Hi Arnaldo

"AH, one additional data, the red LED marked VFO on the top of the front panel lights up intermittently and vanishes when the problem happens."

Loose VFO jumper plug on rear panel?
Also, give the VFO VC wiper a shot of Deoxit then run the VFO up and down a few times.
My 820 had same problem. Easily fixed.
73 Dave f4eyk

40857. TS830S: intermittent shift in display and operation frequency

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 19:16:38 UTC
From: ravnpeter@ymail.com
Topic: 40857 Message: 40857

The procedure to fix intermittent shift in display and operating frequency on the TS830S is well described in the TS830S Survival Guide 6.6, but it doesn't tell how to lift the PCB on top of the sink so that you can insert a pair of tooth-lock washers between the heat sink and the PCB foil. I have removed the 5 screws holding the AFR/AVR unit, but can't swing the board over because of the transistors attached to the heatsink. Should I remove the screws holding them?
Any advice will be appreciated.
Thanks.
Peter, OZ8CTH

40858. Re: [TS-520_820_530_830] Kenwood AT-200

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 20:05:00 UTC
From: Jim S
Topic: 40836 Message: 40858

A lot of things will affect the VSWR on any antenna, not just a G5RV Jr. The height above ground, the proximity to various objects such as buildings, large signs, water towers, etc. etc. We do not know the particular case of our original posters setup, or exactly what frequency he was attempting to operate on when the cap blew. But I stand by my original post.

BTW, the thought about using RF graded caps is also a good one .

Jim AG3Y

On 2/5/2013 9:28 PM, KB1TCD wrote:
>
> I use a g5RV Jr antenna with my 830 and don't use a tuner.
> I do use an antenna analiser to make sure the SWR is under 3:1 before I
> try to tune the radio.
> Thus far I have had less than 2:1 on all bands.
>
> 73 de Jose Douglas - KB1TCD
>
> On 2/5/2013 5:43 PM, Jim S wrote:
> > I would suspect that "the smoke got out" because you were trying to tune
> > a G5RV Jr. on a band on which that antenna has a high VSWR. In spite of
> > claims to the contrary, many antennas which are derived from the
> > original G5RV antenna do not have a fairly low VSWR on all bands, and
> > your combination of frequency, and tuner settings probably put a higher
> > voltage on the cap than it was made for.
> >
> > When replacing the 25pf cap, use the highest rated voltage device you
> > can find, and use low power when attempting to tune for a match, next
> > time. You might want to check to see what the actual VSWR of that
> > antenna actually is at the frequency you are attempting to operate it
> > at. I am betting it is through the roof!
> >
> > Jim AG3Y
>
>
>
>
>
>
>
> =======
> Email scanned by PC Tools - No viruses or spyware found.
> (Email Guard: 9.0.0.2308, Virus/Spyware Database: 6.21020)
> http://www.pctools.com

> <http://www.pctools.com/?cclick=EmailFooterClean_51>
> =======

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40859. Re: The display takes some time before it reads any rf

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 20:38:17 UTC
From: kd0fds
Topic: 40810 Message: 40859

tube warm up?

I know that I usually panic when I see low/no output when I forget that I don't have the heaters turned on.

--- In TS-520_820_530_830@yahoogroups.com, "kcripps@..." wrote:
>
> I just got this ts 520 and I find that it takes a bit of time before
> The display registers any rf. any one might know why this is
>

40860. RE: [TS-520_820_530_830] Re: The display takes some time before it reads any rf

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 21:07:54 UTC
From: fpath fpath
Topic: 40810 Message: 40860

G'day,

Sorry I missed this post earlier first place to start is by removing the aux relay under VOX board and clean the contacts.

Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: kd0fds@...
Date: Wed, 6 Feb 2013 20:38:17 +0000
Subject: [TS-520_820_530_830] Re: The display takes some time before it reads any rf

tube warm up?

I know that I usually panic when I see low/no output when I forget that I don't have the heaters turned on.

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>
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> The display registers any rf. any one might know why this is
>

[Non-text portions of this message have been removed]

40861. RE: [TS-520_820_530_830] Kenwood AT-200

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 21:17:18 UTC
From: fpath fpath
Topic: 40836 Message: 40861

Robert,

Glad you found the link informative this is what the group was set up for, help one another and learn as you go, a great Ham put me onto that site and it has been a continual help and have given it to many people. Don't go less in volts going higher is better but try and stay at same voltage rating, the engineers at Kenwood designed the ATU and made allowences, I am a stuffed shirt about keeping same values and voltage rated components.

Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: rkings1956@...
Date: Tue, 5 Feb 2013 22:16:36 -0800
Subject: RE: [TS-520_820_530_830] Kenwood AT-200

Thanks Dave, I checked the link you sent and it was very informative. I'm waiting till tomorrow
to download the service maunual for the AT-200 to detemine the voltage on the capacitor.

--- On Wed, 2/6/13, fpath fpath fpath@...> wrote:

From: fpath fpath fpath@...>
Subject: RE: [TS-520_820_530_830] Kenwood AT-200
To: ts-520_820_530_830@yahoogroups.com
Date: Wednesday, February 6, 2013, 4:53 AM

G'day

I would suggest having a look at the markings on the actual capacitor, I would assume that it would be an Type 1 RF type capacitor. Have a look at the attached link for an explanation on capacitor types. If you replace it with the incorrect type then you'll end up with trouble again. Spend the time in researching before putting just any type of cap in.

http://www.qsl.net/i0jx/capacit.html

73s
Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: rkings1956@...
Date: Tue, 5 Feb 2013 21:33:05 +0000
Subject: [TS-520_820_530_830] Kenwood AT-200

Hi,I recently purchased a Kenwood AT-200 and after setting up a new antenna (G5RV Jr) and tuning, I noticed smoke coming from the tuner. I opened it up and saw that a capacitor

(from the schematic, C6 25p) was fried. I would like some advice on what C6 25p actually means, where and how I can obtain a replacement. Here is the link to the Operating Manual which has a copy of the schematic.
http://www.kg6haf.com/downloads/AT-200_Manual.pdf.

Robert
KD6FSK

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Yahoo! Groups Links

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40862. External digital readout for my 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 22:35:13 UTC
From: Jan Servaites
Topic: 40862 Message: 40862

Has anyone connect an external freq. readout to the 820? I see a good feasiblity to connect inside the Counter Ass'y Unit (x60-1020-001) using a frequency counter and do an off-set of 1mhz, and that it should read out the 820's freq correctly. Has anyone else seen that? I'll check that out this weekend when I have some time.
I expect a $40 freq counter kit would work just fine for an external readout and with a larger digits on a backlighted LCD.
Jan N8CBX

40863. Re: Kenwood tube education 1 of 4

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 21:44:09 UTC
From: rolandver109
Topic: 40802 Message: 40863

Thank you Dave ! The Tube lessons explains a lot. I have forgotten almoust everything that I once learned about tubes.
Anode, Cathode grid and heater I know - but how they work and how tho dimension the components - that is al gone.

I am now rather sure that there is something wrong around the driver tube.
Last test in CW mode - measured 3W output at 14.2MHz and front the front instument measured:
HW 800
IP 120
ALC Zero
RF Zero.

I have ordered a set of tubes and also think that I will take the RF-bord out, clean it and check the caps around the driver tube and also check the band switch and Ohm-mesure the switch element.

73 /Roland

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath wrote:
>
>
>
>
>
>
> G'Day All,
>
> The below information was given to me to help me learn, hopefully this will assist in the continual matched verus unmatched tube issue and help with a better understanding of what is occurring inside our radios
>
> Class of operation of our Kenwood driver tube and final tubes
>
> In our Kenwood hybrid rigs the Driver Stage and Final Stage tubes are biased to ensure Linear Operation so that we reproduce the SSB audio without distortion. By distortion we are not so much concerned about voice intelligibility as we are the generation of Intermodulation Distortion or IMD products. Although, severe distortion of the SSB envelope can result in a gravelly sound to the voice it is not a primary concern. The Human voice is composed of many tones. When the SSB envelope is distorted a great number of new frequencies are generated consisting of sum and difference frequencies of all the harmonics. These are spaced equal to the difference frequencies and extend outside the original channel width. The Tank circuit does a good job of attenuating

the even order products especially the 2nd harmonic, but does not adequately suppress the odd order products and the 3rd order is especially troublesome as it lies close to the operating frequency. If you look at the TS-830 transmitter specs you can see that the 3rd order suppression is > than -36dB. This means the 3rd order products are > -36dB below a single tone of a 2-tone test.
> In summary the Kenwood hybrid tubes are biased to permit linear operation and per the terms of our licenses we are required to operate the transmitter in a matter that does not result in IMD products that cause adjacent frequency interference ie splatter or buck-shot.
> The Class of an RF amplifier is defined by the degrees of conduction of Plate current flow in relation to the RF input sine wave cycle of the driving signal. Class A means Plate current flows for 360 degrees or 100% of the input RF sine wave cycle. Class A has a maximum theoretical efficiency of approx 50% and in practice 25% to 30% is attainable. We establish the Class of operation by setting the control grid or grid 1 negative dc bias voltage to produce a certain resting plate current on the load line. Some refer to this current as the "bias". This is not correct. Bias is not current it is voltage and with vacuum tubes normally a negative voltage is applied to a control grid nearest the cathode. We apply a negative voltage to the control grid to cut the tubes off in RX mode and a lower bias voltage level to turn them on to a certain current level (Class) in TX mode. The bias is the negative voltage level that produces this level of current. This resting current is called the quiescent current or Q-point.
>
>
> 73's
> Dave
> VK5PDL
>
>
>
>
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>
> [Non-text portions of this message have been removed]
>

40864. DG-5

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 22:56:22 UTC
From: Rick
Topic: 20533 Message: 40864

I just completed the task of insuring all of the plated through holes in my DG-5 are solidly connecting the two sides of the circuit board. I once again cleaned thoroughly the RCA connectors on the back of the DG-5 and on the adaptor unit I had to install on my TS-520. Unfortunately, I still get the exact same problem. The two decimal points appear in the "Display" screen but nothing more. I am getting the proper signals into the unit. I tested the input cables one at a time with the DG-5 counter which works flawlessly. I downloaded the service manual but it's not a real good copy and I'm not a real good digital tech. I would very much appreciate any suggestions, ideas or past experiences anyone might have.

Thanks and best 73,
Rick K5IAR

40865. Re: [TS-520_820_530_830] Kenwood AT-200

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 23:35:31 UTC
From: Robert Reyes
Topic: 40836 Message: 40865

Thanks Joe, Bob Macklin was able to recommend the type of capacitor I'll need and the Item #
with a link to Mouser to order it.

--- On Wed, 2/6/13, Joseph Stiles <stilesjoseph@...> wrote:

From: Joseph Stiles <stilesjoseph@...>
Subject: Re: [TS-520_820_530_830] Kenwood AT-200
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Date: Wednesday, February 6, 2013, 5:31 PM

Dave & Robert

  An out of town friend of mine has an AT-200. He looked at his....the cap in question only has "25" marked on it, is NOT polarized, more rectangle than round, appears to be a "bypass type" set up. He can not find any other markings/nomenclature on the cap itself

73 Joe
WB7UQU

From: fpath fpath <fpath@...>
To: ts-520_820_530_830@yahoogroups.com
Sent: Tuesday, February 5, 2013 8:53 PM
Subject: RE: [TS-520_820_530_830] Kenwood AT-200

G'day

I would suggest having a look at the markings on the actual capacitor, I would assume that it would be an Type 1 RF type capacitor. Have a look at the attached link for an explanation on capacitor types. If you replace it with the incorrect type then you'll end up with trouble again. Spend the time in researching before putting just any type of cap in.

http://www.qsl.net/i0jx/capacit.html

73s
Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: rkings1956@...
Date: Tue, 5 Feb 2013 21:33:05 +0000
Subject: [TS-520_820_530_830] Kenwood AT-200

Hi,I recently purchased a Kenwood AT-200 and after setting up a new antenna (G5RV Jr) and tuning, I noticed smoke coming from the tuner. I opened it up and saw that a capacitor (from the schematic, C6 25p) was fried. I would like some advice on what C6 25p actually

means, where and how I can obtain a replacement. Here is the link to the Operating Manual which has a copy of the schematic.
http://www.kg6haf.com/downloads/AT-200_Manual.pdf.

Robert
KD6FSK

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40866. TS-830 Weak Recieve but nice sounding

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 22:06:07 UTC
From: rolandver109
Topic: 40866 Message: 40866

Hi
My TS-830S sold to me as "for parts" are now partley up and running. Recieve is working and I am sure that I will get transmitt to work to after al hints I have got from members on this forum.

Recive is working on al bands but I experience the sound level, or RF-level a bit weak. The S-meter does´nt move a lot. Compared to a Peseus Reciever measuring "+10" on a signal , the TS-830S measures "7".(Same antenna). When puting in the RF level for "9" according to the service manual it measured "5".

is this normal for a TS-830? Is it out of aligment, or is there something wrong somwhere?

What suprised me is how good the TS830S sounds. The reciever noise is low and the soundon SSB is more pleasant than the Perseus SDR. Also, I can read weak signals almoust as good as the Perseus SDR with its DSP processing. Amazing - For the moment I prefer listen to SSB on the TS-830 trough its internal speaker than listen to the Perseus tough a pair of monitor speakers. Only think to remark on is that I here some hum when listening to very weak signals as I have to set AF to almoust100%.

73/Roland

40867. Re: TS-830S - 1W power out?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 21:27:26 UTC
From: rolandver109
Topic: 40802 Message: 40867

Many Thanks Joe

1 - Rely is cheked and cleaned OK

2 - The resistor in the DRV-line was a capacitor, I tought it was a VDR resistor first. It is (wrong?) connected to R38/L36 - i think the one who did this suspected that C29 was faulty but connected the new cap on the wrong side of R38.

3 - I think the finals is OK but something is wrong around the driver tube.

73/Roland

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles wrote:
>
> Roland,
>
> Â Â Congrats on getting it to rcv. There is also another relay...under the metal shield next to the final board. The relay..RL-1 on the AF board can and will cause lots
> of malfunctions as it controls numerous functions on RCV & XMIT.
>
> Â Â I have not idea why someone would put a diode in the SG line....or why really put a resistor in the DRV line.
> Â Â What board are you refering to when you say "on the drive board" Do you mean the RF board?
>
> Â Â Â With rig on, "heater" on, rig in RCV:Â final amplifier tubes (6146B) pins 1, 4 & 6 = 0.0vdc
> Â Â Â

Â Â Â Â Â pinÂ Â 3 = 266vdc
> Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
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Â Â Â Â Â pinÂ Â 5 = -106vdc(minus 106vdc)
> Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
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Â Â Â Â Â pinÂ Â 7 = 0.0 vdc
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Â Â Â Â Â pinÂ Â 8 = 0.0vdc
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Â Â Â Â Â "SG" = 266vdcÂ (same as pin 3)
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Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
Â Â Â Â Â "FG" = -106vdc (same as pin 5)
>
> Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
Â Â Â Â Â Â These voltages may be slightly higher or
lower on your rig..but should be close.
>
> Look close at the rectifier board to see if the wiring is different
from the schematic...moving a couple of wires is a common QRO mod.

> Check for proper voltages there too
>
> Do you a a service manual?Â If not, look at Gordon's web site:
Â Â n6wk.comÂ Â you can find a service manual. Look on Pg
44 is gives you levels
> Â to check for RX/TX.
>
> Â The HV of 670 is a bit low...but would not account for the 1
watt? Is the 1 watt on all bands?? You could have multiple failures,
including, bad 12by7a driver,
> Â bad final tubes. A very common problem is also a loose/cracked
band switch coupler...it's on the end of the band switch shaft just
inside the final cage. If cracked/broken
> S-22 in the final cage will be out of sync with the rest of the TX
chain and may also be a cause of your problem. With rig OFF and
UNPLUGGED...let sit for a bit,
> remove top and bottom cover, then remove screws holding the cover over
the final cage. With a good INSULATED tool, touch from the top of the
wire wound
> ceramic form between the top of the two final tubes to ground...then
check with a meter set on VDC from there to ground to make sure there
are no volts there.
> Remove most forward tube...use a bright light light and inspect the
white nylon coupler for cracks. If cracked...it can not be "glued" it
will have to be replaced.
> To check for proper orientation/alignment put band selector knob
pointing to "10"...the shaft has flats the should be on the left and
right...the rounded parts should
> be on top and bottom. Each wafer has a white plastic center
section...with a small circular depression...all those should face to
the LEFT. Looking at the final cage
> area...the small shaft on the the tank coil selector switch which
connects to the band switch connector should show one "flat" facing down
or "6 o'clock and the
> other at 3 o'clock...looking right back at you. Any other orientation
...it's outta whack. The set screws are 1.5mm there are 4
>
> The fine copper wire on the ceramic form should be relatively clean
and bright...if it's dark/black...this indicate severe overheating.
>
> Â Â Â

> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: rolandver109
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Saturday, February 2, 2013 1:13 PM
> Subject: [TS-520_820_530_830] TS-830S - 1W power out?
>
>
> Â
> Hi
> I am now a pride owner of a Trio TS-830S, bought it as a" for parts â□" no receive, no transmit" After 6 hours of work receive is working, but transmit is only 1W? (Cleaning the relay on the AF board fixed receive)
> There where a couple of strange mods in the final that I could not figure out the meaning of.
> - A diode, 1N4007 type, in series with final "SG" power input
> - A NTC resistor in series with final "DRV" drive inoutÂ´
> - A short wire on drive bord R36/LR36 to "DRV"
> I removed al of this but does get no more than 1W output power when tuned against a 50 Ohm dummy load (in series with a power meter).
> (I am rather new to "tubes" â□" I am basically a analog "transistor man.)
> I have measured the following signals / voltages_
> - Final drive input â□" 2.5V RMS AC, max 4.2V RMS AC(full AFC), 14.2MHz (Measured with a digital osc.)
> - Final tubes pin 5, receive 95V, and transmit 50V
> - Final tubes pin 4, receive 239V, and transmit 207V
> Anode voltage is about 670V as I remember.
>
> What could be wrong â□" where should I begin the fault tracing? Is the drive voltage sufficient?
>
> Regards/Roland
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

40868. 8 pin din plug and the kenwood 830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 23:46:45 UTC
From: Brian
Topic: 40868 Message: 40868

Will the standard 8 pin din plug work ok with the kenwood 830 s vfo or is it a special type of plug.

If it is a special type,do you know exactly what I need.

Thank you kb4mng

40869. RE: [TS-520_820_530_830] TS-830 Weak Recieve but nice sounding

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 23:48:10 UTC
From: fpath fpath
Topic: 40866 Message: 40869

Roland,

Sounds like your on the way to having this radio working. I would perform the alignment procedure as per service manual, only thing is I clean the tip of my soldering iron before attempting to turn any of the slugs, using the clean hot iron tip place it on each slug and allow to heat momentarily, this can save headaches from splitting\cracking slugs. I have found that on all my hybird radios 28Mhz is a little selfish with S meter readings. It may also help to clean all the pots and swtiches on front panel with some de-oxit, mkaing sure to run the switch pot through its entire range a number of times, then give it a good blast of compressed air to clean out. Same with the band switch wafer, give them a good clean and then blast of compressed air. I'd do the cleaning first then the alignment procedure. Please keep us informed on how you go

73's
Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: landrover@...
Date: Wed, 6 Feb 2013 22:06:07 +0000
Subject: [TS-520_820_530_830] TS-830 Weak Recieve but nice sounding

Hi
My TS-830S sold to me as "for parts" are now partley up and running. Recieve is working and I am sure that I will get transmitt to work to after al hints I have got from members on this forum.

Recive is working on al bands but I experience the sound level, or RF-level a bit weak. The S-meter does?nt move a lot. Compared to a Peseus Reciever measuring "+10" on a signal , the TS-830S measures "7".(Same antenna). When puting in the RF level for "9" according to the service manual it measured "5".

is this normal for a TS-830? Is it out of aligment, or is there something wrong somwhere?

What suprised me is how good the TS830S sounds. The reciever noise is low and the soundon SSB is more pleasant than the Perseus SDR. Also, I can read weak signals almoust as good as the Perseus SDR with its DSP processing. Amazing - For the moment I prefer listen to SSB on the TS-830 trough its internal speaker than listen to the Perseus tough a pair of monitor speakers. Only think to remark on is that I here some hum when listening to very weak signals as I have to set AF to almoust100%.

73/Roland

[Non-text portions of this message have been removed]

40870. Re: [TS-520_820_530_830] 8 pin din plug and the kenwood 830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 23:58:37 UTC
From: n6wk@...
Topic: 40868 Message: 40870

it takes the 262 degree 8 pin DIN. The 270 Degree (Common) one will NOT
work

73,
Gordon
N6WK

On 2/6/2013 3:46 PM, Brian wrote:
>
> Will the standard 8 pin din plug work ok with the kenwood 830 s vfo or
> is it a special type of plug.
>
> If it is a special type,do you know exactly what I need.
>
> Thank you kb4mng
>
>

40871. Re: [TS-520_820_530_830] Kenwood AT-200

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 23:47:24 UTC
From: Robert Reyes
Topic: 40836 Message: 40871

Thanks Bob, I ordered the capacitor you recommended from Mouser it will take a few days . I will let you know how it turns out. Does this capacitor have a positive and negative post ?
Thanks again for the great info.
Robert

--- On Wed, 2/6/13, Bob Macklin <macklinbob@...> wrote:

From: Bob Macklin <macklinbob@...>
Subject: Re: [TS-520_820_530_830] Kenwood AT-200
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, February 6, 2013, 6:13 PM

C6 is on the output of the SWR bridge. It is the input capacitor of the matching network. It sees the full voltage of the transmitter output.

It is 25pf.

This is a 27pf 1000V capacitor:
598-CDV19EF270JO3F

You can buy it from Mouser. Buy several! If you have spares you probably will not need them.

The AT-200 uses 1300V tuning capacitors.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

  ----- Original Message -----
  From: Joseph Stiles
  To: TS-520_820_530_830@yahoogroups.com
  Sent: Wednesday, February 06, 2013 9:31 AM
  Subject: Re: [TS-520_820_530_830] Kenwood AT-200

  Dave & Robert

    An out of town friend of mine has an AT-200. He looked at his....the cap in question only has "25" marked on it, is NOT polarized, more rectangle than round, appears to be a "bypass type" set up. He can not find any other markings/nomenclature on the cap itself

  73 Joe
  WB7UQU

  From: fpath fpath fpath@...m>

To: ts-520_820_530_830@yahoogroups.com
Sent: Tuesday, February 5, 2013 8:53 PM
Subject: RE: [TS-520_820_530_830] Kenwood AT-200

G'day

I would suggest having a look at the markings on the actual capacitor, I would assume that it would be an Type 1 RF type capacitor. Have a look at the attached link for an explanation on capacitor types. If you replace it with the incorrect type then you'll end up with trouble again. Spend the time in researching before putting just any type of cap in.

http://www.qsl.net/i0jx/capacit.html

73s
Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: rkings1956@...
Date: Tue, 5 Feb 2013 21:33:05 +0000
Subject: [TS-520_820_530_830] Kenwood AT-200

Hi,I recently purchased a Kenwood AT-200 and after setting up a new antenna (G5RV Jr) and tuning, I noticed smoke coming from the tuner. I opened it up and saw that a capacitor (from the schematic, C6 25p) was fried. I would like some advice on what C6 25p actually means, where and how I can obtain a replacement. Here is the link to the Operating Manual which has a copy of the schematic.
http://www.kg6haf.com/downloads/AT-200_Manual.pdf.

Robert
KD6FSK

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Yahoo! Groups Links

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[Non-text portions of this message have been removed]

Yahoo! Groups Links

[Non-text portions of this message have been removed]

40872. RE: [TS-520_820_530_830] Kenwood AT-200

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 23:48:27 UTC
From: Robert Reyes
Topic: 40836 Message: 40872

Thanks

--- On Wed, 2/6/13, fpath fpath <fpath@...> wrote:

From: fpath fpath <fpath@...>
Subject: RE: [TS-520_820_530_830] Kenwood AT-200
To: ts-520_820_530_830@yahoogroups.com
Date: Wednesday, February 6, 2013, 9:17 PM

Robert,

Glad you found the link informative this is what the group was set up for, help one another and learn as you go, a great Ham put me onto that site and it has been a continual help and have given it to many people. Don't go less in volts going higher is better but try and stay at same voltage rating, the engineers at Kenwood designed the ATU and made allowences, I am a stuffed shirt about keeping same values and voltage rated components.

Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: rkings1956@...
Date: Tue, 5 Feb 2013 22:16:36 -0800
Subject: RE: [TS-520_820_530_830] Kenwood AT-200

Thanks Dave, I checked the link you sent and it was very informative. I'm waiting till tomorrow
to download the service maunual for the AT-200 to detemine the voltage on the capacitor.

--- On Wed, 2/6/13, fpath fpath fpath@...> wrote:

From: fpath fpath fpath@...>
Subject: RE: [TS-520_820_530_830] Kenwood AT-200
To: ts-520_820_530_830@yahoogroups.com
Date: Wednesday, February 6, 2013, 4:53 AM

G'day

I would suggest having a look at the markings on the actual capacitor, I would assume that it would be an Type 1 RF type capacitor. Have a look at the attached link for an explanation on capacitor types. If you replace it with the incorrect type then you'll end up with trouble again. Spend the time in researching before putting just any type of cap in.

http://www.qsl.net/i0jx/capacit.html

73s
Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: rkings1956@...
Date: Tue, 5 Feb 2013 21:33:05 +0000
Subject: [TS-520_820_530_830] Kenwood AT-200

Hi,I recently purchased a Kenwood AT-200 and after setting up a new antenna (G5RV Jr) and tuning, I noticed smoke coming from the tuner. I opened it up and saw that a capacitor (from the schematic, C6 25p) was fried. I would like some advice on what C6 25p actually means, where and how I can obtain a replacement. Here is the link to the Operating Manual which has a copy of the schematic.
http://www.kg6haf.com/downloads/AT-200_Manual.pdf.

Robert
KD6FSK

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Yahoo! Groups Links

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Yahoo! Groups Links

[Non-text portions of this message have been removed]

40873. Re: [TS-520_820_530_830] Kenwood AT-200

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-06 23:49:02 UTC
From: Robert Reyes
Topic: 40836 Message: 40873

thanks John

--- On Wed, 2/6/13, John Davidson <k8jd@...> wrote:

From: John Davidson <k8jd@...>
Subject: Re: [TS-520_820_530_830] Kenwood AT-200
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Date: Wednesday, February 6, 2013, 5:54 PM

Seeing it is across the transmitter input, and can see a hundred or more Watts of RF power, it would prudent to go with at least 600V or 1 kV rating for this capacitor.

_____
From: Robert Reyes <rkings1956@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, February 6, 2013 12:59 AM
Subject: Re: [TS-520_820_530_830] Kenwood AT-200

Thanks Joe, I ordered a service manual and should be able to downloaded tomorrow. I can't determine what the voltage from the schematic.
Recent Activity: * New Members 14 * New Photos 7
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.

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[Non-text portions of this message have been removed]

40874. Re: [TS-520_820_530_830] Kenwood AT-200

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-07 00:32:32 UTC
From: KB1TCD
Topic: 40836 Message: 40874

Jim,

I agree with you 100%.
We had a GAP Eagle antenna attached to the side of the house, very close
to the shack, a few years ago.
Not only was SWR out of control, but we had RF dancing all over the shack.
We moved the antenna about 100 ft away from the shack to our barn and
not only was the RF issue gone but we got 1:2 SWR or better on all bands
the GAP is supposed to do. No tuner required.

With regards to our G5RV Jr, we have it up 45 ft or more and choke it
before it hits the ground.
We run about 150 ft of coax to get to the shack.
We're out in the woods, so nothing to cause much interference.
Again, we get 2:1 or less SWR on 40 to 6m and less than 3:1 on 160 and
80 on the G5RV Jr.

73 de Jose Douglas - KB1TCD

On 2/6/2013 3:05 PM, Jim S wrote:
> A lot of things will affect the VSWR on any antenna, not just a G5RV
> Jr. The height above ground, the proximity to various objects such as
> buildings, large signs, water towers, etc. etc. We do not know the
> particular case of our original posters setup, or exactly what frequency
> he was attempting to operate on when the cap blew. But I stand by my
> original post.
>
> BTW, the thought about using RF graded caps is also a good one .
>
> Jim AG3Y
>
>
> On 2/5/2013 9:28 PM, KB1TCD wrote:
>> >
>> >I use a g5RV Jr antenna with my 830 and don't use a tuner.
>> >I do use an antenna analiser to make sure the SWR is under 3:1 before I
>> >try to tune the radio.
>> >Thus far I have had less than 2:1 on all bands.
>> >
>> >73 de Jose Douglas - KB1TCD

40875. Re: [TS-520_820_530_830] Kenwood AT-200

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-07 00:56:12 UTC
From: Bob Macklin
Topic: 40836 Message: 40875

This capacitor is not polarized.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Robert Reyes
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, February 06, 2013 3:47 PM
Subject: Re: [TS-520_820_530_830] Kenwood AT-200

Thanks Bob, I ordered the capacitor you recommended from Mouser it will take a few days . I will let you know how it turns out. Does this capacitor have a positive and negative post ?
Thanks again for the great info.
Robert

--- On Wed, 2/6/13, Bob Macklin macklinbob@...> wrote:

From: Bob Macklin macklinbob@...>
Subject: Re: [TS-520_820_530_830] Kenwood AT-200
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, February 6, 2013, 6:13 PM

C6 is on the output of the SWR bridge. It is the input capacitor of the matching network. It sees the full voltage of the transmitter output.

It is 25pf.

This is a 27pf 1000V capacitor:
598-CDV19EF270JO3F

You can buy it from Mouser. Buy several! If you have spares you probably will not need them.

The AT-200 uses 1300V tuning capacitors.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: Joseph Stiles
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, February 06, 2013 9:31 AM
Subject: Re: [TS-520_820_530_830] Kenwood AT-200

Dave & Robert

An out of town friend of mine has an AT-200. He looked at his....the cap in question only has "25" marked on it, is NOT polarized, more rectangle than round, appears to be a "bypass type" set up. He can not find any other markings/nomenclature on the cap itself

73 Joe
WB7UQU

From: fpath fpath fpath@...>
To: ts-520_820_530_830@yahoogroups.com
Sent: Tuesday, February 5, 2013 8:53 PM
Subject: RE: [TS-520_820_530_830] Kenwood AT-200

G'day

I would suggest having a look at the markings on the actual capacitor, I would assume that it would be an Type 1 RF type capacitor. Have a look at the attached link for an explanation on capacitor types. If you replace it with the incorrect type then you'll end up with trouble again. Spend the time in researching before putting just any type of cap in.

http://www.qsl.net/i0jx/capacit.html

73s
Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: rkings1956@...
Date: Tue, 5 Feb 2013 21:33:05 +0000
Subject: [TS-520_820_530_830] Kenwood AT-200

Hi,I recently purchased a Kenwood AT-200 and after setting up a new antenna (G5RV Jr) and tuning, I noticed smoke coming from the tuner. I opened it up and saw that a capacitor (from the schematic, C6 25p) was fried. I would like some advice on what C6 25p actually means, where and how I can obtain a replacement. Here is the link to the Operating Manual which has a copy of the schematic.
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Robert
KD6FSK

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Yahoo! Groups Links

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Yahoo! Groups Links

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40876. Re: TS820S VFO strange behavior !!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-07 02:57:18 UTC
From: roberteleazer@rocketmail.com
Topic: 40850 Message: 40876

Arnie:

As has been sugegsted, a dirty variable capacitor wiper or even something like a spiderweb in the VFO can cause such problems. I have found this is best fixed by removing the VFO, taking off the cover and cleaning and carefully lubing the tuning cap, paying special attention to the pivot points. You might get lucky if you spray a little lube such as LPS-1 in through the little hole in the top and work the knob back and forth.

Also, relative to the problem occurring when you hit the transmit button, it is common on the TS-820S for the carrier module to get off frequency. This will result in the signal disappearing or even shifting to a different frequency. You should consider doing alignment of the USB and LSB frequencies in that module.

Good luck!

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "Prof. Arnaldo Coro Antich" wrote:
>
> Dear amigos of this list >
> My more than thirty years old Kenwood TS820S is not working OK anymore.
> The VFO frequency's behavior is really strange.
> Let me explain what is happening so that maybe some of you may offer
> advice about the possible cause and how to repair it.
> I start up the rig on 40 meters and it will work OK up to about 7070
> kiloHertz
> receiving and transmitting, then I move up the VFO frequency to the national
> Cuban net frequency of 7110 kiloHertz, and it receives OK there, but if
> I push the PTT switch on the microphone, it stops receiving and only noise
> comes out of the loudspeaker !!!
> Then the mystery continues... I move down the VFO frequency to 7040
> kiloHertz
> and it again starts receiving OK.... then I move it up to 7110 kiloHertz and
> it receives well, but if the PTT is actuated, once again the reception
> and transmission
> are totally lost and a wideband noise is all that is heard !!!
> Will appreciate any advice on where to look for the problem...
> AH, one additional data, the red LED marked VFO on the top of the front
> panel
> lights up intermittently and vanishes when the problem happens.
>
> Thanks in advance for the help !!!
>
> 73 and DX
> Arnie Coro

> CO2KK
> La Habana, Cuba
>

40877. Re: [TS-520_820_530_830] Kenwood AT-200

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-07 02:48:27 UTC
From: Robert Reyes
Topic: 40836 Message: 40877

Jose, you stated that you have your G5RV Jr, 45ft or more and choked it before it hit the ground. Could you explain what you mean choking it before it hits the ground. I have a G5RV Jr. the center is hanging from the inside of a tree about 32feet high a slight ground slop behind the tree. I'm using 100ft of LMR 400 and the dipole is an inverted V. I don't have a Ladder/Coax transition 4:1 Balun do you think I need one ?
Robert
--- On Thu, 2/7/13, KB1TCD <kb1tcd@...> wrote:

From: KB1TCD <kb1tcd@gmail.com>
Subject: Re: [TS-520_820_530_830] Kenwood AT-200
To: TS-520_820_530_830@yahoogroups.com
Date: Thursday, February 7, 2013, 12:32 AM

Jim,

I agree with you 100%.
We had a GAP Eagle antenna attached to the side of the house, very close
to the shack, a few years ago.
Not only was SWR out of control, but we had RF dancing all over the shack.
We moved the antenna about 100 ft away from the shack to our barn and
not only was the RF issue gone but we got 1:2 SWR or better on all bands
the GAP is supposed to do. No tuner required.

With regards to our G5RV Jr, we have it up 45 ft or more and choke it
before it hits the ground.
We run about 150 ft of coax to get to the shack.
We're out in the woods, so nothing to cause much interference.
Again, we get 2:1 or less SWR on 40 to 6m and less than 3:1 on 160 and
80 on the G5RV Jr.

73 de Jose Douglas - KB1TCD

On 2/6/2013 3:05 PM, Jim S wrote:
> A lot of things will affect the VSWR on any antenna, not just a G5RV
> Jr. The height above ground, the proximity to various objects such as
> buildings, large signs, water towers, etc. etc. We do not know the
> particular case of our original posters setup, or exactly what frequency
> he was attempting to operate on when the cap blew. But I stand by my
> original post.
>
> BTW, the thought about using RF graded caps is also a good one .
>
> Jim AG3Y
>
>
> On 2/5/2013 9:28 PM, KB1TCD wrote:

>> >
>> >I use a g5RV Jr antenna with my 830 and don't use a tuner.
>> >I do use an antenna analiser to make sure the SWR is under 3:1 before I
>> >try to tune the radio.
>> >Thus far I have had less than 2:1 on all bands.
>> >
>> >73 de Jose Douglas - KB1TCD

Yahoo! Groups Links

[Non-text portions of this message have been removed]

40878. Re: [TS-520_820_530_830] 8 pin din plug and the kenwood 830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-07 04:31:36 UTC
From: Joseph Stiles
Topic: 40868 Message: 40878

kb4mng,

  Those "DIN" plugs are at times difficult to find. Ken Kemski k4eaa.com has the correct plugs and wire as a kit. A new seller showed up on EBAY the other day selling already put together ones for about $30.00....Fredrich Electronics...

73 Joe
WB7UQU

From: "n6wk@..." <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, February 6, 2013 3:58 PM
Subject: Re: [TS-520_820_530_830] 8 pin din plug and the kenwood 830

it takes the 262 degree 8 pin DIN. The 270 Degree (Common) one will NOT work

73,
Gordon
N6WK

On 2/6/2013 3:46 PM, Brian wrote:
>
> Will the standard 8 pin din plug work ok with the kenwood 830 s vfo or
> is it a special type of plug.
>
> If it is a special type,do you know exactly what I need.
>
> Thank you kb4mng
>
>

Yahoo! Groups Links

[Non-text portions of this message have been removed]

40879. Re: [TS-520_820_530_830] Re: TS-830S - 1W power out?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-07 04:41:42 UTC
From: Joseph Stiles
Topic: 40802 Message: 40879

Roland,

Glad I could help you out a bit. I saw that you intend to remove the RF board. Just make sure to make sure that when you put it back in all the wafers, shaft etc., are aligned correctly. If you have any question about that...I can help. Get a strong light and some magnification and take a good look on the foil side of the driver tube socket. I have seen many cracked solder joints here. Check also all the "molex" connectors on the foil side for dry/cracked solder joints...tough up any that appear questionable. I have been rather successful with cleaning the RF board in a soak of warm water and "DAWN" dish detergent and some light agitation with a long SOFT bristle brush....through rinse and complete drying. It really does work good

73 Joe
WB7UQU

From: rolandver109 <landrover@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, February 6, 2013 1:27 PM
Subject: [TS-520_820_530_830] Re: TS-830S - 1W power out?

Many Thanks Joe

1 - Rely is cheked and cleaned OK

2 - The resistor in the DRV-line was a capacitor, I tought it was a VDR resistor first. It is (wrong?) connected to R38/L36 - i think the one who did this suspected that C29 was faulty but connected the new cap on the wrong side of R38.

3 - I think the finals is OK but something is wrong around the driver tube.

73/Roland

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles wrote:
>
> Roland,
>
> Â Â Congrats on getting it to rcv. There is also another relay...under the metal shield next to the final board. The relay..RL-1 on the AF board can and will cause lots
> of malfunctions as it controls numerous functions on RCV & XMIT.
>
> Â Â I have not idea why someone would put a diode in the SG line....or why really put a resistor in the DRV line.
> Â Â What board are you refering to when you say "on the drive

board" Do you mean the RF board?
>
> Â Â Â With rig on, "heater" on, rig in RCV:Â final
amplifier tubes (6146B) pins 1, 4 & 6 = 0.0vdc
> Â Â Â Â Â Â Â Â Â Â Â Â Â Â
Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
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Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
Â Â Â Â Â pinÂ Â 2 = 0.0vdc
> Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
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Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
Â Â Â Â Â pinÂ Â 3 = 266vdc
> Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
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Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
Â Â Â Â Â pinÂ Â 5 = -106vdc(minus 106vdc)
> Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
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Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
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Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
Â Â Â Â Â pinÂ Â 7 = 0.0 vdc
> Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
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Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
Â Â Â Â Â pinÂ Â 8 = 0.0vdc
>
> Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
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Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
Â Â Â Â Â "SG" = 266vdcÂ (same as pin 3)
> Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
Â Â Â Â Â "FG" = -106vdc (same as pin 5)
>
> Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â
Â Â Â Â Â Â These voltages may be slightly higher or
lower on your rig..but should be close.
>
> Look close at the rectifier board to see if the wiring is different
from the schematic...moving a couple of wires is a common QRO mod.
> Check for proper voltages there too
>
> Do you a a service manual?Â If not, look at Gordon's web site:
Â Â n6wk.comÂ Â you can find a service manual. Look on Pg
44 is gives you levels
> Â to check for RX/TX.
>
> Â The HV of 670 is a bit low...but would not account for the 1
watt? Is the 1 watt on all bands?? You could have multiple failures,
including, bad 12by7a driver,
> Â bad final tubes. A very common problem is also a loose/cracked
band switch coupler...it's on the end of the band switch shaft just
inside the final cage. If cracked/broken
> S-22 in the final cage will be out of sync with the rest of the TX
chain and may also be a cause of your problem. With rig OFF and
UNPLUGGED...let sit for a bit,
> remove top and bottom cover, then remove screws holding the cover over
the final cage. With a good INSULATED tool, touch from the top of the
wire wound
> ceramic form between the top of the two final tubes to ground...then
check with a meter set on VDC from there to ground to make sure there
are no volts there.
> Remove most forward tube...use a bright light light and inspect the
white nylon coupler for cracks. If cracked...it can not be "glued" it
will have to be replaced.
> To check for proper orientation/alignment put band selector knob
pointing to "10"...the shaft has flats the should be on the left and
right...the rounded parts should
> be on top and bottom. Each wafer has a white plastic center
section...with a small circular depression...all those should face to
the LEFT. Looking at the final cage
> area...the small shaft on the the tank coil selector switch which

connects to the band switch connector should show one "flat" facing down
or "6 o'clock and the
> other at 3 o'clock...looking right back at you. Any other orientation
...it's outta whack. The set screws are 1.5mm there are 4
>
> The fine copper wire on the ceramic form should be relatively clean
and bright...if it's dark/black...this indicate severe overheating.
>
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>
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> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: rolandver109
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Saturday, February 2, 2013 1:13 PM
> Subject: [TS-520_820_530_830] TS-830S - 1W power out?
>
>
> Â
> Hi
> I am now a pride owner of a Trio TS-830S, bought it as a" for parts
â€" no receive, no transmit" After 6 hours of work receive is
working, but transmit is only 1W? (Cleaning the relay on the AF board
fixed receive)
> There where a couple of strange mods in the final that I could not
figure out the meaning of.
> - A diode, 1N4007 type, in series with final "SG" power input
> - A NTC resistor in series with final "DRV" drive inoutÂ´
> - A short wire on drive bord R36/LR36 to "DRV"
> I removed al of this but does get no more than 1W output power when
tuned against a 50 Ohm dummy load (in series with a power meter).
> (I am rather new to "tubes" â€" I am basically a analog
"transistor man.)
> I have measured the following signals / voltages_
> - Final drive input â€" 2.5V RMS AC, max 4.2V RMS AC(full
AFC), 14.2MHz (Measured with a digital osc.)
> - Final tubes pin 5, receive 95V, and transmit 50V
> - Final tubes pin 4, receive 239V, and transmit 207V

> Anode voltage is about 670V as I remember.
>
> What could be wrong â€" where should I begin the fault tracing?
Is the drive voltage sufficient?
>
> Regards/Roland
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

40880. Re: [TS-520_820_530_830] TS-830 Weak Recieve but nice sounding

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-07 04:47:01 UTC
From: Joseph Stiles
Topic: 40866 Message: 40880

Roland,

  It is rather likely that at least a "basic" alignment stated in the "operators manual" is in order. If possible a full alignment. I can do most of the procedures
in the service manual except the "band pass filters" I do not have a sweep generator. There is a way to do this but I need to get full directions from another member.
He uses "spectrogram" and sound card and computer.

73 Joe
WB7UQU

From: rolandver109 <landrover@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, February 6, 2013 2:06 PM
Subject: [TS-520_820_530_830] TS-830 Weak Recieve but nice sounding

Hi
My TS-830S sold to me as "for parts" are now partley up and running. Recieve is working and I am sure that I will get transmitt to work to after al hints I have got from members on this forum.

Recive is working on al bands but I experience the sound level, or RF-level a bit weak. The S-meter does´nt move a lot. Compared to a Peseus Reciever measuring "+10" on a signal , the TS-830S measures "7".(Same antenna). When puting in the RF level for "9" according to the service manual it measured "5".

is this normal for a TS-830? Is it out of aligment, or is there something wrong somwhere?

What suprised me is how good the TS830S sounds. The reciever noise is low and the soundon SSB is more pleasant than the Perseus SDR. Also, I can read weak signals almoust as good as the Perseus SDR with its DSP processing. Amazing - For the moment I prefer listen to SSB on the TS-830 trough its internal speaker than listen to the Perseus tough a pair of monitor speakers. Only think to remark on is that I here some hum when listening to very weak signals as I have to set AF to almoust100%.

73/Roland

[Non-text portions of this message have been removed]

40881. Re: DG-5

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-07 05:02:02 UTC
From: Scott Griffin
Topic: 20533 Message: 40881

Hi Rick,

I had a similar problem with a DG-5 I owned, and found it was due to a bridge between the traces on the circuit board. Check the board carefully, with a magnifying glass if possible, and look for any traces that have been bridged. Hope you can solve this problem. 73s, Scott, N6CIC

[Non-text portions of this message have been removed]

40882. RE: [TS-520_820_530_830] Re: DG-5

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-07 13:28:45 UTC
From: Rick
Topic: 20533 Message: 40882

Thanks, Scott. It worked great about a year ago when I took the station down. When I put it back up a few days ago all worked well EXCEPT the DG-5 display. I normally use a round light with a large 3X magnifier in it, but I may go to an even stronger hand held magnifying glass to check for bridges.

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Scott Griffin
Sent: Wednesday, February 06, 2013 11:02 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: DG-5

Hi Rick,

I had a similar problem with a DG-5 I owned, and found it was due to a bridge between the traces on the circuit board. Check the board carefully, with a magnifying glass if possible, and look for any traces that have been bridged. Hope you can solve this problem.
73s, Scott, N6CIC

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[Non-text portions of this message have been removed]

40883. TS-520SE

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-07 15:06:09 UTC
From: Scott
Topic: 4279 Message: 40883

I have just acquired this rig in what appears to be in near mint condition. This rig has not been powered up for 3-4 years.
Looking for the groups thoughts here. Replace the PS filter caps before power up? Anything else?

Also looking for a working DG-5 display for this rig.

All comments appreciated.

73,
Scott
kj4bpv

40884. Re: [TS-520_820_530_830] TS-520SE

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-07 15:31:45 UTC
From: dennis hatch
Topic: 4279 Message: 40884

Power it up with and "autotransformer" OR VARIAC with a 100W incandesant light bulb (if you can still find one).... and slowly bring the ac voltage up to 120 V. The light bulb acts as a current limiting device. This will reform the electrolytic capacitors and save you a bunch of $ and labor. Nine times out of ten your caps will reform and be fine..... Why re-cap when you do not have to?

--- On Thu, 2/7/13, Scott <kj4bpv@...> wrote:

From: Scott <kj4bpv@...>
Subject: [TS-520_820_530_830] TS-520SE
To: TS-520_820_530_830@yahoogroups.com
Date: Thursday, February 7, 2013, 9:06 AM

I have just acquired this rig in what appears to be in near mint condition. This rig has not been powered up for 3-4 years.
Looking for the groups thoughts here. Replace the PS filter caps before power up? Anything else?

Also looking for a working DG-5 display for this rig.

All comments appreciated.

73,
Scott
kj4bpv

Yahoo! Groups Links

[Non-text portions of this message have been removed]

40885. Re: [TS-520_820_530_830] TS-830 Weak Recieve but nice sounding

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-07 15:41:22 UTC
From: dennis hatch
Topic: 40866 Message: 40885

Roland: Make sure all your power supply voltages are correct. If I remember right, there is an AGC voltage adjust on the audio board that is critical for correct receiver sensitiviity and S-meter operation..... I wouldn't mess with any tuning until you verify correct voltages are present. 73's Dennis

--- On Wed, 2/6/13, Joseph Stiles <stilesjoseph@...> wrote:

From: Joseph Stiles <stilesjoseph@...>
Subject: Re: [TS-520_820_530_830] TS-830 Weak Recieve but nice sounding
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Date: Wednesday, February 6, 2013, 10:47 PM

Roland,

  It is rather likely that at least a "basic" alignment stated in the "operators manual" is in order. If possible a full alignment. I can do most of the procedures
in the service manual except the "band pass filters" I do not have a sweep generator. There is a way to do this but I need to get full directions from another member.
He uses "spectrogram" and sound card and computer.

73 Joe
WB7UQU

From: rolandver109 <landrover@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, February 6, 2013 2:06 PM
Subject: [TS-520_820_530_830] TS-830 Weak Recieve but nice sounding

Hi
My TS-830S sold to me as "for parts" are now partley up and running. Recieve is working and I am sure that I will get transmitt to work to after al hints I have got from members on this forum.

Recive is working on al bands but I experience the sound level, or RF-level a bit weak. The S-meter does´nt move a lot. Compared to a Peseus Reciever measuring "+10" on a signal , the TS-830S measures "7".(Same antenna). When puting in the RF level for "9" according to the service manual it measured "5".

is this normal for a TS-830? Is it out of aligment, or is there something wrong somwhere?

What suprised me is how good the TS830S sounds. The reciever noise is low and the soundon SSB is more pleasant than the Perseus SDR. Also, I can read weak signals almoust as good as the Perseus SDR with its DSP processing. Amazing - For the moment I prefer listen to SSB on the TS-830 trough its internal speaker than listen to the Perseus tough a pair of monitor speakers. Only think to remark on is that I here some hum when listening to very weak signals as I have to set AF to almoust100%.

73/Roland

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Yahoo! Groups Links

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40886. Re: [TS-520_820_530_830] Kenwood AT-200

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-07 16:09:08 UTC
From: KB1TCD
Topic: 40836 Message: 40886

Hi Robert,

Our antenna is the G5RV Jr from Radiowavz, we use it as a dipole.
My YL and I picked it up a couple of summers ago at HRO in New Hampshire
on sale for $25; we were very proud of each other, walked away from HRO
spending only $25!
It does not have a Ladder/Coax transition baun.
What we did do is choke it by making a coax loop four times around four
feet before the coax reaches the ground.
From there the coax runs into the basement, about 100 ft from the
antenna, and up to the shack which is in my home office; using another
50 ft of coax.

73 de Jose Douglas, KB1TCD

On 2/6/2013 9:48 PM, Robert Reyes wrote:
> Jose, you stated that you have your G5RV Jr, 45ft or more and choked it before it hit the ground. Could you explain what you mean choking it before it hits the ground. I have a G5RV Jr. the center is hanging from the inside of a tree about 32feet high a slight ground slop behind the tree. I’m using 100ft of LMR 400 and the dipole is an inverted V. I don’t have a Ladder/Coax transition 4:1 Balun do you think I need one ?
> Robert

40887. Re: [TS-520_820_530_830] TS-520SE

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-07 16:17:32 UTC
From: KB1TCD
Topic: 4279 Message: 40887

My YL and I were at a lighting store last week and they sold 100 watt incandescent light bulbs.
I questioned them about that and was told that Congress had put the legislature limiting wattage of incandescent light bulbs in the back burner!!!???
Anyway, I replied that Congress has no business telling me what I can or cannot do, especially in the light bulb department.

73 de Jose Douglas KB1TCD

On 2/7/2013 10:31 AM, dennis hatch wrote:
> Power it up with and "autotransformer" OR VARIAC with a 100W incandesant light bulb (if you can still find one).... and slowly bring the ac voltage up to 120 V. The light bulb acts as a current limiting device. This will reform the electrolytic capacitors and save you a bunch of $ and labor. Nine times out of ten your caps will reform and be fine..... Why re-cap when you do not have to?
>
> --- On Thu, 2/7/13, Scott<kj4bpv@...> wrote:
>
>
> From: Scott<kj4bpv@...>
> Subject: [TS-520_820_530_830] TS-520SE
> To:TS-520_820_530_830@yahoogroups.com
> Date: Thursday, February 7, 2013, 9:06 AM
>
>
> I have just acquired this rig in what appears to be in near mint condition. This rig has not been powered up for 3-4 years.
> Looking for the groups thoughts here. Replace the PS filter caps before power up? Anything else?
>
> Also looking for a working DG-5 display for this rig.
>
> All comments appreciated.
>
> 73,
> Scott
> kj4bpv
>

40888. Re: [TS-520_820_530_830] Kenwood AT-200

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-07 18:26:57 UTC
From: John Davidson
Topic: 40836 Message: 40888

Without the ladderline and balun at the coax connection ,IT IS NO LONGER A G5RV ! Don't even call it that.
Now you have a single band dipole antenna resonant somewhat below the 60M band ! It would have unacceptable SWR on the other bands.
The choke wound in the middle of the coax line probably does nothing useful.
A better use of the dipole wire would be replace the coax with ladderline and run it directly to a balanced line tuner in the shack.
73...JD

From: Robert Reyes <rkings1956@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, February 6, 2013 9:48 PM
Subject: Re: [TS-520_820_530_830] Kenwood AT-200

Jose, you stated that you have your G5RV Jr, 45ft or more and choked it before it hit the ground. Could you explain what you mean choking it before it hits the >Yahoo! Groups Links

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40889. Re: [TS-520_820_530_830] Kenwood AT-200

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-07 18:52:27 UTC
From: KB1TCD
Topic: 40836 Message: 40889

John,

OK, so you are saying the antenna Radiowavz sells as a G5RV Jr is not
G5RV Jr at all, no wonder it was only $25!
I just put my MFJ-259 analiser to the antenna here at the shack:

40M 2.0:1
30m 1.8:1
20m 2.2:1
17m 1.8:1
15m 1.8:1
12m 2.2:1
10m 1.5:1
6m 1.2:1

I tried just below 60m as well as 60m and got way over 3.0:1 by the way...

Above values make it possible to tune the TS-830 without using an
antenna tuner.

Yes, the numbers may not make sense, but there they are, and the antenna
works great!

73 de Jose Douglas KB1TCD

On 2/7/2013 1:26 PM, John Davidson wrote:
> Without the ladderline and balun at the coax connection ,IT IS NO LONGER A G5RV ! Don't even call it that.
> Now you have a single band dipole antenna resonant somewhat below the 60M band ! It would have unacceptable SWR on the other bands.
> The choke wound in the middle of the coax line probably does nothing useful.
> A better use of the dipole wire would be replace the coax with ladderline and run it directly to a balanced line tuner in the shack.
> 73...JD

40890. Re: [TS-520_820_530_830] Kenwood AT-200

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-07 20:17:08 UTC
From: John Davidson
Topic: 40836 Message: 40890

You said you did not use the matching section of ladder line !
was this the case? If you retained the ladderline it IS a G5RV.
Low SWR may be due to your coax loss on the returned RF power.
 Still puzzling , if the flat top wire is actually 45 Ft long. I was way off.
The resonance is closer to 10.4 Mhz.
I lost your original posting but thought the length was given as 45 +/- feet.
I was thinking each HALF of the dipole was 45 ft. Not thinking clearly. sorry.
I am not sure of the length of a "Jr." antenna, the original G5RV was 3/2 wavelength Maybe 96-102 Ft long.

From: KB1TCD <kb1tcd@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, February 7, 2013 1:52 PM
Subject: Re: [TS-520_820_530_830] Kenwood AT-200

John,

OK, so you are saying the antenna Radiowavz sells as a G5RV Jr is not
G5RV Jr at all, no wonder it was only $25!
I just put my MFJ-259 analiser to the antenna here at the shack:

40M 2.0:1
30m 1.8:1
20m 2.2:1
17m 1.8:1
15m 1.8:1
12m 2.2:1
10m 1.5:1
6m 1.2:1

I tried just below 60m as well as 60m and got way over 3.0:1 by the way...

Above values make it possible to tune the TS-830 without using an
antenna tuner.

Yes, the numbers may not make sense, but there they are, and the antenna
works great!

73 de Jose Douglas KB1TCD

[Non-text portions of this message have been removed]

40891. Re: [TS-520_820_530_830] Kenwood AT-200

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-07 20:32:48 UTC
From: KB1TCD
Topic: 40836 Message: 40891

John,

Antenna does have 18 feet of ladder line and it measures 51 feet total.

73

Jose KB1TCD

On 2/7/2013 3:17 PM, John Davidson wrote:
> You said you did not use the matching section of ladder line !
> was this the case? If you retained the ladderline it IS a G5RV.
> Low SWR may be due to your coax loss on the returned RF power.
> Still puzzling , if the flat top wire is actually 45 Ft long. I was way off.
> The resonance is closer to 10.4 Mhz.
> I lost your original posting but thought the length was given as 45 ± feet.
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> I am not sure of the length of a "Jr." antenna, the original G5RV was 3/2 wavelength
Maybe 96-102 Ft long.
>

40892. Re: [TS-520_820_530_830] Kenwood AT-200

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-07 22:21:28 UTC
From: John Davidson
Topic: 40836 Message: 40892

I had it all wrong then, Please disregard my comments. I think I had someone else's info mixed in there.

From: KB1TCD <kb1tcd@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, February 7, 2013 3:32 PM
Subject: Re: [TS-520_820_530_830] Kenwood AT-200

John,

Antenna does have 18 feet of ladder line and it measures 51 feet total.

73

Jose KB1TCD

On 2/7/2013 3:17 PM, John Davidson wrote:
> You said you did not use the matching section of ladder line !
> was this the case? If you retained the ladderline it IS a G5RV.
> Low SWR may be due to your coax loss on the returned RF power.
> Still puzzling , if the flat top wire is actually 45 Ft long. I was way off.
> The resonance is closer to 10.4 Mhz.
> I lost your original posting but thought the length was given as 45 ± feet.
> I was thinking each HALF of the dipole was 45 ft. Not thinking clearly. sorry.
> I am not sure of the length of a "Jr." antenna, the original G5RV was 3/2 wavelength
Maybe 96-102 Ft long.
>

[Non-text portions of this message have been removed]

40893. 6146W tube "cap" question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-07 23:40:21 UTC
From: Mark L. Hammond
Topic: 40893 Message: 40893

Hi all,

A buddy of mine sent me some tubes. The cap (or nipple) of one of the 6146W tubes wiggles a little bit.

That CAN'T be good, can it? Meaning, is there any amount of wiggle that is OK? Or is it trash...

73,

Mark L. Hammond [N8MH]

40894. RE: [TS-520_820_530_830] 6146W tube "cap" question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-07 23:44:56 UTC
From: fpath fpath
Topic: 40893 Message: 40894

Mark
It could be as simple as the fixing compound has just broken away. Personally any that I have received like that, including new ones I usually use for target practice at 300 metres. I have found in the past the wire usually breaks or the vaccum has been breeched.

Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: marklhammond@...
Date: Thu, 7 Feb 2013 18:40:21 -0500
Subject: [TS-520_820_530_830] 6146W tube "cap" question

Hi all,

A buddy of mine sent me some tubes. The cap (or nipple) of one of the 6146W tubes wiggles a little bit.

That CAN'T be good, can it? Meaning, is there any amount of wiggle that is OK? Or is it trash...

73,

Mark L. Hammond [N8MH]

[Non-text portions of this message have been removed]

40895. RE: [TS-520_820_530_830] 6146W tube "cap" question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-08 00:54:55 UTC
From: Mark L. Hammond
Topic: 40893 Message: 40895

Thanks, Dave. It does look like the black compound isn't intact around the cap. I think I'll follow your example!

I'm thinking that there might be something wrong with the existing tubes---last thing I need is to introduce another variable in the equation.

73,

Mark N8MH

At 10:14 AM 2/8/2013 +1030, you wrote:

>Mark
>It could be as simple as the fixing compound has just broken away. Personally any that I have received like that, including new ones I usually use for target practice at 300 metres. I have found in the past the wire usually breaks or the vaccum has been breeched.
>
>Dave
>VK5PDL
>
>
>
>To: TS-520_820_530_830@yahoogroups.com
>From: marklhammond@...
>Date: Thu, 7 Feb 2013 18:40:21 -0500
>Subject: [TS-520_820_530_830] 6146W tube "cap" question
>
>
>
>
>
>Hi all,
>
>A buddy of mine sent me some tubes. The cap (or nipple) of one of the 6146W tubes wiggles a little bit.
>
>That CAN'T be good, can it? Meaning, is there any amount of wiggle that is OK? Or is it trash...
>
>73,
>
>Mark L. Hammond [N8MH]
>
>
>
>

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>
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[Non-text portions of this message have been removed]

40896. Re: [TS-520_820_530_830] 6146W tube "cap" question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-08 01:12:43 UTC
From: John Donnelly
Topic: 40893 Message: 40896

Mark,

When the cap cement has crystallized and disintegrated, it's almost always an indication that the tube has been way overheated.
Back in the late 60's, it was common to see the plate cap of the horizontal output tube of the larger screen color sets loose even
though the envelope was still intact and had a vacuum. In the worst cases, the envelope had been so hot that it was sucked in
and distorted. Lots of 6JE6 and 6JF6 outputs suffered that fate when the flyback or the damper shorted. I have a TS-520 sitting
downstairs right now that has one of it's 6146Bs sucked in. Both cathode resistors are shot and the plate choke is black. Some
rebuilding to do on this one before it is back on the air. I would assume that the outputs on your rig have been cherried up way too
much and the associated components should all be suspect now.

Jack Donnelly KV4JX
Ball Ground Video Productions
308 Calusa Place

Ball Ground, GA 30107
Phone 678-592-9974
www.ballgroundvideo.com

From: Mark L. Hammond <marklhammond@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, February 7, 2013 7:54 PM
Subject: RE: [TS-520_820_530_830] 6146W tube "cap" question

Thanks, Dave. It does look like the black compound isn't intact around the cap. I think I'll follow your example!

I'm thinking that there might be something wrong with the existing tubes---last thing I need is to introduce another variable in the equation.

73,

Mark N8MH

At 10:14 AM 2/8/2013 +1030, you wrote:

>Mark
>It could be as simple as the fixing compound has just broken away. Personally any that I have received like that, including new ones I usually use for target practice at 300 metres. I have found in the past the wire usually breaks or the vaccum has been breeched.
>

>Dave
>VK5PDL
>
>
>
>To: TS-520_820_530_830@yahoogroups.com
>From: marklhammond@...
>Date: Thu, 7 Feb 2013 18:40:21 -0500
>Subject: [TS-520_820_530_830] 6146W tube "cap" question
>
>
>
>
>
>Hi all,
>
>A buddy of mine sent me some tubes. The cap (or nipple) of one of the 6146W tubes wiggles a little bit.
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>That CAN'T be good, can it? Meaning, is there any amount of wiggle that is OK? Or is it trash...
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>73,
>
>Mark L. Hammond [N8MH]
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40897. Re: Kenwood TS-830 no output.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-08 01:27:15 UTC
From: w_cavendish
Topic: 40828 Message: 40897

I have tried the radio with a known good set of tubes and still no current reading.

I do have a watt meter hooked up and see no rf output.

I did check the resistance across the 470 ohm resistor and my meter reads close enough that I did not replace it. I will need to check R15 and R16.

When checking the rectifier board what voltages should I be seeing on what pins? My volt meter tops out at 500v and I do not want to cook it on accident.

Thanks again and 73's,
KF5NOL

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath wrote:
>
>
> Brian,
> Did you replace the 470 ohm resistor on the rect board? Also if you have no IP reading have a look at R15 56K on the rectifier board, I ususally replace r15 and r16 both are 56k. Have you checked on a watt meter if there is any output
>
> Dave
> VK5PDL
>
>
>

>

40898. Re: [TS-520_820_530_830] 6146W tube "cap" question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-08 01:52:37 UTC
From: Mark L. Hammond
Topic: 40893 Message: 40898

Hi Jack,

Thanks for the tips. I wasn't clear--the tube I was talking about is a New Old Stock 1987 era JAN GE 6146B that has apparently never been used---it didn't come out of my rig that way. Quite the opposite---I didn't want to put it in! hi hi

My rig has no visible evidence of abuse. The plate choke looks "shiny new" and while I did replace the four cathode resisors--they tested fine and looked OK. Precautionary, mostly...

Thanks,

Mark N8MH

At 05:12 PM 2/7/2013 -0800, you wrote:
>
>
>Mark,
>
>When the cap cement has crystallized and disintegrated, it's almost always an indication that the tube has been way overheated.
>Back in the late 60's, it was common to see the plate cap of the horizontal output tube of the larger screen color sets loose even
>though the envelope was still intact and had a vacuum. In the worst cases, the envelope had been so hot that it was sucked in
>and distorted. Lots of 6JE6 and 6JF6 outputs suffered that fate when the flyback or the damper shorted. I have a TS-520 sitting
>downstairs right now that has one of it's 6146Bs sucked in.Â Both cathode resistors are shot and the plate choke is black.Â Some
>rebuilding to do on this one before it is back on the air.Â I would assume that the outputs on your rig have been cherried up way too
>much and the associated components should all be suspect now.
>
>Jack DonnellyÂ Â Â Â Â Â Â Â KV4JX
>Ball Ground Video Productions
>308 Calusa Place
>
>Ball Ground, GA 30107
>Phone 678-592-9974
>www.ballgroundvideo.com
>
>_____
>From: Mark L. Hammond <mailto:marklhammond%40gmail.com>marklhammond@gmail.com>
>To: <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>Sent: Thursday, February 7, 2013 7:54 PM
>Subject: RE: [TS-520_820_530_830] 6146W tube "cap" question

>
>
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>Thanks, Dave. It does look like the black compound isn't intact around the cap. I think I'll follow your example!
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>I'm thinking that there might be something wrong with the existing tubes---last thing I need is to introduce another variable in the equation.
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>At 10:14 AM 2/8/2013 +1030, you wrote:
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>>It could be as simple as the fixing compound has just broken away. Personally any that I have received like that, including new ones I usually use for target practice at 300 metres. I have found in the past the wire usually breaks or the vaccum has been breeched.
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>>VK5PDL
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>>To: <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>>From: <mailto:marklhammond%40gmail.com>marklhammond@...
>>Date: Thu, 7 Feb 2013 18:40:21 -0500
>>Subject: [TS-520_820_530_830] 6146W tube "cap" question
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40899. Re: [TS-520_820_530_830] Re: Kenwood TS-830 no output.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-08 02:43:54 UTC
From: Joseph Stiles
Topic: 40828 Message: 40899

Brian,

Your volt meter should be fine...just don't test the HV at the"800" post on the rectifier board. Most of the voltages are printed on the board itself...right by the pins. You can double check by looking at the "XRAY VIEW" of the rectifier board in the service manual. Use bright light. Note: some voltages are AC but most are DC. BE VERY CAREFUL, YOU WILL BE WITHIN 1/2" OR SO OF 800VDC....LETHAL....as in SK

73 Joe
WB7UQU

From: w_cavendish <w_cavendish@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, February 7, 2013 5:27 PM
Subject: [TS-520_820_530_830] Re: Kenwood TS-830 no output.

I have tried the radio with a known good set of tubes and still no current reading.

I do have a watt meter hooked up and see no rf output.

I did check the resistance across the 470 ohm resistor and my meter reads close enough that I did not replace it. I will need to check R15 and R16.

When checking the rectifier board what voltages should I be seeing on what pins? My volt meter tops out at 500v and I do not want to cook it on accident.

Thanks again and 73's,
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> Brian,
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> Dave
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40900. Re: [TS-520_820_530_830] 6146W tube "cap" question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-08 03:18:38 UTC
From: Cliff White
Topic: 40893 Message: 40900

I got a used tube that had that problem, and was able to basically just solder it back on. Just make sure the wire is still there and it hasn't lost it's vacuum. Be sure to put it into a tube tester before putting it in a radio, though.

Respectfully,
Cliff White, W5CNW
w5cnw@... <mailto:w5cnw@...>
On 02/07/2013 07:52 PM, Mark L. Hammond wrote:
> Hi Jack,
>
> Thanks for the tips. I wasn't clear--the tube I was talking about is a New Old Stock 1987 era JAN GE 6146B that has apparently never been used---it didn't come out of my rig that way. Quite the opposite---I didn't want to put it in! hi hi
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> My rig has no visible evidence of abuse. The plate choke looks "shiny new" and while I did replace the four cathode resisors--they tested fine and looked OK. Precautionary, mostly...
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> Thanks,
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> Mark N8MH
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> At 05:12 PM 2/7/2013 -0800, you wrote:
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>> Mark,
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>> When the cap cement has crystallized and disintegrated, it's almost always an indication that the tube has been way overheated.
>> Back in the late 60's, it was common to see the plate cap of the horizontal output tube of the larger screen color sets loose even
>> though the envelope was still intact and had a vacuum. In the worst cases, the envelope had been so hot that it was sucked in
>> and distorted. Lots of 6JE6 and 6JF6 outputs suffered that fate when the flyback or the damper shorted. I have a TS-520 sitting
>> downstairs right now that has one of it's 6146Bs sucked in.Â Both cathode resistors are shot and the plate choke is black.Â Some
>> rebuilding to do on this one before it is back on the air.Â I would assume that the outputs on your rig have been cherried up way too
>> much and the associated components should all be suspect now.
>>
>> Jack DonnellyÂ Â Â Â Â Â Â Â KV4JX

>> Ball Ground Video Productions
>> 308 Calusa Place
>>
>> Ball Ground, GA 30107
>> Phone 678-592-9974
>> www.ballgroundvideo.com
>>
>> _____
>> From: Mark L. Hammond <mailto:marklhammond%40gmail.com>marklhammond@...>
>> To: <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>> Sent: Thursday, February 7, 2013 7:54 PM
>> Subject: RE: [TS-520_820_530_830] 6146W tube "cap" question
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>> Thanks, Dave. It does look like the black compound isn't intact around the cap. I think I'll follow your example!
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>> I'm thinking that there might be something wrong with the existing tubes---last thing I need is to introduce another variable in the equation.
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>> 73,
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>> Mark N8MH
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>> At 10:14 AM 2/8/2013 +1030, you wrote:
>>
>>> Mark
>>> It could be as simple as the fixing compound has just broken away. Personally any that I have received like that, including new ones I usually use for target practice at 300 metres. I have found in the past the wire usually breaks or the vaccum has been breeched.
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>>> Dave
>>> VK5PDL
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>>>
>>>
>>> To: <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>>> From: <mailto:marklhammond%40gmail.com>marklhammond@...
>>> Date: Thu, 7 Feb 2013 18:40:21 -0500
>>> Subject: [TS-520_820_530_830] 6146W tube "cap" question
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>>> Hi all,
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>>> That CAN'T be good, can it? Meaning, is there any amount of wiggle that is OK? Or is it trash...
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40901. Re: DG-5

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-08 06:00:34 UTC
From: Scott Griffin
Topic: 20533 Message: 40901

One more thing Rick. I am sure you have already done this, but re-check the connections from the input RCA jacks (Het, VFO, and Carrier) to make sure they are properly connected internally to the circuit board. In moving the unit perhaps an internal connection came loose. It has been some time since I worked on a DG-5, but that may be where I found either a bridge or a loose connection. Good luck with tracking down the problem.
73s, Scott, N6CIC

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40902. (no subject)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-08 09:51:23 UTC
From: Tony Baggett
Topic: 40902 Message: 40902

http://www.bonform.de/znotrmb/8ampdy4dd93s9jfiwzfvy0t1sf2kco2mfr1wrcpjr8bm1k5crm !!!

Tony Baggett

2/8/2013 10:51:22 AM

cd8zb53sj2cu5n2q7glxwgpafd0rq99gmdel3a76q5th

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40903. RE: [TS-520_820_530_830] 6146W tube "cap" question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-08 11:05:28 UTC
From: fpath fpath
Topic: 40893 Message: 40903

Mark,

Good idea, you'll have to refresh my memory relating to your actual problems, sorry cna't keep up with emails atm hihi

Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: marklhammond@...
Date: Thu, 7 Feb 2013 19:54:55 -0500
Subject: RE: [TS-520_820_530_830] 6146W tube "cap" question

Thanks, Dave. It does look like the black compound isn't intact around the cap. I think I'll follow your example!

I'm thinking that there might be something wrong with the existing tubes---last thing I need is to introduce another variable in the equation.

73,

Mark N8MH

At 10:14 AM 2/8/2013 +1030, you wrote:

>Mark
>It could be as simple as the fixing compound has just broken away. Personally any that I have received like that, including new ones I usually use for target practice at 300 metres. I have found in the past the wire usually breaks or the vaccum has been breeched.
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>From: marklhammond@...
>Date: Thu, 7 Feb 2013 18:40:21 -0500
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40904. Re: [TS-520_820_530_830] 6146W tube "cap" question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-08 11:44:05 UTC
From: Mark L. Hammond
Topic: 40893 Message: 40904

Hi Cliff,

Wow, that's a neat fix. Mine seems connected (and could be tested for continuity) Sadly, I don't have a tube tester (Other than the rig,and it's not worth the risk..hi hi). It's the vacuum question I guess.

Mark N8MH

At 09:18 PM 2/7/2013 -0600, you wrote:
>
>
>I got a used tube that had that problem, and was able to basically just
>solder it back on. Just make sure the wire is still there and it hasn't
>lost it's vacuum. Be sure to put it into a tube tester before putting it
>in a radio, though.
>
>Respectfully,
>Cliff White, W5CNW
><mailto:w5cnw%40arrl.net>w5cnw@... <mailto:w5cnw%40arrl.net>w5cnw@...>
>On 02/07/2013 07:52 PM, Mark L. Hammond wrote:
>> Hi Jack,
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>> Thanks for the tips. I wasn't clear--the tube I was talking about is a New Old Stock 1987 era JAN GE 6146B that has apparently never been used---it didn't come out of my rig that way. Quite the opposite---I didn't want to put it in! hi hi
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>> My rig has no visible evidence of abuse. The plate choke looks "shiny new" and while I did replace the four cathode resisors--they tested fine and looked OK. Precautionary, mostly...
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>> Thanks,
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>> Mark N8MH
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>> At 05:12 PM 2/7/2013 -0800, you wrote:
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>>> Mark,
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>>> When the cap cement has crystallized and disintegrated, it's almost always an indication that the tube has been way overheated.
>>> Back in the late 60's, it was common to see the plate cap of the horizontal output tube of the larger screen color sets loose even
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>>> Ball Ground, GA 30107
>>> Phone 678-592-9974
>>> www.ballgroundvideo.com
>>>
>>> _____
>>> From: Mark L. Hammond <mailto:marklhammond%40gmail.com>marklhammond@...>
>>> To: <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>>> Sent: Thursday, February 7, 2013 7:54 PM
>>> Subject: RE: [TS-520_820_530_830] 6146W tube "cap" question
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>>>> From: <mailto:marklhammond%40gmail.com>marklhammond@...
>>>> Date: Thu, 7 Feb 2013 18:40:21 -0500
>>>> Subject: [TS-520_820_530_830] 6146W tube "cap" question

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40905. Kenwood TWINS...JR599/TX599

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-08 12:48:37 UTC
From: Behiels JeanPierre
Topic: 40905 Message: 40905

Hi members

Could someone confirm me if the information downunder is the correct one for construction of a TWIN interconnection cable ?

Here's the pin config (pin # on 1 end, destination on the other, or N/C (not connected)

Pin # - Destination
1 - 1
2 - N/C
3 - 3
4 - 4
5 - NC
6 - N/C
7 - 7 AND 16
8 - 8
9 - 9
10 - 10
11 - 11
12 - N/C
13 - N/C
14 - N/C
15 - 15
16 - 16 AND 7

Regards Jean ON4AEF.

[Non-text portions of this message have been removed]

40906. Re: [TS-520_820_530_830] Kenwood TWINS...JR599/TX599

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-08 13:11:34 UTC
From: Kurt Cathcart, KR2C
Topic: 40905 Message: 40906

My manual operator manual and service manual show this:

2,11 jumpered
4,5 jumpered
7 to receiver
16 to receiver

I can open up the cable later and verify if needed.

On 2/8/2013 7:48 AM, Behiels JeanPierre wrote:
>
> Hi members
>
> Could someone confirm me if the information downunder is the correct
> one for construction of a TWIN interconnection cable ?
>
> Here's the pin config (pin # on 1 end, destination on the other, or
> N/C (not connected)
>
> Pin # - Destination
> 1 - 1
> 2 - N/C
> 3 - 3
> 4 - 4
> 5 - NC
> 6 - N/C
> 7 - 7 AND 16
> 8 - 8
> 9 - 9
> 10 - 10
> 11 - 11
> 12 - N/C
> 13 - N/C
> 14 - N/C
> 15 - 15
> 16 - 16 AND 7
>
> Regards Jean ON4AEF.
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40907. Re: [TS-520_820_530_830] 6146W tube "cap" question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-08 11:31:58 UTC
From: John Donnelly
Topic: 40893 Message: 40907

In that case, you can save it with some JB weld. Just make sure that the solder connection is good.

Jack Donnelly KV4JX
Ball Ground Video Productions
308 Calusa Place

Ball Ground, GA 30107
Phone 678-592-9974
www.ballgroundvideo.com

From: Mark L. Hammond <marklhammond@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, February 7, 2013 8:52 PM
Subject: Re: [TS-520_820_530_830] 6146W tube "cap" question

Hi Jack,

Thanks for the tips. I wasn't clear--the tube I was talking about is a New Old Stock 1987 era JAN GE 6146B that has apparently never been used---it didn't come out of my rig that way. Quite the opposite---I didn't want to put it in! hi hi

My rig has no visible evidence of abuse. The plate choke looks "shiny new" and while I did replace the four cathode resisors--they tested fine and looked OK. Precautionary, mostly...

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At 05:12 PM 2/7/2013 -0800, you wrote:
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>>From: marklhammond@...
>>Date: Thu, 7 Feb 2013 18:40:21 -0500
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40908. RE: [TS-520_820_530_830] Re: DG-5

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-08 13:44:00 UTC
From: Rick
Topic: 20533 Message: 40908

Thanks, Scott. I re-soldered each of the RCA jacks to be sure they were making good connection. It seems so strange to me that the "Counter" setting works perfectly and yet all I get are two decimals in the "Display" position. I assume this means the display portion is all working fine. I put that scope on each of the three connections (HET, CAR and VFO) and got waveforms for each. I'm not sure what I'm looking for so I don't know if they are the correct waveforms. As I move the scope through the circuitry using the Test Points (TP) I get pulses and various waveforms, so, I know something is getting through. However, not being well versed in digital equipment and not have a legible schematic (I have one on order) I'm not sure if what I am seeing on the scope is correct.

Thanks for your help and advice,..
73,
Rick / K5IAR

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Scott Griffin
Sent: Friday, February 08, 2013 12:01 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: DG-5

One more thing Rick. I am sure you have already done this, but re-check the connections from the input RCA jacks (Het, VFO, and Carrier) to make sure they are properly connected internally to the circuit board. In moving the unit perhaps an internal connection came loose. It has been some time since I worked on a DG-5, but that may be where I found either a bridge or a loose connection. Good luck with tracking down the problem.
73s, Scott, N6CIC

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40909. Re: [TS-520_820_530_830] 6146W tube "cap" question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-08 15:48:30 UTC
From: Mark Gilger
Topic: 40893 Message: 40909

I've used Super Glue and it seem to work good.

Mark

At 06:31 AM 2/8/2013, John Donnelly wrote:
>
>
>In that case, you can save it with some JB
>weld.Â Just make sure that the solder connection is good.
>
>Â
>
>Jack DonnellyÂ Â Â Â Â Â Â KV4JX
>Ball Ground Video Productions
>308 Calusa Place
>
>Ball Ground, GA 30107
>Phone 678-592-9974
>www.ballgroundvideo.com
>
>_____
>From: Mark L. Hammond <mailto:marklhammond%40gmail.com>marklhammond@...>
>To:
><mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>
>Sent: Thursday, February 7, 2013 8:52 PM
>Subject: Re: [TS-520_820_530_830] 6146W tube "cap" question
>
>
>Â
>Hi Jack,
>
>Thanks for the tips. I wasn't clear--the tube I
>was talking about is a New Old Stock 1987 era
>JAN GE 6146B that has apparently never been
>used---it didn't come out of my rig that way.
>Quite the opposite---I didn't want to put it in! hi hi
>
>My rig has no visible evidence of abuse. The
>plate choke looks "shiny new" and while I did
>replace the four cathode resisors--they tested
>fine and looked OK. Precautionary, mostly...
>
>Thanks,

>
>Mark N8MH
>
>At 05:12 PM 2/7/2013 -0800, you wrote:
> >
> >
> >Mark,
> >
> >When the cap cement has crystallized and
> disintegrated, it's almost always an indication
> that the tube has been way overheated.
> >Back in the late 60's, it was common to see
> the plate cap of the horizontal output tube of
> the larger screen color sets loose even
> >though the envelope was still intact and had a
> vacuum. In the worst cases, the envelope had been so hot that it was sucked in
> >and distorted. Lots of 6JE6 and 6JF6 outputs
> suffered that fate when the flyback or the
> damper shorted. I have a TS-520 sitting
> >downstairs right now that has one of it's
> 6146Bs sucked in.Ã☐ Both cathode resistors are
> shot and the plate choke is black.Ã☐ Some
> >rebuilding to do on this one before it is back
> on the air.Ã☐ I would assume that the outputs
> on your rig have been cherried up way too
> >much and the associated components should all be suspect now.
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> >Jack DonnellyÃ☐ Ã☐ Ã☐ Ã☐ Ã☐ Ã☐ Ã☐ KV4JX
> >Ball Ground Video Productions
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> >Ball Ground, GA 30107
> >Phone 678-592-9974
> >www.ballgroundvideo.com
> >
> >_____
> >From: Mark L. Hammond
> <mailto:marklhammond%40gmail.com>marklhammond@gmail.com>
> >To:
> <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>
> >Sent: Thursday, February 7, 2013 7:54 PM
> >Subject: RE: [TS-520_820_530_830] 6146W tube "cap" question
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> >
> >Ã☐
> >Thanks, Dave. It does look like the black
> compound isn't intact around the cap. I think I'll follow your example!
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> >I'm thinking that there might be something
> wrong with the existing tubes---last thing I
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> >At 10:14 AM 2/8/2013 +1030, you wrote:
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> >>It could be as simple as the fixing compound
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> I have found in the past the wire usually
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> >>Dave
> >>VK5PDL
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> >>
> >>To:
> <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
> >>From: <mailto:marklhammond%40gmail.com>marklhammond@...
> >>Date: Thu, 7 Feb 2013 18:40:21 -0500
> >>Subject: [TS-520_820_530_830] 6146W tube "cap" question
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> >>Hi all,
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> >>That CAN'T be good, can it? Meaning, is there
> any amount of wiggle that is OK? Or is it trash...
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> >>Mark L. Hammond [N8MH]
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40910. Transverter TV-502 pin cord

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-08 16:33:07 UTC
From: kd0fds
Topic: 40910 Message: 40910

I'm fianally getting around to building my transverter cables.
I have a question on the "pin cord."
My intent is to connect the TV-502 to my TS-820s.

According to the TS-820 manual:
"Connect the supplied pin-cords to the X VERTER OUT
jack of TS-820 and the TX IN jack of the transverter (2m
TX IN jack for TV-502)."

Can I use a high quality (monster) RCA cable for this "pin cord" or do I have to build my own with LRM400 or the like?

Thank you.

40911. Re: 6146W tube "cap" question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-08 16:40:25 UTC
From: crazhoveride33
Topic: 40893 Message: 40911

6146w is a military tube not gonna work if anyone has had success id like to know but they will not nutrilize you need 6146 b tubes for that awsome boat anchor
--- In TS-520_820_530_830@yahoogroups.com, John Donnelly wrote:
>
> In that case, you can save it with some JB weld.Â Just make sure that the solder connection is good.
>
>
> Â
>
> Jack DonnellyÂ Â Â Â Â Â Â Â KV4JX
> Ball Ground Video Productions
> 308 Calusa Place
>
> Ball Ground, GA 30107
> Phone 678-592-9974
> www.ballgroundvideo.com
>
>
>
> _____
> From: Mark L. Hammond
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, February 7, 2013 8:52 PM
> Subject: Re: [TS-520_820_530_830] 6146W tube "cap" question
>
>
> Â
> Hi Jack,
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> Thanks for the tips. I wasn't clear--the tube I was talking about is a New Old Stock 1987 era JAN GE 6146B that has apparently never been used---it didn't come out of my rig that way. Quite the opposite---I didn't want to put it in! hi hi
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> My rig has no visible evidence of abuse. The plate choke looks "shiny new" and while I did replace the four cathode resisors--they tested fine and looked OK. Precautionary, mostly...
>
> Thanks,
>
> Mark N8MH
>
> At 05:12 PM 2/7/2013 -0800, you wrote:
> >
> >
> >Mark,
> >

> >When the cap cement has crystallized and disintegrated, it's almost always an indication that the tube has been way overheated.
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> >though the envelope was still intact and had a vacuum. In the worst cases, the envelope had been so hot that it was sucked in
> >and distorted. Lots of 6JE6 and 6JF6 outputs suffered that fate when the flyback or the damper shorted. I have a TS-520 sitting
> >downstairs right now that has one of it's 6146Bs sucked in.Ã☐ Both cathode resistors are shot and the plate choke is black.Ã☐ Some
> >rebuilding to do on this one before it is back on the air.Ã☐ I would assume that the outputs on your rig have been cherried up way too
> >much and the associated components should all be suspect now.
> >
> >Jack DonnellyÃ☐ Ã☐ Ã☐ Ã☐ Ã☐ Ã☐ Ã☐ KV4JX
> >Ball Ground Video Productions
> >308 Calusa Place
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> >Ball Ground, GA 30107
> >Phone 678-592-9974
> >www.ballgroundvideo.com
> >
> >_____
> >From: Mark L. Hammond marklhammond@...>
> >To: TS-520_820_530_830@yahoogroups.com
> >Sent: Thursday, February 7, 2013 7:54 PM
> >Subject: RE: [TS-520_820_530_830] 6146W tube "cap" question
> >
> >
> >Ã☐
> >Thanks, Dave. It does look like the black compound isn't intact around the cap. I think I'll follow your example!
> >
> >I'm thinking that there might be something wrong with the existing tubes---last thing I need is to introduce another variable in the equation.
> >
> >73,
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> >Mark N8MH
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> >At 10:14 AM 2/8/2013 +1030, you wrote:
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> >>Mark
> >>It could be as simple as the fixing compound has just broken away. Personally any that I have received like that, including new ones I usually use for target practice at 300 metres. I have found in the past the wire usually breaks or the vaccum has been breeched.
> >>
> >>Dave
> >>VK5PDL
> >>

> >>
> >>
> >>To: TS-520_820_530_830@yahoogroups.com
> >>From: marklhammond@...
> >>Date: Thu, 7 Feb 2013 18:40:21 -0500
> >>Subject: [TS-520_820_530_830] 6146W tube "cap" question
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40912. Re: Transverter TV-502 pin cord

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-08 16:58:04 UTC
From: kd0fds
Topic: 40910 Message: 40912

--- In TS-520_820_530_830@yahoogroups.com, "kd0fds" wrote:
>
> I'm fianally getting around to building my transverter cables.
> I have a question on the "pin cord."
> My intent is to connect the TV-502 to my TS-820s.
>
> According to the TS-820 manual:
> "Connect the supplied pin-cords to the X VERTER OUT
> jack of TS-820 and the TX IN jack of the transverter (2m
> TX IN jack for TV-502)."
>
> Can I use a high quality (monster) RCA cable for the RCA-RCA "pin cord" or do I have to build my own with LRM400 like I'm using for pin 6 and pin 7 of the 12 pin interconnect cable?
>
> Thank you.
>

40913. RE: [TS-520_820_530_830] Re: 6146W tube "cap" question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-08 17:03:12 UTC
From: Bill Kuhn
Topic: 40893 Message: 40913

I've had no trouble using the 6146W in place of 6146B in Kenwood 530s and 830s. The only difference AFAIK is the W is 'ruggedized'. Electrically it is a B.

73 DE NO0OO

Bill Kuhn -
We hate CenturyLink - The worst ISP in the business.

In God We Trust

From: TS-520_820_530_830@yahoogroups.com on behalf of crazhoveride33
Sent: Fri 2/8/2013 10:40 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: 6146W tube "cap" question

6146w is a military tube not gonna work if anyone has had success id like to know but they will not nutrilize you need 6146 b tubes for that awsome boat anchor
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> 308 Calusa Place
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> Ball Ground, GA 30107
> Phone 678-592-9974
> www.ballgroundvideo.com
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> ---
> From: Mark L. Hammond
> To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Thursday, February 7, 2013 8:52 PM
> Subject: Re: [TS-520_820_530_830] 6146W tube "cap" question

>
>
> Â
> Hi Jack,
>
> Thanks for the tips. I wasn't clear--the tube I was talking about is a New Old Stock 1987 era JAN GE 6146B that has apparently never been used---it didn't come out of my rig that way. Quite the opposite---I didn't want to put it in! hi hi
>
> My rig has no visible evidence of abuse. The plate choke looks "shiny new" and while I did replace the four cathode resisors--they tested fine and looked OK. Precautionary, mostly...
>
> Thanks,
>
> Mark N8MH
>
> At 05:12 PM 2/7/2013 -0800, you wrote:
> >
> >
> >Mark,
> >
> >When the cap cement has crystallized and disintegrated, it's almost always an indication that the tube has been way overheated.
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> >though the envelope was still intact and had a vacuum. In the worst cases, the envelope had been so hot that it was sucked in
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> >Ball Ground, GA 30107
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> >_____
> >From: Mark L. Hammond marklhammond@...>
> >To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>
> >Sent: Thursday, February 7, 2013 7:54 PM
> >Subject: RE: [TS-520_820_530_830] 6146W tube "cap" question
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> >
> >Ã'
> >Thanks, Dave. It does look like the black compound isn't intact around the cap. I think I'll follow your example!
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> >>From: marklhammond@...
> >>Date: Thu, 7 Feb 2013 18:40:21 -0500
> >>Subject: [TS-520_820_530_830] 6146W tube "cap" question
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40914. TS-830S final cage

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-08 17:23:44 UTC
From: w8sfc
Topic: 40914 Message: 40914

I need a good final cage cover for an 830S that I am resurrecting. Can anyone point me to a source?

TNX & 73

Sid Grant W8SFC

40915. Re: [TS-520_820_530_830] Re: 6146W tube "cap" question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-08 17:55:23 UTC
From: Mark L. Hammond
Topic: 40893 Message: 40915

I have a pair of 6146W tubes in my other rig--a TS-520. Working great.

The files section of this Yahoo group have one or two documents that discuss the various flavors of 6146 tubes. It's a good read. My recollection is that the 6146W is a "ruggedized" version that would be better for mobile aps, military, etc. I also seem to recall that users can expect a little lower RF output from the "W" as compared to the "B."

Mark N8MH

On Fri, Feb 8, 2013 at 11:40 AM, crazhoveride33 <crazhoveride33@...>wrote:

> **
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>
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> > Sent: Thursday, February 7, 2013 8:52 PM
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> > >_____
> > >From: Mark L. Hammond marklhammond@...>
>
> > >To: TS-520_820_530_830@yahoogroups.com
> > >Sent: Thursday, February 7, 2013 7:54 PM
> > >Subject: RE: [TS-520_820_530_830] 6146W tube "cap" question

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> > >>To: TS-520_820_530_830@...m
> > >>From: marklhammond@...
>
> > >>Date: Thu, 7 Feb 2013 18:40:21 -0500
> > >>Subject: [TS-520_820_530_830] 6146W tube "cap" question
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Mark L. Hammond [N8MH]

[Non-text portions of this message have been removed]

40916. Re: [TS-520_820_530_830] Re: 6146W tube "cap" question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-08 19:34:12 UTC
From: John Donnelly
Topic: 40893 Message: 40916

If I remember right from the military days in the AF, the only difference between a regular and mil or ruggedized tube
was the filament current. We had people that used mil version tubes they scrounged from bench stock in their
Heathkits and the transformers ran hot because of the additional filament current.

Jack Donnelly KV4JX
Ball Ground Video Productions
308 Calusa Place

Ball Ground, GA 30107
Phone 678-592-9974
www.ballgroundvideo.com

From: Bill Kuhn <bkuhn@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, February 8, 2013 12:03 PM
Subject: RE: [TS-520_820_530_830] Re: 6146W tube "cap" question

I've had no trouble using the 6146W in place of 6146B in Kenwood 530s and 830s. The only difference AFAIK is the W is 'ruggedized'. Electrically it is a B.

73 DE NO0OO

Bill Kuhn -
We hate CenturyLink - The worst ISP in the business.

In God We Trust

From: TS-520_820_530_830@yahoogroups.com on behalf of crazhoveride33
Sent: Fri 2/8/2013 10:40 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: 6146W tube "cap" question

6146w is a military tube not gonna work if anyone has had success id like to know but they will not nutrilize you need 6146 b tubes for that awsome boat anchor
--- In TS-520_820_530_830@yahoogroups.com , John Donnelly wrote:
>
> In that case, you can save it with some JB weld.Â Just make sure that the solder connection is good.
>

>
> Â
>
> Jack DonnellyÂ Â Â Â Â Â Â KV4JX
> Ball Ground Video Productions
> 308 Calusa Place
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> Ball Ground, GA 30107
> Phone 678-592-9974
> www.ballgroundvideo.com
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>
> _____
> From: Mark L. Hammond
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, February 7, 2013 8:52 PM
> Subject: Re: [TS-520_820_530_830] 6146W tube "cap" question
>
>
> Â
> Hi Jack,
>
> Thanks for the tips. I wasn't clear--the tube I was talking about is a New Old Stock 1987 era JAN GE 6146B that has apparently never been used---it didn't come out of my rig that way. Quite the opposite---I didn't want to put it in! hi hi
>
> My rig has no visible evidence of abuse. The plate choke looks "shiny new" and while I did replace the four cathode resisors--they tested fine and looked OK. Precautionary, mostly...
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> Thanks,
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> Mark N8MH
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> At 05:12 PM 2/7/2013 -0800, you wrote:
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> > >Back in the late 60's, it was common to see the plate cap of the horizontal output tube of the larger screen color sets loose even
> > >though the envelope was still intact and had a vacuum. In the worst cases, the envelope had been so hot that it was sucked in
> > >and distorted. Lots of 6JE6 and 6JF6 outputs suffered that fate when the flyback or the damper shorted. I have a TS-520 sitting
> > >downstairs right now that has one of it's 6146Bs sucked in.Ã' Both cathode resistors are shot and the plate choke is black.Ã' Some

> >rebuilding to do on this one before it is back on the air.Ã' I would assume that the outputs on your rig have been cherried up way too
> >much and the associated components should all be suspect now.
> >
> >Jack DonnellyÃ' Ã' Ã' Ã' Ã' Ã' KV4JX
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> >308 Calusa Place
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> >Ball Ground, GA 30107
> >Phone 678-592-9974
> >www.ballgroundvideo.com
> >
> >_____
> >From: Mark L. Hammond marklhammond@...>
> >To: TS-520_820_530_830@yahoogroups.com
> >Sent: Thursday, February 7, 2013 7:54 PM
> >Subject: RE: [TS-520_820_530_830] 6146W tube "cap" question
> >
> >
> >Ã'
> >Thanks, Dave. It does look like the black compound isn't intact around the cap. I think I'll follow your example!
> >
> >I'm thinking that there might be something wrong with the existing tubes---last thing I need is to introduce another variable in the equation.
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> >>
> >>Dave
> >>VK5PDL
> >>
> >>
> >>
> >>To: TS-520_820_530_830@yahoogroups.com
> >>From: marklhammond@...
> >>Date: Thu, 7 Feb 2013 18:40:21 -0500
> >>Subject: [TS-520_820_530_830] 6146W tube "cap" question
> >>
> >>
> >>
> >>

> >>
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> >>A buddy of mine sent me some tubes. The cap (or nipple) of one of the 6146W tubes wiggles a little bit.
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> >>That CAN'T be good, can it? Meaning, is there any amount of wiggle that is OK? Or is it trash...
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> >>Yahoo! Groups Links
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40917. Re: [TS-520_820_530_830] Re: 6146W tube "cap" question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-08 19:48:35 UTC
From: Mark Gilger
Topic: 40893 Message: 40917

I've been running W's in my most of my hybrids
and have had no problems with them nutrilizing.
I'm glad of that as I bought a dozen of them from RF parts at the time.

Mark

At 11:40 AM 2/8/2013, crazhoveride33 wrote:
>
>
>
>6146w is a military tube not gonna work if
>anyone has had success id like to know but they
>will not nutrilize you need 6146 b tubes for that awsome boat anchor
>--- In
><mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com,
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> weld.Â Just make sure that the solder connection is good.
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> >
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> > From: Mark L. Hammond
> > To:
> <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
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> > Sent: Thursday, February 7, 2013 8:52 PM
> > Subject: Re: [TS-520_820_530_830] 6146W tube "cap" question
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> > Thanks for the tips. I wasn't clear--the tube
> I was talking about is a New Old Stock 1987 era
> JAN GE 6146B that has apparently never been
> used---it didn't come out of my rig that way.
> Quite the opposite---I didn't want to put it in! hi hi
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> > My rig has no visible evidence of abuse. The
> plate choke looks "shiny new" and while I did
> replace the four cathode resisors--they tested
> fine and looked OK. Precautionary, mostly...
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> > >When the cap cement has crystallized and
> disintegrated, it's almost always an indication
> that the tube has been way overheated.
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> the plate cap of the horizontal output tube of
> the larger screen color sets loose even
> > >though the envelope was still intact and had
> a vacuum. In the worst cases, the envelope had
> been so hot that it was sucked in
> > >and distorted. Lots of 6JE6 and 6JF6 outputs
> suffered that fate when the flyback or the
> damper shorted. I have a TS-520 sitting
> > >downstairs right now that has one of it's
> 6146Bs sucked in.Ã☐ Both cathode resistors are
> shot and the plate choke is black.Ã☐ Some
> > >rebuilding to do on this one before it is
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> > >_____

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> > >To:
> <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
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> > >Sent: Thursday, February 7, 2013 7:54 PM
> > >Subject: RE: [TS-520_820_530_830] 6146W tube "cap" question
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> > >>From: marklhammond@...
> > >>Date: Thu, 7 Feb 2013 18:40:21 -0500
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40918. Re: Transverter TV-502 pin cord

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-08 22:07:23 UTC
From: james27613
Topic: 40910 Message: 40918

hi,

I got my tv-502 used and it had the tv-506
cable with it.

I just cut an old rca audio cable in half and
attached it to the pins on the connector.

works just fine.

73 james ke4drn

40919. Re: 6146W tube "cap" question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-08 22:10:29 UTC
From: james27613
Topic: 40893 Message: 40919

hi

I also run 6146W NOS JAN by GE from
surplus sales.

My ts-530 with original tubes had one cap that
was a bit loose, used a little amount of
5 min epoxy to reattach it and no problems.

There was no solder on either cap on top of the tubes.

73 james ke4drn

40920. Re: 6146W tube "cap" question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-08 23:06:51 UTC
From: boat.anchor
Topic: 40893 Message: 40920

Likewise I have used B's and W's interchangeably in the TS-820S.
In the TS-520 I have used both 6146 and 6146A.
Barry
VA7GEM

--- In TS-520_820_530_830@yahoogroups.com, "Bill Kuhn" wrote:
>
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> From: TS-520_820_530_830@yahoogroups.com on behalf of crazhoveride33
> Sent: Fri 2/8/2013 10:40 AM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: 6146W tube "cap" question
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> > From: Mark L. Hammond
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Thursday, February 7, 2013 8:52 PM
> > Subject: Re: [TS-520_820_530_830] 6146W tube "cap" question
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> > >From: Mark L. Hammond marklhammond@>
> > >To: TS-520_820_530_830@yahoogroups.com
> > >Sent: Thursday, February 7, 2013 7:54 PM
> > >Subject: RE: [TS-520_820_530_830] 6146W tube "cap" question
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> > >>To: TS-520_820_530_830@yahoogroups.com
> > >>From: marklhammond@
> > >>Date: Thu, 7 Feb 2013 18:40:21 -0500
> > >>Subject: [TS-520_820_530_830] 6146W tube "cap" question
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40921. SM-220/BS-5/BS-8

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-08 22:40:59 UTC
From: Rick
Topic: 40921 Message: 40921

I recently acquired a SM-220 station monitor with a BS-8 installed. Does anyone know if it is possible to use this pan adaptor on the TS-520 instead of the BS-5?

Thanks.
Rick / K5IAR

40922. Re: [TS-520_820_530_830] SM-220/BS-5/BS-8

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-09 04:39:40 UTC
From: cmerje@juno.com
Topic: 40921 Message: 40922

Hi Rick,
My SM-220 Book page 5 item # 6: For the TS-520 series specify the BS-5 Pan Display. If you don't have an Instruction Manual go on Line and Goggle Kenwood SM-220 Station Monitor. You will find all kinds of information.
Good Luck,
Wayne W6WMV Finley,Ca.
---------- Original Message ----------
From: "Rick" <rickb@...>
To: <TS-520_820_530_830@yahoogroups.com>
Subject: [TS-520_820_530_830] SM-220/BS-5/BS-8
Date: Fri, 8 Feb 2013 16:40:59 -0600

I recently acquired a SM-220 station monitor with a BS-8 installed. Does
anyone know if it is possible to use this pan adapter on the TS-520 instead
of the BS-5?

Thanks.
Rick / K5IAR

Yahoo! Groups Links

Woman is 53 But Looks 25
Mom reveals 1 simple wrinkle trick that has angered doctors...
http://thirdpartyoffers.juno.com/TGL3141/5115d33e653b8533e7d21st03duc

40923. wirewrap wire gauge on RF board of TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-09 06:24:53 UTC
From: William Houghton
Topic: 40923 Message: 40923

Hi all,

Does anyone know the guage of the wirewrap wire used to connect the various coil boards to the RF board in a TS-520?

many thanks,

Bill

[Non-text portions of this message have been removed]

40924. RE: [TS-520_820_530_830] SM-220/BS-5/BS-8

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-09 13:51:59 UTC
From: Rick
Topic: 40921 Message: 40924

Thanks, Wayne. I was pretty sure the BS-8 would not work, but I was hoping there was some possible work around. Hopefully, I'll run a cross a BS-5 for sale or trade. This BS-8 does me no good at all.

Have a great weekend...

73,
Rick K5IAR

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of cmerje@...
Sent: Friday, February 08, 2013 10:40 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] SM-220/BS-5/BS-8

Hi Rick,
My SM-220 Book page 5 item # 6: For the TS-520 series specify the BS-5 Pan Display. If you don't have an Instruction Manual go on Line and Goggle Kenwood SM-220 Station Monitor. You will find all kinds of information.
Good Luck,
Wayne W6WMV Finley,Ca.
---------- Original Message ----------
From: "Rick" <rickb@...>
To: <TS-520_820_530_830@yahoogroups.com>
Subject: [TS-520_820_530_830] SM-220/BS-5/BS-8
Date: Fri, 8 Feb 2013 16:40:59 -0600

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Rick / K5IAR

Yahoo! Groups Links

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Yahoo! Groups Links

40926. Re: [TS-520_820_530_830] SM-220/BS-5/BS-8

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-09 16:05:55 UTC
From: Keith Hutt
Topic: 40921 Message: 40926

No not possible you need a BS-5 for the 520
i have a BS-5 and need a BS-8 for my 830

Keith G0TSH

-----Original Message-----
From: cmerje@...
Sent: Saturday, February 09, 2013 4:39 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] SM-220/BS-5/BS-8

Hi Rick,
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Yahoo! Groups Links

40927. Re: Transverter TV-502 pin cord

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-09 16:11:37 UTC
From: kd0fds
Topic: 40910 Message: 40927

Thanks, James. I built the cable last night. Tests out perfectly, but no relays seem to click when I power up the tv-502.

My TV-502 likely has an internal fault waiting for me to find.

--- In TS-520_820_530_830@yahoogroups.com, "james27613" wrote:
>
> hi,
>
> I got my tv-502 used and it had the tv-506
> cable with it.
>
> I just cut an old rca audio cable in half and
> attached it to the pins on the connector.
>
> works just fine.
>
> 73 james ke4drn
>

40928. Re: [TS-520_820_530_830] SM-220/BS-5/BS-8

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-09 16:18:34 UTC
From: Bob Macklin
Topic: 40921 Message: 40928

Put the BS-8 on eBay!

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Rick
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, February 09, 2013 5:51 AM
Subject: RE: [TS-520_820_530_830] SM-220/BS-5/BS-8

Thanks, Wayne. I was pretty sure the BS-8 would not work, but I was hoping there was some possible work around. Hopefully, I'll run a cross a BS-5 for sale or trade. This BS-8 does me no good at all.

Have a great weekend...

73,
Rick K5IAR

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of cmerje@...
Sent: Friday, February 08, 2013 10:40 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] SM-220/BS-5/BS-8

Hi Rick,
My SM-220 Book page 5 item # 6: For the TS-520 series specify the BS-5 Pan Display. If you don't have an Instruction Manual go on Line and Goggle Kenwood SM-220 Station Monitor. You will find all kinds of information.
Good Luck,
Wayne W6WMV Finley,Ca.
---------- Original Message ----------
From: "Rick" rickb@...>
To: TS-520_820_530_830@yahoogroups.com>
Subject: [TS-520_820_530_830] SM-220/BS-5/BS-8
Date: Fri, 8 Feb 2013 16:40:59 -0600

I recently acquired a SM-220 station monitor with a BS-8 installed. Does anyone know if it is possible to use this pan adapter on the TS-520 instead of the BS-5?

Thanks.
Rick / K5IAR

Yahoo! Groups Links

_____
Woman is 53 But Looks 25
Mom reveals 1 simple wrinkle trick that has angered doctors...
http://thirdpartyoffers.juno.com/TGL3141/5115d33e653b8533e7d21st03duc

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Yahoo! Groups Links

[Non-text portions of this message have been removed]

40929. Re: [TS-520_820_530_830] SM-220/BS-5/BS-8

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-09 16:20:02 UTC
From: Bob Macklin
Topic: 40921 Message: 40929

Sounds like you guys should swap!

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: "Keith Hutt" <keith.hutt@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Saturday, February 09, 2013 8:05 AM
Subject: Re: [TS-520_820_530_830] SM-220/BS-5/BS-8

> No not possible you need a BS-5 for the 520
> i have a BS-5 and need a BS-8 for my 830
>
> Keith G0TSH
>
> -----Original Message-----
> From: cmerje@...
> Sent: Saturday, February 09, 2013 4:39 AM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [TS-520_820_530_830] SM-220/BS-5/BS-8
>
> Hi Rick,
> My SM-220 Book page 5 item # 6: For the TS-520 series specify the BS-5 Pan
> Display. If you don't have an Instruction Manual go on Line and Goggle
> Kenwood SM-220 Station Monitor. You will find all kinds of information.
> Good Luck,
> Wayne W6WMV Finley,Ca.
> ---------- Original Message ----------
> From: "Rick" <rickb@...>
> To: <TS-520_820_530_830@yahoogroups.com>
> Subject: [TS-520_820_530_830] SM-220/BS-5/BS-8
> Date: Fri, 8 Feb 2013 16:40:59 -0600
>
> I recently acquired a SM-220 station monitor with a BS-8 installed. Does
> anyone know if it is possible to use this pan adapter on the TS-520
> instead
> of the BS-5?
>
> Thanks.
> Rick / K5IAR
>
>
>

>
> ---
>
> Yahoo! Groups Links
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> _____
> Woman is 53 But Looks 25
> Mom reveals 1 simple wrinkle trick that has angered doctors...
> http://thirdpartyoffers.juno.com/TGL3141/5115d33e653b8533e7d21st03duc
>
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> ---
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> Yahoo! Groups Links
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> Yahoo! Groups Links
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40930. RE: [TS-520_820_530_830] SM-220/BS-5/BS-8

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-09 19:09:06 UTC
From: Rick
Topic: 40921 Message: 40930

I'll swap you.

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Keith Hutt
Sent: Saturday, February 09, 2013 10:06 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] SM-220/BS-5/BS-8

No not possible you need a BS-5 for the 520
i have a BS-5 and need a BS-8 for my 830

Keith G0TSH

-----Original Message-----
From: cmerje@...
Sent: Saturday, February 09, 2013 4:39 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] SM-220/BS-5/BS-8

Hi Rick,
My SM-220 Book page 5 item # 6: For the TS-520 series specify the BS-5 Pan
Display. If you don't have an Instruction Manual go on Line and Goggle
Kenwood SM-220 Station Monitor. You will find all kinds of information.
Good Luck,
Wayne W6WMV Finley,Ca.
---------- Original Message ----------
From: "Rick" <rickb@...>
To: <TS-520_820_530_830@yahoogroups.com>
Subject: [TS-520_820_530_830] SM-220/BS-5/BS-8
Date: Fri, 8 Feb 2013 16:40:59 -0600

I recently acquired a SM-220 station monitor with a BS-8 installed. Does
anyone know if it is possible to use this pan adapter on the TS-520 instead
of the BS-5?

Thanks.
Rick / K5IAR

Yahoo! Groups Links

Woman is 53 But Looks 25
Mom reveals 1 simple wrinkle trick that has angered doctors...
http://thirdpartyoffers.juno.com/TGL3141/5115d33e653b8533e7d21st03duc

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Yahoo! Groups Links

Yahoo! Groups Links

40931. Re: [TS-520_820_530_830] SM-220/BS-5/BS-8

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-09 19:53:14 UTC
From: pmarkavage@...
Topic: 40921 Message: 40931

The only thing different about the BS-5 and BS-8 is the first mixer stage. Everything after that is pretty much the same. Simple circuit to build; put a small toggle switch to switch betwen them and you have a BS-5/8. Add a switch to bypass the front end and now you have a SM-220 that works with a 455 KHz IF.

Pete, wa2cwa

On Sat, 9 Feb 2013 07:51:59 -0600 "Rick" <rickb@...> writes:
> Thanks, Wayne. I was pretty sure the BS-8 would not work, but I was
> hoping
> there was some possible work around. Hopefully, I'll run a cross a
> BS-5 for
> sale or trade. This BS-8 does me no good at all.
>
> Have a great weekend...
>
> 73,
> Rick K5IAR
>
> -----Original Message-----
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of
> cmerje@...
> Sent: Friday, February 08, 2013 10:40 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [TS-520_820_530_830] SM-220/BS-5/BS-8
>
> Hi Rick,
> My SM-220 Book page 5 item # 6: For the TS-520 series specify the
> BS-5 Pan
> Display. If you don't have an Instruction Manual go on Line and
> Goggle
> Kenwood SM-220 Station Monitor. You will find all kinds of
> information.
> Good Luck,
> Wayne W6WMV Finley,Ca.
> ---------- Original Message ----------
> From: "Rick" <rickb@...>
> To: <TS-520_820_530_830@yahoogroups.com>
> Subject: [TS-520_820_530_830] SM-220/BS-5/BS-8
> Date: Fri, 8 Feb 2013 16:40:59 -0600
>
> I recently acquired a SM-220 station monitor with a BS-8 installed.
> Does

> anyone know if it is possible to use this pan adapter on the TS-520
> instead
> of the BS-5?
>
> Thanks.
> Rick / K5IAR

40932. RE: [TS-520_820_530_830] SM-220/BS-5/BS-8

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-09 20:02:04 UTC
From: Rick
Topic: 40921 Message: 40932

Hi Pete.

Thanks for the info. I hopefully have a BS-5 located I can swap my BS-8 for.
If that falls through I might just give the conversion a try.

Rick/K5IAR

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of pmarkavage@...
Sent: Saturday, February 09, 2013 1:53 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] SM-220/BS-5/BS-8

The only thing different about the BS-5 and BS-8 is the first mixer
stage. Everything after that is pretty much the same. Simple circuit to
build; put a small toggle switch to switch betwen them and you have a
BS-5/8. Add a switch to bypass the front end and now you have a SM-220
that works with a 455 KHz IF.

Pete, wa2cwa

On Sat, 9 Feb 2013 07:51:59 -0600 "Rick" rickb@...
<mailto:rickb%40tx.rr.com> > writes:
> Thanks, Wayne. I was pretty sure the BS-8 would not work, but I was
> hoping
> there was some possible work around. Hopefully, I'll run a cross a
> BS-5 for
> sale or trade. This BS-8 does me no good at all.
>
> Have a great weekend...
>
> 73,
> Rick K5IAR
>
> -----Original Message-----
> From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> [mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of
> cmerje@... <mailto:cmerje%40juno.com>
> Sent: Friday, February 08, 2013 10:40 PM
> To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: Re: [TS-520_820_530_830] SM-220/BS-5/BS-8
>

> Hi Rick,
> My SM-220 Book page 5 item # 6: For the TS-520 series specify the
> BS-5 Pan
> Display. If you don't have an Instruction Manual go on Line and
> Goggle
> Kenwood SM-220 Station Monitor. You will find all kinds of
> information.
> Good Luck,
> Wayne W6WMV Finley,Ca.
> ---------- Original Message ----------
> From: "Rick" rickb@... <mailto:rickb%40tx.rr.com> >
> To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> >
> Subject: [TS-520_820_530_830] SM-220/BS-5/BS-8
> Date: Fri, 8 Feb 2013 16:40:59 -0600
>
> I recently acquired a SM-220 station monitor with a BS-8 installed.
> Does
> anyone know if it is possible to use this pan adapter on the TS-520
> instead
> of the BS-5?
>
> Thanks.
> Rick / K5IAR

[Non-text portions of this message have been removed]

40933. Re: [TS-520_820_530_830] SM-220/BS-5/BS-8

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-09 20:40:28 UTC
From: pmarkavage@...
Topic: 40921 Message: 40933

The conversion looks easy enough as long as the CRT stays good. If it dies, you're dead in the water. No replacement CRT is available the last time I looked.
Pete, wa2cwa

On Sat, 9 Feb 2013 14:02:04 -0600 "Rick" <rickb@...> writes:
> Hi Pete.
>
> Thanks for the info. I hopefully have a BS-5 located I can swap my
> BS-8 for.
> If that falls through I might just give the conversion a try.
>
>
>
> Rick/K5IAR
>
>
>
> -----
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of
> pmarkavage@...
> Sent: Saturday, February 09, 2013 1:53 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [TS-520_820_530_830] SM-220/BS-5/BS-8
>
>
>
>
>
> The only thing different about the BS-5 and BS-8 is the first mixer
> stage. Everything after that is pretty much the same. Simple circuit
> to
> build; put a small toggle switch to switch betwen them and you have
> a
> BS-5/8. Add a switch to bypass the front end and now you have a
> SM-220
> that works with a 455 KHz IF.
>
> Pete, wa2cwa
>
> On Sat, 9 Feb 2013 07:51:59 -0600 "Rick" rickb@...
> <mailto:rickb%40tx.rr.com> > writes:
> > Thanks, Wayne. I was pretty sure the BS-8 would not work, but I

> was
> > hoping
> > there was some possible work around. Hopefully, I'll run a cross a
>
> > BS-5 for
> > sale or trade. This BS-8 does me no good at all.
> >
> > Have a great weekend...
> >
> > 73,
> > Rick K5IAR
> >
> > -----Original Message-----
> > From: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > [mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of
> > cmerje@... <mailto:cmerje%40juno.com>
> > Sent: Friday, February 08, 2013 10:40 PM
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Subject: Re: [TS-520_820_530_830] SM-220/BS-5/BS-8
> >
> > Hi Rick,
> > My SM-220 Book page 5 item # 6: For the TS-520 series specify the
>
> > BS-5 Pan
> > Display. If you don't have an Instruction Manual go on Line and
> > Goggle
> > Kenwood SM-220 Station Monitor. You will find all kinds of
> > information.
> > Good Luck,
> > Wayne W6WMV Finley,Ca.
> > ---------- Original Message ----------
> > From: "Rick" rickb@... <mailto:rickb%40tx.rr.com> >
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com> >
> > Subject: [TS-520_820_530_830] SM-220/BS-5/BS-8
> > Date: Fri, 8 Feb 2013 16:40:59 -0600
> >
> > I recently acquired a SM-220 station monitor with a BS-8
> installed.
> > Does
> > anyone know if it is possible to use this pan adapter on the
> TS-520
> > instead
> > of the BS-5?
> >
> > Thanks.
> > Rick / K5IAR

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> [Non-text portions of this message have been removed]
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>
> Yahoo! Groups Links
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40934. RE: [TS-520_820_530_830] SM-220/BS-5/BS-8

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-09 22:43:21 UTC
From: fpath fpath
Topic: 40921 Message: 40934

The CRT very rarely fails, what does fail is the HV PIO caps, have repaired and re-built several that have had no trace at all, easy and simple fix, as long as all the HV caps are replaced

73s
Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: pmarkavage@...
Date: Sat, 9 Feb 2013 15:40:28 -0500
Subject: Re: [TS-520_820_530_830] SM-220/BS-5/BS-8

The conversion looks easy enough as long as the CRT stays good. If it
dies, you're dead in the water. No replacement CRT is available the last
time I looked.
Pete, wa2cwa

On Sat, 9 Feb 2013 14:02:04 -0600 "Rick" rickb@tx.rr.com> writes:
> Hi Pete.
>
> Thanks for the info. I hopefully have a BS-5 located I can swap my
> BS-8 for.
> If that falls through I might just give the conversion a try.
>
>
>
> Rick/K5IAR
>
>
>
> _____
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of
> pmarkavage@...
> Sent: Saturday, February 09, 2013 1:53 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [TS-520_820_530_830] SM-220/BS-5/BS-8
>
>
>
>
>
> The only thing different about the BS-5 and BS-8 is the first mixer
> stage. Everything after that is pretty much the same. Simple circuit

> to
> build; put a small toggle switch to switch betwen them and you have
> a
> BS-5/8. Add a switch to bypass the front end and now you have a
> SM-220
> that works with a 455 KHz IF.
>
> Pete, wa2cwa
>
> On Sat, 9 Feb 2013 07:51:59 -0600 "Rick" rickb@tx.rr.com
> > writes:
> > Thanks, Wayne. I was pretty sure the BS-8 would not work, but I
> was
> > hoping
> > there was some possible work around. Hopefully, I'll run a cross a
>
> > BS-5 for
> > sale or trade. This BS-8 does me no good at all.
> >
> > Have a great weekend...
> >
> > 73,
> > Rick K5IAR
> >
> > -----Original Message-----
> > From: TS-520_820_530_830@yahoogroups.com
>
> > [mailto:TS-520_820_530_830@yahoogroups.com
>] On Behalf Of
> > cmerje@...
> > Sent: Friday, February 08, 2013 10:40 PM
> > To: TS-520_820_530_830@yahoogroups.com
>
> > Subject: Re: [TS-520_820_530_830] SM-220/BS-5/BS-8
> >
> > Hi Rick,
> > My SM-220 Book page 5 item # 6: For the TS-520 series specify the
>
> > BS-5 Pan
> > Display. If you don't have an Instruction Manual go on Line and
> > Goggle
> > Kenwood SM-220 Station Monitor. You will find all kinds of
> > information.
> > Good Luck,
> > Wayne W6WMV Finley,Ca.
> > ---------- Original Message ----------
> > From: "Rick" rickb@... >
> > To: TS-520_820_530_830@yahoogroups.com
> >
> > Subject: [TS-520_820_530_830] SM-220/BS-5/BS-8

> > Date: Fri, 8 Feb 2013 16:40:59 -0600
> >
> > I recently acquired a SM-220 station monitor with a BS-8
> installed.
> > Does
> > anyone know if it is possible to use this pan adapter on the
> TS-520
> > instead
> > of the BS-5?
> >
> > Thanks.
> > Rick / K5IAR
>
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> [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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[Non-text portions of this message have been removed]

40935. RE: [TS-520_820_530_830] SM-220/BS-5/BS-8

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-09 20:53:43 UTC
From: Rick
Topic: 40921 Message: 40935

I figured the CRT would be a bear to find if ever needed. This one is real bright and clear so far, but you never know. I was in the TV repair business years ago when they repaired them and I have a CRT Rejuvenator I guess I could whack it with. HI HI

Thanks again.

_____

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of pmarkavage@...
Sent: Saturday, February 09, 2013 2:40 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] SM-220/BS-5/BS-8

The conversion looks easy enough as long as the CRT stays good. If it dies, you're dead in the water. No replacement CRT is available the last time I looked.
Pete, wa2cwa

On Sat, 9 Feb 2013 14:02:04 -0600 "Rick" rickb@...
<mailto:rickb%40tx.rr.com> > writes:
> Hi Pete.
>
> Thanks for the info. I hopefully have a BS-5 located I can swap my
> BS-8 for.
> If that falls through I might just give the conversion a try.
>
>
>
> Rick/K5IAR
>
>
>
> _____
>
> From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> [mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of
> pmarkavage@... <mailto:pmarkavage%40juno.com>
> Sent: Saturday, February 09, 2013 1:53 PM
> To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: Re: [TS-520_820_530_830] SM-220/BS-5/BS-8
>

>
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>
>
> The only thing different about the BS-5 and BS-8 is the first mixer
> stage. Everything after that is pretty much the same. Simple circuit
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> build; put a small toggle switch to switch betwen them and you have
> a
> BS-5/8. Add a switch to bypass the front end and now you have a
> SM-220
> that works with a 455 KHz IF.
>
> Pete, wa2cwa
>
> On Sat, 9 Feb 2013 07:51:59 -0600 "Rick" rickb@...
<mailto:rickb%40tx.rr.com>
> > writes:
> > Thanks, Wayne. I was pretty sure the BS-8 would not work, but I
> was
> > hoping
> > there was some possible work around. Hopefully, I'll run a cross a
>
> > BS-5 for
> > sale or trade. This BS-8 does me no good at all.
> >
> > Have a great weekend...
> >
> > 73,
> > Rick K5IAR
> >
> > -----Original Message-----
> > From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
>
> > [mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
>] On Behalf Of
> > cmerje@... <mailto:cmerje%40juno.com>
> > Sent: Friday, February 08, 2013 10:40 PM
> > To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
>
> > Subject: Re: [TS-520_820_530_830] SM-220/BS-5/BS-8
> >
> > Hi Rick,
> > My SM-220 Book page 5 item # 6: For the TS-520 series specify the
>
> > BS-5 Pan
> > Display. If you don't have an Instruction Manual go on Line and

> > Goggle
> > Kenwood SM-220 Station Monitor. You will find all kinds of
> > information.
> > Good Luck,
> > Wayne W6WMV Finley,Ca.
> > ---------- Original Message ----------
> > From: "Rick" rickb@... <mailto:rickb%40tx.rr.com> >
> > To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> >
> > Subject: [TS-520_820_530_830] SM-220/BS-5/BS-8
> > Date: Fri, 8 Feb 2013 16:40:59 -0600
> >
> > I recently acquired a SM-220 station monitor with a BS-8
> installed.
> > Does
> > anyone know if it is possible to use this pan adapter on the
> TS-520
> > instead
> > of the BS-5?
> >
> > Thanks.
> > Rick / K5IAR
>
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> [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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[Non-text portions of this message have been removed]

40936. Bandswitch again?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-09 21:08:39 UTC
From: rolandver109
Topic: 40936 Message: 40936

Hi
Av re-assembled the bandswitch after taking it apart and checked every switch element.
But I a bit unsure if I got it correct assembled, could I have set the switches wring 180 deg. Wrong? Se picture for bandswitch set to 10MHz.
(Axel sides vertical, switch notch at 10 a clock)

Bandswitch
<http://i750.photobucket.com/albums/xx143/Rolandver/TS-830S/Band_sw_1_zp\
s0ef10bb2.jpg>

73´s/Roland

[Non-text portions of this message have been removed]

40937. Re: [TS-520_820_530_830] Bandswitch again?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-10 00:10:10 UTC
From: Joseph Stiles
Topic: 40936 Message: 40937

Roland,

It appears to me that the "wafers" are 180 degrees off. Look close at the white plastic of the wafers, you will see a small indented circle on each. Those should be to the nine(9) o'clock position, The "notches" should point slightly lower that the 3 o'clock position, the band switch know at the "10" position, flats of the shaft should be vertical, the shaft from S-22 in the final cage should show one "flat" down or 6 o'clock, the other should be at 3 o'clock or looking right back at you.
If not in the correct position, the receive side will not operate correctly, and you go to transmit...bad things can and will happen.

73 Joe
WB7UQU

From: rolandver109 <landrover@dalatron.se>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, February 9, 2013 1:08 PM
Subject: [TS-520_820_530_830] Bandswitch again?

Hi
Av re-assembled the bandswitch after taking it apart and checked every
switch element.
But I a bit unsure if I got it correct assembled, could I have set the
switches wring 180 deg. Wrong? Se picture for bandswitch set to 10MHz.
(Axel sides vertical, switch notch at 10 a clock)

Bandswitch
http://i750.photobucket.com/albums/xx143/Rolandver/TS-830S/Band_sw_1_zps0ef10bb2.jpg>

73´s/Roland

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[Non-text portions of this message have been removed]

40938. Why would this tube say "not Kenwood"?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-10 00:10:40 UTC
From: Mark L. Hammond
Topic: 40938 Message: 40938

Hi All,

I've been browsing around the web today looking at sources for 6146B and 6146W tubes.

At RF parts, they list a 6146W JAN GE tube that says, "not kenwood."

Any ideas why they would state that?? Link below...

I have a set that looks just like in my TS-520, and they seem to perform just great.

http://www.rfparts.com/6146w-ge.html

http://www.rfparts.com/catalogsearch/result/?q=6146

Mark L. Hammond [N8MH]

40939. Re: [TS-520_820_530_830] Why would this tube say "not Kenwood"?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-10 00:45:19 UTC
From: William Houghton
Topic: 40938 Message: 40939

Probably because some 6146W tubes are 6146A's and others are 6146B's.

From: Mark L. Hammond <marklhammond@gmail.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, February 9, 2013 4:10:47 PM
Subject: [TS-520_820_530_830] Why would this tube say "not Kenwood"?

Hi All,

I've been browsing around the web today looking at sources for 6146B and 6146W tubes.

At RF parts, they list a 6146W JAN GE tube that says, "not kenwood."

Any ideas why they would state that?? Link below...

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http://www.rfparts.com/6146w-ge.html

http://www.rfparts.com/catalogsearch/result/?q=6146

Mark L. Hammond [N8MH]

[Non-text portions of this message have been removed]

40940. The meter not working properly

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-10 01:09:19 UTC
From: kcripps@rogers.com
Topic: 40940 Message: 40940

I have had the 520 for about two weeks now.
And I find when I first start up for the first time
The meter does not seem to be working properly
It won't register any strong signals or I can't get
Needle to move when I try to set the ALC.
after about 15 min if I durn the rf gain back and forth
Or switch band back and forth I can get the needle
To work any idea where I should start my search
To find the problem

40941. Re: [TS-520_820_530_830] Why would this tube say "not Kenwood"?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-10 01:30:06 UTC
From: John Donnelly
Topic: 40938 Message: 40941

I know there are some folks out there running the "W" version of the 6146 in their Kenwoods but remember that the only difference
between a "W" or Joint Army Navy (JAN) version and a regular tube is that the "W" tube is "Ruggedized" which means the filament
is beefier and thus pulls quite a bit more current than the regular 6146. It may be that they are warning Kenwood owners that the
transformer may not be up to the task. Just a maybe. As I said in an earlier post, there were several friends of mine in the AF that
used JAN bench stock tubes in their Heathkit ham gear and they eventually cooked the power transformers.

Jack Donnelly KV4JX
Ball Ground Video Productions
308 Calusa Place

Ball Ground, GA 30107
Phone 678-592-9974
www.ballgroundvideo.com

From: William Houghton <rdrbill@pacbell.net>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, February 9, 2013 7:45 PM
Subject: Re: [TS-520_820_530_830] Why would this tube say "not Kenwood"?

Probably because some 6146W tubes are 6146A's and others are 6146B's.

From: Mark L. Hammond marklhammond@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, February 9, 2013 4:10:47 PM
Subject: [TS-520_820_530_830] Why would this tube say "not Kenwood"?

Hi All,

I've been browsing around the web today looking at sources for 6146B and 6146W tubes.

At RF parts, they list a 6146W JAN GE tube that says, "not kenwood."

Any ideas why they would state that?? Link below...

I have a set that looks just like in my TS-520, and they seem to perform just great.

http://www.rfparts.com/6146w-ge.html

http://www.rfparts.com/catalogsearch/result/?q=6146

Mark L. Hammond [N8MH]

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[Non-text portions of this message have been removed]

40942. Re: [TS-520_820_530_830] SM-220/BS-5/BS-8

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-10 02:38:59 UTC
From: pmarkavage@...
Topic: 40921 Message: 40942

Over the years going to flea markets I've found three that were bad. Two had open filaments and the third had a neck crack in the area of the pin section. Vacuum was compromised. They were being sold for parts.

Pete, wa2cwa

On Sun, 10 Feb 2013 09:13:21 +1030 fpath fpath <fpath@...>
writes:
>
> The CRT very rarely fails, what does fail is the HV PIO caps, have
> repaired and re-built several that have had no trace at all, easy
> and simple fix, as long as all the HV caps are replaced
>
> 73s
> Dave
> VK5PDL
>
>
>
>
>
>
> To: TS-520_820_530_830@yahoogroups.com
> From: pmarkavage@...
> Date: Sat, 9 Feb 2013 15:40:28 -0500
> Subject: Re: [TS-520_820_530_830] SM-220/BS-5/BS-8
>
>
>
>
>
> The conversion looks easy enough as long as the CRT stays good. If
> it
> dies, you're dead in the water. No replacement CRT is available the
> last
> time I looked.
> Pete, wa2cwa
>
> On Sat, 9 Feb 2013 14:02:04 -0600 "Rick" rickb@...> writes:
> > Hi Pete.
> >
> > Thanks for the info. I hopefully have a BS-5 located I can swap my
>
> > BS-8 for.
> > If that falls through I might just give the conversion a try.

> >
> >
> >
> > Rick/K5IAR
> >
> >
> >
> > _____
> >
> > From: TS-520_820_530_830@yahoogroups.com
> > [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of
> > pmarkavage@...
> > Sent: Saturday, February 09, 2013 1:53 PM
> > To: TS-520_820_530_830@yahoogroups.com
> > Subject: Re: [TS-520_820_530_830] SM-220/BS-5/BS-8
> >
> >
> >
> >
> >
> > The only thing different about the BS-5 and BS-8 is the first
> mixer
> > stage. Everything after that is pretty much the same. Simple
> circuit
> > to
> > build; put a small toggle switch to switch betwen them and you
> have
> > a
> > BS-5/8. Add a switch to bypass the front end and now you have a
> > SM-220
> > that works with a 455 KHz IF.
> >
> > Pete, wa2cwa
> >
> > On Sat, 9 Feb 2013 07:51:59 -0600 "Rick" rickb@...
> > > writes:
> > > Thanks, Wayne. I was pretty sure the BS-8 would not work, but I
> >
> > was
> > > hoping
> > > there was some possible work around. Hopefully, I'll run a cross
> a
> > >
> > > BS-5 for
> > > sale or trade. This BS-8 does me no good at all.
> > >
> > > Have a great weekend...
> > >
> > > 73,
> > > Rick K5IAR

> > >
> > -----Original Message-----
> > > From: TS-520_820_530_830@yahoogroups.com
> > >
> > > [mailto:TS-520_820_530_830@yahoogroups.com
> >] On Behalf Of
> > > cmerje@...
> > > Sent: Friday, February 08, 2013 10:40 PM
> > > To: TS-520_820_530_830@yahoogroups.com
> > >
> > > Subject: Re: [TS-520_820_530_830] SM-220/BS-5/BS-8
> > > >
> > > Hi Rick,
> > > My SM-220 Book page 5 item # 6: For the TS-520 series specify
> the
> > >
> > > BS-5 Pan
> > > Display. If you don't have an Instruction Manual go on Line and
> >
> > > Goggle
> > > Kenwood SM-220 Station Monitor. You will find all kinds of
> > > information.
> > > Good Luck,
> > > Wayne W6WMV Finley,Ca.
> > > ---------- Original Message ----------
> > > From: "Rick" rickb@... >
> > > To: TS-520_820_530_830@yahoogroups.com
> > > >
> > > Subject: [TS-520_820_530_830] SM-220/BS-5/BS-8
> > > Date: Fri, 8 Feb 2013 16:40:59 -0600
> > > >
> > > I recently acquired a SM-220 station monitor with a BS-8
> > installed.
> > > Does
> > > anyone know if it is possible to use this pan adapter on the
> > TS-520
> > > instead
> > > of the BS-5?
> > > >
> > > Thanks.
> > > Rick / K5IAR

40943. Re: [TS-520_820_530_830] Why would this tube say "not Kenwood"?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-10 04:22:06 UTC
From: Bob
Topic: 40938 Message: 40943

FYI: I found the following information on THeTubeStore.com regarding what they currently sell::

"Replaces 6146-A, 6146-B, and 6146W tube
types. The 6146W tube types produced after 1964 were designed to the
6146B tube specifications. Any 6146W tube produced before 1964 should
not be used in place of 6146B tube but can replace 6146A tube."

No extra information as to what the differences may be were provided on that site.

However, Surplus Sales of Nebraska states: "In most cases, our 6146W will directly replace 6146, 6146A and 6146B. Made for use in Collins and other U.S. manufactured equipment. Date code: 1987." So, they are specifying U.S. HAM manufacturers, and also show a date after 1964.

Bob/WA2JAJ

From: John Donnelly <jack@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Saturday, February 9, 2013 8:30 PM
Subject: Re: [TS-520_820_530_830] Why would this tube say "not Kenwood"?

I know there are some folks out there running the "W" version of the 6146 in their Kenwoods but remember that the only difference
between a "W" or Joint Army Navy (JAN) version and a regular tube is that the "W" tube is "Ruggedized" which means the filament
is beefier and thus pulls quite a bit more current than the regular 6146. It may be that they are warning Kenwood owners that the
transformer may not be up to the task. Just a maybe. As I said in an earlier post, there were several friends of mine in the AF that
used JAN bench stock tubes in their Heathkit ham gear and they eventually cooked the power transformers.

Jack Donnelly KV4JX
Ball Ground Video Productions
308 Calusa Place

Ball Ground, GA 30107
Phone 678-592-9974
www.ballgroundvideo.com

From: William Houghton rdrbill@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, February 9, 2013 7:45 PM
Subject: Re: [TS-520_820_530_830] Why would this tube say "not Kenwood"?

Probably because some 6146W tubes are 6146A's and others are 6146B's.

From: Mark L. Hammond marklhammond@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, February 9, 2013 4:10:47 PM
Subject: [TS-520_820_530_830] Why would this tube say "not Kenwood"?

Hi All,

I've been browsing around the web today looking at sources for 6146B and 6146W tubes.

At RF parts, they list a 6146W JAN GE tube that says, "not kenwood."

Any ideas why they would state that?? Link below...

I have a set that looks just like in my TS-520, and they seem to perform just great.

http://www.rfparts.com/6146w-ge.html

http://www.rfparts.com/catalogsearch/result/?q=6146

Mark L. Hammond [N8MH]

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[Non-text portions of this message have been removed]

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40944. Re: [TS-520_820_530_830] Why would this tube say "not Kenwood"?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-10 13:42:39 UTC
From: Mark L. Hammond
Topic: 40938 Message: 40944

Hi Bob,

Yes, I've read a good bit about this before and after my post, including the various helpful files in the Files section of this group and the info you posted below. Thanks!

Our hybrid rigs would be considered "non-US manufactured," right?

I found the info at this link interesting, too:
http://amfone.net/Amforum/index.php?topic=24304.20;wap2

73,

Mark N8MH

At 08:22 PM 2/9/2013 -0800, you wrote:
>
>
>FYI: I found the following information on THeTubeStore.com regarding what they currently sell::
>
>"Replaces 6146-A, 6146-B, and 6146W tube
>types. The 6146W tube types produced after 1964 were designed to the
>6146B tube specifications. Any 6146W tube produced before 1964 should
>not be used in place of 6146B tube but can replace 6146A tube."
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>No extra information as to what the differences may be were provided on that site.
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>However, Surplus Sales of Nebraska states: "In most cases, our 6146W will directly replace 6146, 6146A and 6146B. Made for use in Collins and other U.S. manufactured equipment. Date code: 1987." So, they are specifying U.S. HAM manufacturers, and also show a date after 1964.
>
>Bob/WA2JAJ
>
>_____
>From: John Donnelly <mailto:jack%40ballgroundvideo.com>jack@...>
>To: "<mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com" <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com>
>Sent: Saturday, February 9, 2013 8:30 PM
>Subject: Re: [TS-520_820_530_830] Why would this tube say "not Kenwood"?
>
>
>Â
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"Ruggedized" which means the filament
>is beefier and thus pulls quite a bit more current than the regular 6146.Â It may be that they are warning Kenwood owners that the
>transformer may not be up to the task.Â Just a maybe.Â As I saidÂ in an earlier post, there were several friends of mine in the AF that
>used JAN bench stock tubes in their Heathkit ham gear and they eventually cooked the power transformers.
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>Jack DonnellyÂ Â Â Â Â Â Â Â KV4JX
>Ball Ground Video Productions
>308 Calusa Place
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>Ball Ground, GA 30107
>Phone 678-592-9974
>www.ballgroundvideo.com
>
>_____
>From: William Houghton <mailto:rdrbill%40pacbell.net>rdrbill@...>
>To: <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>Sent: Saturday, February 9, 2013 7:45 PM
>Subject: Re: [TS-520_820_530_830] Why would this tube say "not Kenwood"?
>
>Â
>Probably because some 6146W tubes are 6146A's and others are 6146B's.
>
>_____
>From: Mark L. Hammond <mailto:marklhammond%40gmail.com>marklhammond@...>
>To: <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>Sent: Sat, February 9, 2013 4:10:47 PM
>Subject: [TS-520_820_530_830] Why would this tube say "not Kenwood"?
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><http://www.rfparts.com/6146w-ge.html>http://www.rfparts.com/6146w-ge.html
>
>http://www.rfparts.com/catalogsearch/result/?q=6146
>
>Mark L. Hammond [N8MH]
>
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40945. Re: [TS-520_820_530_830] Why would this tube say "not Kenwood"?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-10 15:06:44 UTC
From: Bob
Topic: 40938 Message: 40945

Mark: Made in Japan!...Maybe Kenwood skimped on the filament part of the power transformer and only provided for the current of the specified tubes. In any case, we should all be aware of the potential for problems when substituting parts which aren't truly identical...

73

Bob / WA2JAJ

From: Mark L. Hammond <marklhammond@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, February 10, 2013 8:42 AM
Subject: Re: [TS-520_820_530_830] Why would this tube say "not Kenwood"?

Hi Bob,

Yes, I've read a good bit about this before and after my post, including the various helpful files in the Files section of this group and the info you posted below. Thanks!

Our hybrid rigs would be considered "non-US manufactured," right?

I found the info at this link interesting, too:
http://amfone.net/Amforum/index.php?topic=24304.20;wap2

73,

Mark N8MH

At 08:22 PM 2/9/2013 -0800, you wrote:
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>
>Bob/WA2JAJ

>
>_____
>From: John Donnelly jack@...>
>To: "TS-520_820_530_830@yahoogroups.com" TS-520_820_530_830@yahoogroups.com>
>Sent: Saturday, February 9, 2013 8:30 PM
>Subject: Re: [TS-520_820_530_830] Why would this tube say "not Kenwood"?
>
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>is beefier and thus pulls quite a bit more current than the regular 6146.Â It may be that they are warning Kenwood owners that the
>transformer may not be up to the task.Â Just a maybe.Â As I saidÂ in an earlier post, there were several friends of mine in the AF that
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>Jack DonnellyÂ Â Â Â Â Â Â Â KV4JX
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>Ball Ground, GA 30107
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>www.ballgroundvideo.com
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>_____
>From: William Houghton rdrbill@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Saturday, February 9, 2013 7:45 PM
>Subject: Re: [TS-520_820_530_830] Why would this tube say "not Kenwood"?
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>_____
>From: Mark L. Hammond marklhammond@gmail.com>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Sat, February 9, 2013 4:10:47 PM
>Subject: [TS-520_820_530_830] Why would this tube say "not Kenwood"?
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>
>Mark L. Hammond [N8MH]
>
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40946. Re: [TS-520_820_530_830] The meter not working properly

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-10 18:38:47 UTC
From: Joseph Stiles
Topic: 40940 Message: 40946

Since you have had this rig for a short time, I take it that you do not know the history. So, for starters, I recommend:

Obtain a good contact cleaner/lube. Everyone has their own recommendations....but I use "DEOXIT D5"
Obtain some "canned air." Also know as "air duster." Can be found at/in computer shops/areas of stores dealing with electronics. Walmart & Costco are two.
With power OFF..rig UNPLUGGED...follow directions on the DEOXIT can. Exercise switch/control numerous times...blow "canned air" into/or on control.
I do mean, every control that rotates, slides, or otherwise moves. Blow off with "canned air."
Let rig sit for a short time...maybe 15-30 minutes..to make sure that all of the DEOXIT is evaporated...as it is flammable.
Power on rig, check for proper operation.

I have been surprised by how many problems have been "fixed" by a good cleaning of controls. These rigs are old...and will develop control problems, especially when left to sit...or even when operated, controls...etc..left in the same place. Check tightness of screws that hold down the various boards too!

73 Joe
WB7UQU

From: "kcripps@..." <kcripps@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, February 9, 2013 5:09 PM
Subject: [TS-520_820_530_830] The meter not working properly

I have had the 520 for about two weeks now.
And I find when I first start up for the first time
The meter does not seem to be working properly
It won't register any strong signals or I can't get
Needle to move when I try to set the ALC.
after about 15 min if I durn the rf gain back and forth
Or switch band back and forth I can get the needle
To work any idea where I should start my search
To find the problem

[Non-text portions of this message have been removed]

40947. KENWOOD HYBRID USER NET (January 17th, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-10 19:15:26 UTC
From: mvgilger
Topic: 40947 Message: 40947

The Saturday's net on 40 meter we had 30 stations checking with good band conditions. Out of those, there was:

7 running TS-520(x)
3 running TS-530(x)
5 running TS-820(x)
6 running TS-830S

I was running a TS940. The rest were running non hybrids of one model or another.

The Sunday 20 meter net we had 17 stations checking in under good band conditions. Out of those, there were:

5 running TS-520(x)
1 running TS-530(x)
2 running TS-820(x)
3 running TS-830S

I was running a non hybrid TS-940. The rest were running non hybrids of one model or another.

We have been having several people checking in regularly with their TS-430, TS-440, and TS-940's, which of course is not a hybrid, although over 30+ years old. Everyone is welcome as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a net control station, please send me an email. Currently it's just myself, WB2KNR and WB0SGA. I would like to get several more. If we do, we can alternate so everyone might be on a 3-4 week rotation. It's a lot of fun and a good way to make sure you station is optimized.

For anyone that has not heard, we have a new web site that WB4HFN is hosting. He currently has a very nice site for Drake, Collins and Heathkit and now Kenwood Hybrids. Good quality manuals plus sale flyers and brochures will be found here, along with user supplied information for all Hybrids.

His URL is:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754 check-ins, Sunday total 563 check-ins

November 2012, Saturday's, net total = 47, Sundays total = 20
December 2012, Saturday's, net total = 74, Sunday's total = 70
January 2013, Saturday's, net total = 93, Sunday's total = 87
February 2013, Saturday's net total = 54, Sundays total = 44. (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

40948. Re: Bandswitch again?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-10 20:38:40 UTC
From: rolandver109
Topic: 40936 Message: 40948

Hi
Many thanks Joe
All assembled now and working,exept very low opower outout, 5W max.

73's Roland

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles wrote:
>
> Roland,
>
> Â Â It appears to me that the "wafers" are 180 degrees off. Look close at the white plastic of the wafers, you will see a small indented circle on each. Those should be to the
> nine(9) o'clock position, The "notches" should point slightly lower that the 3 o'clock position, the band switch know at the "10" position, flats of the shaft should be vertical,
> the shaft from S-22 in the final cage should show one "flat" down or 6 o'clock, the other should be at 3 o'clock or looking right back at you.
> If not in the correct position, the receive side will not operate correctly, and you go to transmit...bad things can and will happen.
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: rolandver109
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Saturday, February 9, 2013 1:08 PM
> Subject: [TS-520_820_530_830] Bandswitch again?
>
>
> Â
>
> Hi
> Av re-assembled the bandswitch after taking it apart and checked every
> switch element.
> But I a bit unsure if I got it correct assembled, could I have set the
> switches wring 180 deg. Wrong? Se picture for bandswitch set to 10MHz.
> (Axel sides vertical, switch notch at 10 a clock)
>
> Bandswitch
> http://i750.photobucket.com/albums/xx143/Rolandver/TS-830S/Band_sw_1_zps0ef10bb2.jpg>
>

> 73Â´s/Roland
>
> [Non-text portions of this message have been removed]
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>
> [Non-text portions of this message have been removed]
>

40949. Re: TS-830S - 1W power out?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-10 20:59:36 UTC
From: rolandver109
Topic: 40802 Message: 40949

Hi
I have now serviced the band switch (by disassembling it and testing every switch element). Driver tube socket re-soldered. Caps C29 and C69 checked. All resistors on the final unit board checked. After assembling everything and checked band switch alignment (twice) - power output is better but are still is low.
Meter reads in tune mode and CAR 50%: ALZ = "0", IP=80mA, HV=800. Power measured to maximum 5W at 14.2MHz against a 50 Ohm dummy load.
Anyone who have some hints what to check next?
73´s/Roland
--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles wrote:
>
> Roland,
>
> Â Â Glad I could help you out a bit. I saw that you intend to remove the RF board. Just make sure to make sure that when you put it back inÂ all the wafers, shaft etc., are aligned correctly. If you have any question about that...I can help. Get a strong light and some magnification and take a good look on the foil side of the driver tube socket. I have seen many cracked solder joints here. Check also all the "molex" connectors on the foil side for dry/cracked solder joints...tough up any that appear questionable. I have been rather successful with cleaning the RF board in a soak of warm water and "DAWN" dish detergent and some light agitation with a long SOFT bristle brush....through rinse and complete drying. It really does work good
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: rolandver109
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, February 6, 2013 1:27 PM
> Subject: [TS-520_820_530_830] Re: TS-830S - 1W power out?
>
>
> Â
> Many Thanks Joe
>

> 1 - Rely is cheked and cleaned OK
>
> 2 - The resistor in the DRV-line was a capacitor, I tought it was a
VDR
> resistor first. It is (wrong?) connected to R38/L36 - i think the one
> who did this suspected that C29 was faulty but connected the new cap
on
> the wrong side of R38.
>
> 3 - I think the finals is OK but something is wrong around the driver
> tube.
>
> 73/Roland
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles wrote:
> >
> > Roland,
> >
> > Ã☐ Ã☐ Congrats on getting it to rcv. There is also another
> relay...under the metal shield next to the final board. The
relay..RL-1
> on the AF board can and will cause lots
> > of malfunctions as it controls numerous functions on RCV & XMIT.
> >
> > Ã☐ Ã☐ I have not idea why someone would put a diode in the
SG
> line....or why really put a resistor in the DRV line.
> > Ã☐ Ã☐ What board are you refering to when you say "on the
drive
> board" Do you mean the RF board?
> >
> > Ã☐ Ã☐ Ã☐ With rig on, "heater" on, rig in RCV:Ã☐
final
> amplifier tubes (6146B) pins 1, 4 & 6 = 0.0vdc
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slightly higher or

> lower on your rig..but should be close.
> >
> > Look close at the rectifier board to see if the wiring is different
> from the schematic...moving a couple of wires is a common QRO mod.
> > Check for proper voltages there too
> >
> > Do you a a service manual?Ã☐ If not, look at Gordon's web site:
> Ã☐ Ã☐ n6wk.comÃ☐ Ã☐ you can find a service manual.
Look on Pg
> 44 is gives you levels
> > Ã☐ to check for RX/TX.
> >
> > Ã☐ The HV of 670 is a bit low...but would not account for the 1
> watt? Is the 1 watt on all bands?? You could have multiple failures,
> including, bad 12by7a driver,
> > Ã☐ bad final tubes. A very common problem is also a
loose/cracked
> band switch coupler...it's on the end of the band switch shaft just
> inside the final cage. If cracked/broken
> > S-22 in the final cage will be out of sync with the rest of the TX
> chain and may also be a cause of your problem. With rig OFF and
> UNPLUGGED...let sit for a bit,
> > remove top and bottom cover, then remove screws holding the cover
over
> the final cage. With a good INSULATED tool, touch from the top of the
> wire wound
> > ceramic form between the top of the two final tubes to ground...then
> check with a meter set on VDC from there to ground to make sure there
> are no volts there.
> > Remove most forward tube...use a bright light light and inspect the
> white nylon coupler for cracks. If cracked...it can not be "glued" it
> will have to be replaced.
> > To check for proper orientation/alignment put band selector knob
> pointing to "10"...the shaft has flats the should be on the left and
> right...the rounded parts should
> > be on top and bottom. Each wafer has a white plastic center
> section...with a small circular depression...all those should face to
> the LEFT. Looking at the final cage
> > area...the small shaft on the the tank coil selector switch which
> connects to the band switch connector should show one "flat" facing
down
> or "6 o'clock and the
> > other at 3 o'clock...looking right back at you. Any other
orientation
> ...it's outta whack. The set screws are 1.5mm there are 4
> >
> > The fine copper wire on the ceramic form should be relatively clean
> and bright...if it's dark/black...this indicate severe overheating.
> >

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> > Ã□
> > 73Ã□ Joe
> > WB7UQU
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> >
> > _____
> > From: rolandver109
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Saturday, February 2, 2013 1:13 PM
> > Subject: [TS-520_820_530_830] TS-830S - 1W power out?
> >
> >
> > Ã□
> > Hi
> > I am now a pride owner of a Trio TS-830S, bought it as a" for parts
> Ã¢â□¬" no receive, no transmit" After 6 hours of work receive is
> working, but transmit is only 1W? (Cleaning the relay on the AF board
> fixed receive)
> > There where a couple of strange mods in the final that I could not
> figure out the meaning of.
> > - A diode, 1N4007 type, in series with final "SG" power input
> > - A NTC resistor in series with final "DRV" drive inoutÃ□Â´
> > - A short wire on drive bord R36/LR36 to "DRV"
> > I removed al of this but does get no more than 1W output power when
> tuned against a 50 Ohm dummy load (in series with a power meter).
> > (I am rather new to "tubes" Ã¢â□¬" I am basically a analog
> "transistor man.)
> > I have measured the following signals / voltages_
> > - Final drive input Ã¢â□¬" 2.5V RMS AC, max 4.2V RMS AC(full
> AFC), 14.2MHz (Measured with a digital osc.)
> > - Final tubes pin 5, receive 95V, and transmit 50V
> > - Final tubes pin 4, receive 239V, and transmit 207V
> > Anode voltage is about 670V as I remember.

> >
> > What could be wrong Ã¢â□¬" where should I begin the fault
tracing?
> Is the drive voltage sufficient?
> >
> > Regards/Roland
> >
> >
> >
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> >
> > [Non-text portions of this message have been removed]
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40950. 30M WARC mod for TS-820S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-10 21:36:29 UTC
From: jazzguitarboy605
Topic: 40950 Message: 40950

Hi all,

I did the majority of the 30M WARC mod for the TS-820S on my radio and documented it as I went. I have receive on 30M working great, and the new driver coil for transmit installed, but I wasn't able to complete the transmit part of the mod because I don't have tools (or hands) small enough to manipulate some of the wires to the loading capacitor without breaking something.

I put some info and a couple of photos in the mods folder in the files section here.

If anyone else is interested in attempting this mod, I have five extra 15.500 MHz crystals and one extra slug-tuned coil -- shoot me an email.

73,
Ben (AK4YG)

40951. Re: Why would this tube say "not Kenwood"?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-11 00:36:48 UTC
From: james27613
Topic: 40938 Message: 40951

hi,

Did the Heathkit gear use the tubes
in push pull or parallel circuit?

73 james

--- In TS-520_820_530_830@yahoogroups.com, John Donnelly wrote:
>
> I know there are some folks out there running the "W" version of the 6146 in their Kenwoods but remember that the only difference
> between a "W" or Joint Army Navy (JAN) version and a regular tube is that the "W" tube is "Ruggedized" which means the filament
> is beefier and thus pulls quite a bit more current than the regular 6146.Â It may be that they are warning Kenwood owners that the
> transformer may not be up to the task.Â Just a maybe.Â As I saidÂ in an earlier post, there were several friends of mine in the AF that
> used JAN bench stock tubes in their Heathkit ham gear and they eventually cooked the power transformers.
>
>
> Jack Donnelly

40952. Turner Super Sidekick mic wiring for a TS-520S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-11 01:10:15 UTC
From: lonelyone_64109
Topic: 40952 Message: 40952

I am trying to hook up a Turner Super Sidekick mic to my TS-520S. I've got it working in the VOX mode. But I want to be able to use it in push to talk mode as well. Can it be done? Does anyone have the wiring info they can pass along to me?

WB0CJB

40953. Re: [TS-520_820_530_830] Turner Super Sidekick mic wiring for a TS-520S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-11 01:34:20 UTC
From: Ken Winterling
Topic: 40952 Message: 40953

Paul,

Look at this site:

http://www.cbtricks.com/mic_manuals/turner/turner_super_sidekick_om.pdf

I would put the switch in the "relay" position and use that diagram.
dd dd dd dd dd dd dd dd dd ss s q q
a a

Ken
WA2LBI

On Sun, Feb 10, 2013 at 8:10 PM, lonelyone_64109
<lonelyone_64109@...>wrote:

> **
>
>
> I am trying to hook up a Turner Super Sidekick mic to my TS-520S. I've got
> it working in the VOX mode. But I want to be able to use it in push to talk
> mode as well. Can it be done? Does anyone have the wiring info they can
> pass along to me?
>
> WB0CJB
>

[Non-text portions of this message have been removed]

40954. Re: [TS-520_820_530_830] Re: Why would this tube say "not Kenwood"?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-11 01:31:54 UTC
From: John Donnelly
Topic: 40938 Message: 40954

The guys I knew both had DX-100-B transmitters and if I remember correctly, the 6146 outputs were in parallel.

Jack Donnelly KV4JX
Ball Ground Video Productions
308 Calusa Place

Ball Ground, GA 30107
Phone 678-592-9974
www.ballgroundvideo.com

From: james27613 <james27613@...t>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, February 10, 2013 7:36 PM
Subject: [TS-520_820_530_830] Re: Why would this tube say "not Kenwood"?

hi,

Did the Heathkit gear use the tubes
in push pull or parallel circuit?

73 james

--- In TS-520_820_530_830@yahoogroups.com, John Donnelly wrote:
>
> I know there are some folks out there running the "W" version of the 6146 in their Kenwoods but remember that the only difference
> between a "W" or Joint Army Navy (JAN) version and a regular tube is that the "W" tube is "Ruggedized" which means the filament
> is beefier and thus pulls quite a bit more current than the regular 6146.Â It may be that they are warning Kenwood owners that the
> transformer may not be up to the task.Â Just a maybe.Â As I saidÂ in an earlier post, there were several friends of mine in the AF that
> used JAN bench stock tubes in their Heathkit ham gear and they eventually cooked the power transformers.
>
>
> Jack Donnelly

[Non-text portions of this message have been removed]

40955. Re: [TS-520_820_530_830] Re: Why would this tube say "not Kenwood"?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-11 01:45:45 UTC
From: Bob Macklin
Topic: 40938 Message: 40955

All the Heathkit HF units wit dual 6146s were parallel. There were VHF units that had PP 6146s.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: John Donnelly
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, February 10, 2013 5:31 PM
Subject: Re: [TS-520_820_530_830] Re: Why would this tube say "not Kenwood"?

The guys I knew both had DX-100-B transmitters and if I remember correctly, the 6146 outputs were in parallel.

Jack Donnelly KV4JX
Ball Ground Video Productions
308 Calusa Place

Ball Ground, GA 30107
Phone 678-592-9974
www.ballgroundvideo.com

_____
From: james27613 james27613@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, February 10, 2013 7:36 PM
Subject: [TS-520_820_530_830] Re: Why would this tube say "not Kenwood"?

hi,

Did the Heathkit gear use the tubes
in push pull or parallel circuit?

73 james

--- In TS-520_820_530_830@yahoogroups.com, John Donnelly wrote:
>
> I know there are some folks out there running the "W" version of the 6146 in their Kenwoods but remember that the only difference
> between a "W" or Joint Army Navy (JAN) version and a regular tube is that the "W" tube is "Ruggedized" which means the filament
> is beefier and thus pulls quite a bit more current than the regular 6146.Â It may be that they are warning Kenwood owners that the
> transformer may not be up to the task.Â Just a maybe.Â As I saidÂ in an earlier post, there were several friends of mine in the AF that

> used JAN bench stock tubes in their Heathkit ham gear and they eventually cooked the power transformers.
>
>
> Jack Donnelly

[Non-text portions of this message have been removed]

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40956. Re: [TS-520_820_530_830] Re: TS-830S - 1W power out?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-11 04:40:05 UTC
From: Joseph Stiles
Topic: 40802 Message: 40956

Roland,

Have you looked at doing a check of the TX(transmit) section shown on Pg 44 of the service manual?

I'm going to be gone for a couple of days...I won't have computer access where I'm at

73 Joe
WB7UQU

From: rolandver109 <landrover@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, February 10, 2013 12:59 PM
Subject: [TS-520_820_530_830] Re: TS-830S - 1W power out?

Hi
I have now serviced the band switch (by disassembling it and testing every switch element). Driver tube socket re-soldered. Caps C29 and C69 checked. All resistors on the final unit board checked. After assembling everything and checked band switch alignment (twice) - power output is better but are still is low.
Meter reads in tune mode and CAR 50%: ALZ = "0", IP=80mA, HV=800. Power measured to maximum 5W at 14.2MHz against a 50 Ohm dummy load.
Anyone who have some hints what to check next?
73´s/Roland
--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles wrote:
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> Roland,
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> Â Â Glad I could help you out a bit. I saw that you intend to remove the RF board. Just make sure to make sure that when you put it back inÂ all the wafers, shaft etc., are aligned correctly. If you have any question about that...I can help. Get a strong light and some magnification and take a good look on the foil side of the driver tube socket. I have seen many cracked solder joints here. Check also all the "molex" connectors on the foil side for dry/cracked solder joints...tough up any that appear questionable. I have been rather successful with cleaning the RF board in a soak of warm water and "DAWN" dish detergent and some light agitation with a long SOFT bristle brush....through rinse and complete drying. It really does work good
>
>
> Â
> 73Â Joe

> WB7UQU
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> _____
> From: rolandver109
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, February 6, 2013 1:27 PM
> Subject: [TS-520_820_530_830] Re: TS-830S - 1W power out?
>
>
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> Many Thanks Joe
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> 3 - I think the finals is OK but something is wrong around the driver
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> > Ã, Ã, What board are you refering to when you say "on the
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final
> amplifier tubes (6146B) pins 1, 4 & 6 = 0.0vdc
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slightly higher or
> lower on your rig..but should be close.
> >
> > Look close at the rectifier board to see if the wiring is different
> from the schematic...moving a couple of wires is a common QRO mod.
> > Check for proper voltages there too
> >
> > Do you a a service manual?Ã, If not, look at Gordon's web site:
> Ã, Ã, n6wk.comÃ, Ã, you can find a service manual.
Look on Pg
> 44 is gives you levels
> > Ã, to check for RX/TX.
> >
> > Ã, The HV of 670 is a bit low...but would not account for the 1
> watt? Is the 1 watt on all bands?? You could have multiple failures,
> including, bad 12by7a driver,
> > Ã, bad final tubes. A very common problem is also a
loose/cracked
> band switch coupler...it's on the end of the band switch shaft just
> inside the final cage. If cracked/broken
> > S-22 in the final cage will be out of sync with the rest of the TX
> chain and may also be a cause of your problem. With rig OFF and
> UNPLUGGED...let sit for a bit,
> > remove top and bottom cover, then remove screws holding the cover
over
> the final cage. With a good INSULATED tool, touch from the top of the
> wire wound
> > ceramic form between the top of the two final tubes to ground...then
> check with a meter set on VDC from there to ground to make sure there
> are no volts there.
> > Remove most forward tube...use a bright light light and inspect the
> white nylon coupler for cracks. If cracked...it can not be "glued" it
> will have to be replaced.
> > To check for proper orientation/alignment put band selector knob
> pointing to "10"...the shaft has flats the should be on the left and
> right...the rounded parts should
> > be on top and bottom. Each wafer has a white plastic center
> section...with a small circular depression...all those should face to
> the LEFT. Looking at the final cage
> > area...the small shaft on the the tank coil selector switch which

> connects to the band switch connector should show one "flat" facing
down
> or "6 o'clock and the
> > other at 3 o'clock...looking right back at you. Any other
orientation
> ...it's outta whack. The set screws are 1.5mm there are 4
> >
> > The fine copper wire on the ceramic form should be relatively clean
> and bright...if it's dark/black...this indicate severe overheating.
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> > Ã,
> > 73Ã, Joe
> > WB7UQU
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> > _____
> > From: rolandver109
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Saturday, February 2, 2013 1:13 PM
> > Subject: [TS-520_820_530_830] TS-830S - 1W power out?
> >
> >
> > Ã,
> > Hi
> > I am now a pride owner of a Trio TS-830S, bought it as a" for parts
> Ã¢â,¬" no receive, no transmit" After 6 hours of work receive is
> working, but transmit is only 1W? (Cleaning the relay on the AF board
> fixed receive)
> > There where a couple of strange mods in the final that I could not
> figure out the meaning of.
> > - A diode, 1N4007 type, in series with final "SG" power input
> > - A NTC resistor in series with final "DRV" drive inoutÃ,Â´
> > - A short wire on drive bord R36/LR36 to "DRV"
> > I removed al of this but does get no more than 1W output power when

> tuned against a 50 Ohm dummy load (in series with a power meter).
> > (I am rather new to "tubes" Ã¢â‚¬" I am basically a analog
> "transistor man.)
> > I have measured the following signals / voltages_
> > - Final drive input Ã¢â‚¬" 2.5V RMS AC, max 4.2V RMS AC(full
> AFC), 14.2MHz (Measured with a digital osc.)
> > - Final tubes pin 5, receive 95V, and transmit 50V
> > - Final tubes pin 4, receive 239V, and transmit 207V
> > Anode voltage is about 670V as I remember.
> >
> > What could be wrong Ã¢â‚¬" where should I begin the fault
tracing?
> Is the drive voltage sufficient?
> >
> > Regards/Roland
> >
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40957. ts520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-11 15:53:10 UTC
From: david
Topic: 18446 Message: 40957

HI all
i was tuning up on my kenwood ts 520 on 10m the other day then the 4 a fuse went.

after i changed that i noticed the power out has gone really down like 30 watts on 80 m and same really across all the bands. i did notice that the power was going down slowly before this.

i was wondering as the valves or tubes have never been changed in this rig since it was built in 1980 are they ready for a change and how do i do it?

thanks before hand

best 73 Dave M0GGK

40958. Re: [TS-520_820_530_830] Re: TS-830S - 1W power out?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-11 17:08:33 UTC
From: Joseph Stiles
Topic: 40802 Message: 40958

Roland,

I dug through some info you might find useful regarding the 830 you are dealing with:

Voltage measurements on the "final board:"

volts are DC unless noted
Rig in XMIT(transmit), 14.20Mhz, HV= 800, Ip= 230mA, @ 100W output into 50 ohm dummy load

6146B P-1, 4 , 6 = 1.5vdc
P-2 = 0vdc/12.6vac(heater)
P-3 = 228vdc
P-5 = -68.2vdc
P-7 = 0vdc/6.0vac (heater)
P-8 = 0vdc/0vac

"SG" post should be same as P-3

"FG" post should be same as P-3

Voltages may not be what you observe...but should be CLOSE.

I'll be QRT for a couple

73 Joe
WB7UQU

From: rolandver109 <landrover@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, February 10, 2013 12:59 PM
Subject: [TS-520_820_530_830] Re: TS-830S - 1W power out?

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Look on Pg
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> the final cage. With a good INSULATED tool, touch from the top of the
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> check with a meter set on VDC from there to ground to make sure there
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> white nylon coupler for cracks. If cracked...it can not be "glued" it
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> ...it's outta whack. The set screws are 1.5mm there are 4
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> > Ã,
> > 73Ã, Joe
> > WB7UQU
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> > _____
> > From: rolandver109
> > To: TS-520_820_530_830@yahoogroups.com

> > Sent: Saturday, February 2, 2013 1:13 PM
> > Subject: [TS-520_820_530_830] TS-830S - 1W power out?
> >
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> > Ã,
> > Hi
> > I am now a pride owner of a Trio TS-830S, bought it as a" for parts
> Ã¢â,¬" no receive, no transmit" After 6 hours of work receive is
> working, but transmit is only 1W? (Cleaning the relay on the AF board
> fixed receive)
> > There where a couple of strange mods in the final that I could not
> figure out the meaning of.
> > - A diode, 1N4007 type, in series with final "SG" power input
> > - A NTC resistor in series with final "DRV" drive inoutÃ,Â´
> > - A short wire on drive bord R36/LR36 to "DRV"
> > I removed al of this but does get no more than 1W output power when
> tuned against a 50 Ohm dummy load (in series with a power meter).
> > (I am rather new to "tubes" Ã¢â,¬" I am basically a analog
> "transistor man.)
> > I have measured the following signals / voltages_
> > - Final drive input Ã¢â,¬" 2.5V RMS AC, max 4.2V RMS AC(full
> AFC), 14.2MHz (Measured with a digital osc.)
> > - Final tubes pin 5, receive 95V, and transmit 50V
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> > Anode voltage is about 670V as I remember.
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> > What could be wrong Ã¢â,¬" where should I begin the fault
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> Is the drive voltage sufficient?
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40959. Re: [TS-520_820_530_830] Re: TS-830S - 1W power out?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-11 22:50:06 UTC
From: Joseph Stiles
Topic: 40802 Message: 40959

Roland,

  I sent 1 piece of incorrect info:

              correct below to read: "SG" should be same as P-5

73 Joe
WB7UQU

From: Joseph Stiles <stilesjoseph@...m>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, February 11, 2013 9:08 AM
Subject: Re: [TS-520_820_530_830] Re: TS-830S - 1W power out?

Roland,

   I dug through some info you might find useful regarding the 830 you are dealing with:

   Voltage measurements on the "final board:"

     volts are DC unless noted
    Rig in XMIT(transmit), 14.20Mhz, HV= 800, Ip= 230mA, @ 100W output into 50 ohm dummy load

                                        6146B P-1, 4 , 6 = 1.5vdc
                                                  P-2 = 0vdc/12.6vac(heater)
                                                  P-3 = 228vdc
                                                  P-5 = -68.2vdc
                                                  P-7 = 0vdc/6.0vac (heater)
                                                  P-8 = 0vdc/0vac

                                             "SG" post should be same as P-3

                                             "FG" post should be same as P-3

     Voltages may not be what you observe...but should be CLOSE.

     I'll be QRT for a couple

73 Joe
WB7UQU

From: rolandver109 landrover@dalatron.se>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, February 10, 2013 12:59 PM
Subject: [TS-520_820_530_830] Re: TS-830S - 1W power out?

Hi
I have now serviced the band switch (by disassembling it and testing every switch element). Driver tube socket re-soldered. Caps C29 and C69 checked. All resistors on the final unit board checked. After assembling everything and checked band switch alignment (twice) - power output is better but are still is low.
Meter reads in tune mode and CAR 50%: ALZ = "0", IP=80mA, HV=800. Power measured to maximum 5W at 14.2MHz against a 50 Ohm dummy load.
Anyone who have some hints what to check next?
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> 73Â Joe
> WB7UQU
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> From: rolandver109
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, February 6, 2013 1:27 PM
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final
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> Ã, Ã, Ã, Ã, Ã, "FG" = -106vdc (same as pin 5)
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> Ã, Ã, Ã, Ã, Ã, Ã, These voltages may be
slightly higher or
> lower on your rig..but should be close.
> >
> > Look close at the rectifier board to see if the wiring is different
> from the schematic...moving a couple of wires is a common QRO mod.
> > Check for proper voltages there too
> >
> > Do you a a service manual?Ã, If not, look at Gordon's web site:
> Ã, Ã, n6wk.comÃ, Ã, you can find a service manual.
Look on Pg
> 44 is gives you levels

> > Ã, to check for RX/TX.
> >
> > Ã, The HV of 670 is a bit low...but would not account for the 1
> watt? Is the 1 watt on all bands?? You could have multiple failures,
> including, bad 12by7a driver,
> > Ã, bad final tubes. A very common problem is also a
loose/cracked
> band switch coupler...it's on the end of the band switch shaft just
> inside the final cage. If cracked/broken
> > S-22 in the final cage will be out of sync with the rest of the TX
> chain and may also be a cause of your problem. With rig OFF and
> UNPLUGGED...let sit for a bit,
> > remove top and bottom cover, then remove screws holding the cover
over
> the final cage. With a good INSULATED tool, touch from the top of the
> wire wound
> > ceramic form between the top of the two final tubes to ground...then
> check with a meter set on VDC from there to ground to make sure there
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> > From: rolandver109
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Saturday, February 2, 2013 1:13 PM
> > Subject: [TS-520_820_530_830] TS-830S - 1W power out?
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40960. Re: [TS-520_820_530_830] Re: TS-830S - 1W power out?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-11 22:52:01 UTC
From: Joseph Stiles
Topic: 40802 Message: 40960

Roland:

Let's try this ONE LAST TIME: "FG" same as P-5

73 Joe
WB7UQU

From: Joseph Stiles <stilesjoseph@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, February 11, 2013 2:50 PM
Subject: Re: [TS-520_820_530_830] Re: TS-830S - 1W power out?

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"SG" post should be same as P-3

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> Sent: Wednesday, February 6, 2013 1:27 PM
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> Ã, Ã, Ã, Ã, Ã, Ã, These voltages may be
slightly higher or
> lower on your rig..but should be close.
> >
> > Look close at the rectifier board to see if the wiring is different
> from the schematic...moving a couple of wires is a common QRO mod.
> > Check for proper voltages there too
> >
> > Do you a a service manual?Ã, If not, look at Gordon's web site:
> Ã, Ã, n6wk.comÃ, Ã, you can find a service manual.
Look on Pg
> 44 is gives you levels
> > Ã, to check for RX/TX.
> >
> > Ã, The HV of 670 is a bit low...but would not account for the 1
> watt? Is the 1 watt on all bands?? You could have multiple failures,
> including, bad 12by7a driver,
> > Ã, bad final tubes. A very common problem is also a
loose/cracked
> band switch coupler...it's on the end of the band switch shaft just
> inside the final cage. If cracked/broken
> > S-22 in the final cage will be out of sync with the rest of the TX
> chain and may also be a cause of your problem. With rig OFF and
> UNPLUGGED...let sit for a bit,
> > remove top and bottom cover, then remove screws holding the cover
over
> the final cage. With a good INSULATED tool, touch from the top of the
> wire wound
> > ceramic form between the top of the two final tubes to ground...then
> check with a meter set on VDC from there to ground to make sure there
> are no volts there.
> > Remove most forward tube...use a bright light light and inspect the
> white nylon coupler for cracks. If cracked...it can not be "glued" it
> will have to be replaced.
> > To check for proper orientation/alignment put band selector knob
> pointing to "10"...the shaft has flats the should be on the left and
> right...the rounded parts should
> > be on top and bottom. Each wafer has a white plastic center
> section...with a small circular depression...all those should face to
> the LEFT. Looking at the final cage
> > area...the small shaft on the the tank coil selector switch which
> connects to the band switch connector should show one "flat" facing
down
> or "6 o'clock and the
> > other at 3 o'clock...looking right back at you. Any other
orientation
> ...it's outta whack. The set screws are 1.5mm there are 4
> >
> > The fine copper wire on the ceramic form should be relatively clean
> and bright...if it's dark/black...this indicate severe overheating.

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> > Ã,
> > 73Ã, Joe
> > WB7UQU
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> >
> >
> > _____
> > From: rolandver109
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Saturday, February 2, 2013 1:13 PM
> > Subject: [TS-520_820_530_830] TS-830S - 1W power out?
> >
> >
> > Ã,
> > Hi
> > I am now a pride owner of a Trio TS-830S, bought it as a" for parts
> Ã¢â,¬" no receive, no transmit" After 6 hours of work receive is
> working, but transmit is only 1W? (Cleaning the relay on the AF board
> fixed receive)
> > There where a couple of strange mods in the final that I could not
> figure out the meaning of.
> > - A diode, 1N4007 type, in series with final "SG" power input
> > - A NTC resistor in series with final "DRV" drive inoutÃ,Â´
> > - A short wire on drive bord R36/LR36 to "DRV"
> > I removed al of this but does get no more than 1W output power when
> tuned against a 50 Ohm dummy load (in series with a power meter).
> > (I am rather new to "tubes" Ã¢â,¬" I am basically a analog
> "transistor man.)
> > I have measured the following signals / voltages_
> > - Final drive input Ã¢â,¬" 2.5V RMS AC, max 4.2V RMS AC(full
> AFC), 14.2MHz (Measured with a digital osc.)
> > - Final tubes pin 5, receive 95V, and transmit 50V
> > - Final tubes pin 4, receive 239V, and transmit 207V
> > Anode voltage is about 670V as I remember.

> >
> > What could be wrong Ã¢â‚¬" where should I begin the fault
tracing?
> Is the drive voltage sufficient?
> >
> > Regards/Roland
> >
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> > [Non-text portions of this message have been removed]
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40961. my first TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-12 02:53:08 UTC
From: William Houghton
Topic: 40961 Message: 40961

Hi all,

A week ago I was given my first TS-520. It spent about 30 years in the cabin of a sailboat. Yes, the cabinet has rust and needs repainting but the insides were remarkably clean. There were some issues on the RF board which I have repaired. The receiver seems to work well. The xmtr is working but only getting about 75W out on 20m and 100W out on 40m.

While looking at the RF board I found that a 33K resistor was wired in series with a rectifier diode, D6. Anyone know if this is a factory change or is a widely known mod?

The s-meter is not currently working on receive. The meter movement does work. When I looked at the IF board I noticed a terminal strip mounted mounted to the top of the IF board using the mounting screw of the IF board. It is located at the outside edge, in the center, next to the location for a CW filter. Is this also something from the factory or is it an end-user mod?

Thanks and 73,

Bill

[Non-text portions of this message have been removed]

40962. Re: TS-830S - 1W power out?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-12 06:15:51 UTC
From: scott10k
Topic: 40802 Message: 40962

Roland,
Assuming that the driver tube and the finals are OK, I would suggest that you check Rf voltages according to the Transmit Rf level diagram on page 44 of the service manual. This may give you an indication as to why you are not getting drive (since your ALC reading in Tune mode seems to be zero). Most of these measurements are done with the SG switch OFF so as not to stress the final tubes.
You will need to use an Rf probe and a digital multimeter or VTVM. I made my own Rf probe from two 1N60 diodes in series, a 0.01 uf ceramic cap (500 volts or more), and 4.7 megohm resistor, according to circuit diagrams in the ARRL handbook or on the internet.

On the Rf board you would first measure the Rf voltage at TP-4 which should be around 2.0 Rf volts. You should also measure the VCO voltage at TP-3 which should be around 1.0 Rf volts. I suggest doing these measurements at 14.175 MHz. If both of these voltage readings are OK, then you know that the mixer should be providing sufficient Rf drive to the driver tube. If these voltages are very much lower than there may be a problem on the IF board or even on the PLL board.

If you are getting the correct voltages at TP-4 and TP-3, then the next item to check is the Rf drive on pin 7 (the plate) of the driver tube. This requires a device called a Pomona socket, which can be found on eBay. With the Pomona socket in place you can also check that you have the correct DC voltages to pins 7, 8, and 2 to make sure they are within spec. CAUTION-the EXPOSED PINS ON THE POMONA SOCKET WILL HAVE HIGH VOLTAGES (Pin 7 about 330 volts). Rf drive to pin 7 should be about 75 Rf volts, but I have found it to be somewhat lower and I still can get 100 watts output from the rig.

For each measurment, be sure to record the positions of the Drive and Carrier controls. You will need these for future reference.

I hope this will be a good start in your analysis of the low output problem you are having. Terry Wagner first gave me the advice to do the above, and I was able to correct problems with my TS-830S.

73s, Scott, N6CIC

--- In TS-520_820_530_830@yahoogroups.com, "rolandver109" wrote:
>
>
> Hi
> I have now serviced the band switch (by disassembling it and testing
> every switch element). Driver tube socket re-soldered. Caps C29 and C69
> checked. All resistors on the final unit board checked. After
> assembling everything and checked band switch alignment (twice) -
> power output is better but are still is low.
> Meter reads in tune mode and CAR 50%: ALZ = "0", IP=80mA,
> HV=800. Power measured to maximum 5W at 14.2MHz against a 50 Ohm dummy
> load.

> Anyone who have some hints what to check next?
> 73´s/Roland
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles wrote:
> >
> > Roland,
> >
> > Â Â Glad I could help you out a bit. I saw that you intend to
> remove the RF board. Just make sure to make sure that when you put it
> back inÂ all the wafers, shaft etc., are aligned correctly. If you
> have any question about that...I can help. Get a strong light and some
> magnification and take a good look on the foil side of the driver tube
> socket. I have seen many cracked solder joints here. Check also all the
> "molex" connectors on the foil side for dry/cracked solder
> joints...tough up any that appear questionable. I have been rather
> successful with cleaning the RF board in a soak of warm water and "DAWN"
> dish detergent and some light agitation with a long SOFT bristle
> brush....through rinse and complete drying. It really does work good
> >
> >
> > Â
> > 73Â Joe
> > WB7UQU
> >
> >
> >

40963. TS 520S VFO Assembly needed

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-12 12:04:37 UTC
From: Tim
Topic: 40963 Message: 40963

HI,I am trying to restore an ole ts 520s 160M version and i am in need of a complete vfo assembly to finish the job...Will pay a fair price + Shipping...Let me know if you can help...Thanks N4DXX ..Info good on qrz..

40964. TS-830 IP meter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-12 12:08:41 UTC
From: Tim
Topic: 40964 Message: 40964

Hi.I am restoring a ts 830 and have completed the task except for the ip meter will read at times and at times it won't.I can peck the right side of the rig and it will come to life...Loose connection or a relay issue ....Any thoughts....Thanks in advance!!

40965. Re: [TS-520_820_530_830] TS 520S VFO Assembly needed

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-12 15:44:52 UTC
From: W LEWIS
Topic: 40963 Message: 40965

Contact Bob Mansker, KE5FTF. If anyone has one it would probably be him.
73s,
Butch Lewis
K0PSA

--- On Tue, 2/12/13, Tim <htjude@...> wrote:

From: Tim <htjude@...>
Subject: [TS-520_820_530_830] TS 520S VFO Assembly needed
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, February 12, 2013, 6:04 AM

HI,I am trying to restore an ole ts 520s 160M version and i am in need of a complete vfo assembly to finish the job...Will pay a fair price + Shipping...Let me know if you can help...Thanks N4DXX ..Info good on qrz..

[Non-text portions of this message have been removed]

40966. ASTATIC D104 trade?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-12 15:44:20 UTC
From: n3kvl
Topic: 40966 Message: 40966

Hi All,

I recently picked up a TS520S and a D104 without a PTT. Its in excellent shape, however, I don't think I will use it.

I would rather use a MC-50 or compatible matching mic for the rig.

If anyone is interested and would like to trade for TS520S related gear....let me know.

I haven't tested the D104, but there's not much that can go wrong with all that very shiny chrome :-)

Thanks
Archie

40967. REÑ TS820S out of frequency lock

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-12 15:51:12 UTC
From: Prof. Arnaldo Coro Antich
Topic: 40967 Message: 40967

Any ideas what may be the cause of the sudden loss of frequency lock
after pressing
the PTT ?
The radio receives OK up to a certain frequency... sometimes it allows
one to transmit
on frequencies below about 7060 kHz, other times it doesn't.
Moving up to 7110 it ALWAYS looses both reception and transmission after
pressing
the PTT .
Power output is normal when it works...
Tested the external VFO and the problem is identical with both VFO's
Any ideas of how to reach the possible affected part of the rig ?
Thanks for help... it is my only HF multiband rig !!!

Arnie Coro
CO2KK

40968. Re: TS-520SE

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-12 16:43:35 UTC
From: Scott
Topic: 4279 Message: 40968

Dennis, thanks for reminding me! I guess it's been to long since the TV service days:(Ripple looks good for the moment. Testing continues.

73,
Scott Lewis
KJ4BPV

--- In TS-520_820_530_830@yahoogroups.com, dennis hatch wrote:
>
> Power it up with and "autotransformer" OR VARIAC with a 100W incandesant light bulb (if you can still find one).... and slowly bring the ac voltage up to 120 V. The light bulb acts as a current limiting device. This will reform the electrolytic capacitors and save you a bunch of $ and labor. Nine times out of ten your caps will reform and be fine..... Why re-cap when you do not have to?
> --- On Thu, 2/7/13, Scott wrote:
>
>
> From: Scott
> Subject: [TS-520_820_530_830] TS-520SE
> To: TS-520_820_530_830@yahoogroups.com
> Date: Thursday, February 7, 2013, 9:06 AM
>
>
> I have just acquired this rig in what appears to be in near mint condition. This rig has not been powered up for 3-4 years.
> Looking for the groups thoughts here. Replace the PS filter caps before power up? Anything else?
>
> Also looking for a working DG-5 display for this rig.
>
> All comments appreciated.
>
> 73,
> Scott
> kj4bpv
>
>
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> Yahoo! Groups Links
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>
>
> [Non-text portions of this message have been removed]
>

40969. Re: [TS-520_820_530_830] REÑ TS820S out of frequency lock

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-12 19:10:35 UTC
From: Mark Gilger
Topic: 40967 Message: 40969

More than likely your VFO needs to have the Rear
Wiper tab cleaned. The procedures is located at:

http://www.n6wk.com/kenwood/TS-820-VFO--servicing.pdf

In most cases you do not need to remove the vfo
to perform. Just remove the rear most screw on
the side plate access plate and spray a few drops of DeOxit on the tab.

Good luck.

Mark

At 10:51 AM 2/12/2013, Prof. Arnaldo Coro Antich wrote:
>
>
>Any ideas what may be the cause of the sudden loss of frequency lock
>after pressing
>the PTT ?
>The radio receives OK up to a certain frequency... sometimes it allows
>one to transmit
>on frequencies below about 7060 kHz, other times it doesn't.
>Moving up to 7110 it ALWAYS looses both reception and transmission after
>pressing
>the PTT .
>Power output is normal when it works...
>Tested the external VFO and the problem is identical with both VFO's
>Any ideas of how to reach the possible affected part of the rig ?
>Thanks for help... it is my only HF multiband rig !!!
>
>Arnie Coro
>CO2KK
>

[Non-text portions of this message have been removed]

40970. RE: Need to know what is DEOXIT

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-12 20:39:04 UTC
From: Prof. Arnaldo Coro Antich
Topic: 40970 Message: 40970

Dear amigos... need to learn what DEOXIT is...
Got a recommendation to use DEOXIT on the variable capacitor of the VFO
of the TS820S.
I will do what is suggested... but the VCO unlock problem is happning with
the EXTERNAL VFO too...
thanks for the INFO
Note: Have a little WD40 left in a can... Will it work like DEOXIT ?
Arnie Coro
CO2KK

40971. Re: [TS-520_820_530_830] RE: Need to know what is DEOXIT

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-12 21:45:21 UTC
From: Jan Servaites
Topic: 40970 Message: 40971

MCM has it and use ONLY Deoxit and nothing else (please no WD-40)
http://www.mcmelectronics.com/product/CAIG-LABORATORIES-D5S-6-/200-040
Jan N8CBX

>
>

40972. RE: [TS-520_820_530_830] TS-830 IP meter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-12 21:59:55 UTC
From: fpath fpath
Topic: 40964 Message: 40972

G'day Tim,

Seems you have answered your own question. It appears to be a loose or bad connection with a molex connector or dry\cold joint. Look at the circuit diagram for the (S13) IP section of the switch and trace back, then go to that connector(s) and removed, clean and refit, if it continutes to happend remove the affected board, look at the foil side of the board under magnification and good lighting and remove old solder sand and clean and re-apply new solder. Clean S13 using deoxit, ensuring switch is run through its entire range multiply times, dry off using can/compressed air then allow to dry for a further 30 minutes just to be on safe side. Dont for get that these radios have HV that can kill, when poking around inside disconnect from power supply and discharge HV system several times.

When requesting help, please include callsign and name at bottom of email.

73s
Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: htjude@hotmail.com
Date: Tue, 12 Feb 2013 12:08:41 +0000
Subject: [TS-520_820_530_830] TS-830 IP meter

Hi.I am restoring a ts 830 and have completed the task except for the ip meter will read at times and at times it won't.I can peck the right side of the rig and it will come to life...Loose connection or a relay issue ....Any thoughts....Thanks in advance!!

[Non-text portions of this message have been removed]

40973. Re: [TS-520_820_530_830] RE: Need to know what is DEOXIT

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-12 22:11:18 UTC
From: Cliff White
Topic: 40970 Message: 40973

To answer your first question Deoxit is an electrical contact
cleaner/lubricant.

On 02/12/2013 03:45 PM, Jan Servaites wrote:
> MCM has it and use ONLY Deoxit and nothing else (please no WD-40)
> http://www.mcmelectronics.com/product/CAIG-LABORATORIES-D5S-6-/200-040
> Jan N8CBX
>
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> Yahoo! Groups Links
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[Non-text portions of this message have been removed]

40974. Re: TS 520S VFO Assembly needed

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-12 22:58:19 UTC
From: Bob
Topic: 40963 Message: 40974

Hi,
I have a clean stable VFO Unit for the 520S...
Will include the dials & brackets plus a couple extra bulbs...
Sell for $45.00 plus $13.00 to mail by Priority Mail...
Bob
ke5ftf@...
****

--- In TS-520_820_530_830@yahoogroups.com, "Tim" wrote:
>
> HI,I am trying to restore an ole ts 520s 160M version and i am in need of a complete vfo assembly to finish the job...Will pay a fair price + Shipping...Let me know if you can help...Thanks N4DXX ..Info good on qrz..
>

40975. Re: [TS-520_820_530_830] RE: Need to know what is DEOXIT

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-12 23:00:52 UTC
From: Joseph Stiles
Topic: 40970 Message: 40975

Amigo Arnie,

I suspect that if cleaning the VFO "wipers" on both the rig and remote does not solve the problem...I would take a look at the service manual and check the voltages on the VCO(voltage controlled oscillator) according to the procedure on Pg 45, Section 2-2, and Pg 52 & 53, section 5-2.

DEOXIT is a commonly available cleaner/lube here in the USA. It may not be available to you locally. Any old "TV" channel selector cleaner/lube should serve as well.

Buenos Dias Arnie,

73 Joe
WB7UQU

From: Prof. Arnaldo Coro Antich <coro@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, February 12, 2013 12:39 PM
Subject: [TS-520_820_530_830] RE: Need to know what is DEOXIT

Dear amigos... need to learn what DEOXIT is...
Got a recommendation to use DEOXIT on the variable capacitor of the VFO
of the TS820S.
I will do what is suggested... but the VCO unlock problem is happning with
the EXTERNAL VFO too...
thanks for the INFO
Note: Have a little WD40 left in a can... Will it work like DEOXIT ?
Arnie Coro
CO2KK

[Non-text portions of this message have been removed]

40976. Re: [TS-520_820_530_830] RE: Need to know what is DEOXIT

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-12 22:14:15 UTC
From: Bruce Gentry
Topic: 40970 Message: 40976

On 2/12/13 3:39 PM, Prof. Arnaldo Coro Antich wrote:
> Note: Have a little WD40 left in a can... Will it work like DEOXIT ?
> Arnie Coro
> CO2KK

> Deoxit used oliec acid, made from olives, as it's primary active ingredient. The acid will clean oxide from copper and other metals, other ingredients flush dirt out and lubricate the contact surfaces.
> WD-40 is mostly hydrocarbon solvent, and is acceptable only for an
> initial cleaning to remove hardened grease and oil, as well as
> ordinary dirt from contacts. It's also very good for dissolving old
> lubricants that have oxidized and turned to varnish in switch and
> control bushings. Once the shaft is freed or the worst of the crud is
> loosend up, the WD-40 must be completely flushed out. It will make a
> terrible mess if left in the control or switch, likely worse than
> before it was applied. It doesn't do much for oxidation on contacts,
> something else like DeOxit is needed for that. It can be used as a
> step in cleaning a really filthy switch or control, but is only the
> beginning. If the shaft of a switch or control turns freely, and the
> the contacts or control are scratchy, it probably isn't needed, just
> use a good contact cleaner.
>
>
>
> Bruce Gentry, KA2IVY
>
> ------------------------------------
>
> Yahoo! Groups Links
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>

40977. Re: [TS-520_820_530_830] RE: Need to know what is DEOXIT

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-12 23:47:20 UTC
From: KB1TCD
Topic: 40970 Message: 40977

Right, WD40 must be flushed out!

I remember back in the mid 70s I bought a Peugeot racing bicycle.
The dealer told me to never use WD40 on the chain as it will "eat it up"
and also void the warranty.
I never used WD40 after that on anything!

73 de KB1TCD

40978. Re: [TS-520_820_530_830] RE: Need to know what is DEOXIT

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-13 14:31:52 UTC
From: dennis hatch
Topic: 40970 Message: 40978

By volume: 96% Naptha, 3% Oliec Acid, 1% mineral oil..... WD-40 is NOT recommended as posts say.

--- On Tue, 2/12/13, Prof. Arnaldo Coro Antich <coro@...> wrote:

From: Prof. Arnaldo Coro Antich <coro@...>
Subject: [TS-520_820_530_830] RE: Need to know what is DEOXIT
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, February 12, 2013, 2:39 PM

Dear amigos... need to learn what DEOXIT is...
Got a recommendation to use DEOXIT on the variable capacitor of the VFO
of the TS820S.
I will do what is suggested... but the VCO unlock problem is happning with
the EXTERNAL VFO too...
thanks for the INFO
Note: Have a little WD40 left in a can... Will it work like DEOXIT ?
Arnie Coro
CO2KK

Yahoo! Groups Links

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40979. Re: [TS-520_820_530_830] RE: Need to know what is DEOXIT

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-13 14:44:09 UTC
From: Prof. Arnaldo Coro Antich
Topic: 40970 Message: 40979

Thank you very much amigo Dennis !!!
II am sure that Pedro my chemical engineer friend can ? duplicate? the
formula
and make a list a pint for me !!!
It was very easy to download the detailed and fully illustrated procedure to
open up the rig and partially dismount the internal VFO in order to apply
the Deoxit to the back wiper and also lubrication to the ball bearing
at the front of the capacitor.
I will perform this maintenance anyway, despite the fact that it looks
like the problem
is in the complex VCO PLL circuits !!!
Otherwise this TS820S is cosmetically in a like new condition, and it
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nicely until the failure that unlocks the VCO developed, possibly to be
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on ageing electrolytic capacitors ...

73 and DX
Arnie Coro
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BTW, there are several TS520's and TS830's here in Cuba that are still
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> To: TS-520_820_530_830@yahoogroups.com
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> CO2KK
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> Yahoo! Groups Links
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40980. TS-2000 Group

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-13 18:17:34 UTC
From: waynemvoigt
Topic: 40980 Message: 40980

Hi Everyone,
Is there a net or Group like ours that works on TS-2000's? Our group is fantastic, you can always get answers to Kenwood Hybred Questions here.I need help with my TS-2000 so I though I would ask here. I have had questions about my TS-830 and always had someone to come up with the answers.
Have a Great Day,
Wayne W6WMV Finley,Ca.

40981. Re: [TS-520_820_530_830] TS-2000 Group

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-13 23:24:26 UTC
From: Mark L. Hammond
Topic: 40980 Message: 40981

Hi Wayne,

Yes, I'm a member of two Yahoo TS-2000 groups--just search for them. I haven't been receiving daily emails for quite a while from that group (my choice), but I remain a member.

There has been some great discussion from time to time, but it's not NEARLY as warm and helpful as this Hybrid group :) My opinion of course...but it's also a fact..hi hi.

Lots of info in their archives as well.

73!

Mark N8MH

At 06:17 PM 2/13/2013 +0000, you wrote:
>
>
>Hi Everyone,
>Is there a net or Group like ours that works on TS-2000's? Our group is fantastic, you can always get answers to Kenwood Hybred Questions here.I need help with my TS-2000 so I though I would ask here. I have had questions about my TS-830 and always had someone to come up with the answers.
>Have a Great Day,
>Wayne W6WMV Finley,Ca.
>
>

[Non-text portions of this message have been removed]

40982. Re: [TS-520_820_530_830] RE: Need to know what is DEOXIT

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-13 23:29:36 UTC
From: Mark L. Hammond
Topic: 40970 Message: 40982

Aha! The mineral oil explains a lot.

When I made my first application of Deoxit spray (5%) to a TS-520, I treated it like it would ALL evaporate, like electrical connection cleaner that is all volatile and leaves no residue. That was a mistake on my part...and a bit messy.

Quickly it became obvious that only small amounts are needed, and that it WILL leave an oily residue where you overspray/drip. I started using paper towels to catch such things during spraying/dripping.

Maybe my mistakes will spare somebody else who is new to the concoction.

73,

Mark N8MH

At 06:31 AM 2/13/2013 -0800, you wrote:
>
>
>By volume: 96% Naptha, 3% Oliec Acid, 1% mineral oil..... WD-40 is NOT recommended as posts say.
>
>--- On Tue, 2/12/13, Prof. Arnaldo Coro Antich <mailto:coro%40enet.cu>coro@...> wrote:
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>Subject: [TS-520_820_530_830] RE: Need to know what is DEOXIT
>To: <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>Date: Tuesday, February 12, 2013, 2:39 PM
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40983. Re: TS-2000 Group

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-13 23:40:40 UTC
From: foxcreek4
Topic: 40980 Message: 40983

Hi Wayne

Check the Yahoo Groups listing there are 2 TS-2000 groups one for the radio and one for software. Go luck.

Skip, KC4QP

--- In TS-520_820_530_830@yahoogroups.com, "waynemvoigt" wrote:
>
> Hi Everyone,
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> Have a Great Day,
> Wayne W6WMV Finley,Ca.
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40984. Re: [TS-520_820_530_830] my first TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-13 23:44:03 UTC
From: vu2jmx
Topic: 40961 Message: 40984

Hello Bill,

RE: S meter.
Is the AGC switch ON (fast/slow) ? I'm assuming you have the RF gain turned all the way CW.

The TS-520 is a work-horse. Great audio on TX. Congratulations on your new acquisition !

73,
Prem.

From: William Houghton <rdrbill@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, February 11, 2013 9:53:08 PM
Subject: [TS-520_820_530_830] my first TS-520

Hi all,

A week ago I was given my first TS-520. It spent about 30 years in the cabin of a sailboat. Yes, the cabinet has rust and needs repainting but the insides were remarkably clean. There were some issues on the RF board which I have repaired. The receiver seems to work well. The xmtr is working but only getting about 75W out on 20m and 100W out on 40m.

While looking at the RF board I found that a 33K resistor was wired in series with a rectifier diode, D6. Anyone know if this is a factory change or is a widely known mod?

The s-meter is not currently working on receive. The meter movement does work. When I looked at the IF board I noticed a terminal strip mounted mounted to the top of the IF board using the mounting screw of the IF board. It is located at the outside edge, in the center, next to the location for a CW filter. Is this also something from the factory or is it an end-user mod?

Thanks and 73,

Bill

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40985. Re: [TS-520_820_530_830] my first TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-14 00:36:07 UTC
From: William Houghton
Topic: 40961 Message: 40985

Hi Prem,

I've seen a photo of another RF board and it has the same modification to diode D6, a ressitor in series with D6. For now, I will assume this was a factory mod.

I traced one of the wires from the terminal strip and found it was the red wire to the VFO. Mike, W5RKL, has told me that this is the RIT line to the VFO. I will trace this back to its origin and see whats up. The RIT function is working on the radio.

I found that the reference voltage, RF1, on the AVR board was sitting at 2.6V. Pin 9 of the board was at 9V. I adjusted VR3 to set RF1 to 3.3V. Signal levels came up and I could zero the s-meter. However, I could only get the s-meter to S7 by adjusting VR2 on the IF board. I'm using a Heathkit IG-42 generator which has a built in signal level meter but I haven't checked that for accuracy of the output. Other than the sensitivity of the s-meter perhaps being off the s-meter now functions on all bands.

Since this email goes to the forum, google tells me that a replacment for the 3SK41 etc FETs is an NTE-222 or an RCA 40673. Is one any better of a choice than the other?

Thanks to all & 73 - Bill

From: vu2jmx <vu2jmx@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wed, February 13, 2013 3:44:08 PM
Subject: Re: [TS-520_820_530_830] my first TS-520

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73,
Prem.

From: William Houghton rdrbill@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, February 11, 2013 9:53:08 PM
Subject: [TS-520_820_530_830] my first TS-520

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Thanks and 73,

Bill

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40986. Re: [TS-520_820_530_830] my first TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-14 01:54:08 UTC
From: vu2jmx
Topic: 40961 Message: 40986

Hi Bill,

It has been a while since I probed the innards of my TS-520. Perhaps the others with recent hands-on experience can chip in.
I can send you some pics of the boards and wiring you are referring to - if that's of any help.
BTW, is your AGC switch on ? And, is your RF gain fully CW ?

On one of my TS-520 the front-end MOSFET was noisy. I replaced it with a BF-966 from my junk box. Had no reason to hunt for any other equivalent. The 40673 is also a hard-to-find transistor....

73,
Prem.

From: William Houghton <rdrbill@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, February 13, 2013 7:36:07 PM
Subject: Re: [TS-520_820_530_830] my first TS-520

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To: "TS-520_820_530_830@yahoogroups.com" TS-520_820_530_830@yahoogroups.com>

Sent: Wed, February 13, 2013 3:44:08 PM
Subject: Re: [TS-520_820_530_830] my first TS-520

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To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, February 11, 2013 9:53:08 PM
Subject: [TS-520_820_530_830] my first TS-520

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40987. Re: [TS-520_820_530_830] my first TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-14 02:09:49 UTC
From: William Houghton
Topic: 40961 Message: 40987

Hi Prem,

No need for pix yet. You could tell me if D6 your RF board has a mod. Where the diode should go through the two holes the diode is in series with a resistor. Is your the same? D6 is located along the left side of the board about 1/3 of the way front the front of the rig.

Yes, AGC is on and RF gain turned up all of the way. This might sort itself out after I do an alignment.

From: vu2jmx <vu2jmx@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wed, February 13, 2013 5:54:16 PM
Subject: Re: [TS-520_820_530_830] my first TS-520

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40988. Re: [TS-520_820_530_830] RE: Need to know what is DEOXIT

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-14 14:06:32 UTC
From: dennis hatch
Topic: 40970 Message: 40988

De nada y mucho gusto! 73's Dennis, WA0WAB

--- On Wed, 2/13/13, Prof. Arnaldo Coro Antich <coro@...> wrote:

From: Prof. Arnaldo Coro Antich <coro@...>
Subject: Re: [TS-520_820_530_830] RE: Need to know what is DEOXIT
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, February 13, 2013, 8:44 AM

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and make a list a pint for me !!!
It was very easy to download the detailed and fully illustrated procedure to
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Yahoo! Groups Links

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40989. Re: [TS-520_820_530_830] RE: Need to know what is DEOXIT

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-14 14:09:52 UTC
From: dennis hatch
Topic: 40970 Message: 40989

Do not assume that the transistors are good. I have seen VCO lock problems due to aged transistors. 73's Dennis

--- On Wed, 2/13/13, Prof. Arnaldo Coro Antich <coro@...> wrote:

From: Prof. Arnaldo Coro Antich <coro@...>
Subject: Re: [TS-520_820_530_830] RE: Need to know what is DEOXIT
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, February 13, 2013, 8:44 AM

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40990. Re: [TS-520_820_530_830] 6146W tube "cap" question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-14 14:24:17 UTC
From: dennis hatch
Topic: 40893 Message: 40990

Remove all the solder from the old cap, and use a SMALL ammount of high temperature silicone automotive exhaust manafold gasket sealer to glue the cap back on. After the silicone has CURED, solder the cap connection. The cap will stay in place!

--- On Fri, 2/8/13, Mark L. Hammond <marklhammond@...> wrote:

From: Mark L. Hammond <marklhammond@gmail.com>
Subject: Re: [TS-520_820_530_830] 6146W tube "cap" question
To: TS-520_820_530_830@yahoogroups.com
Date: Friday, February 8, 2013, 5:44 AM

Hi Cliff,

Wow, that's a neat fix. Mine seems connected (and could be tested for continuity) Sadly, I don't have a tube tester (Other than the rig,and it's not worth the risk..hi hi). It's the vacuum question I guess.

Mark N8MH

At 09:18 PM 2/7/2013 -0600, you wrote:
>
>
>I got a used tube that had that problem, and was able to basically just
>solder it back on. Just make sure the wire is still there and it hasn't
>lost it's vacuum. Be sure to put it into a tube tester before putting it
>in a radio, though.
>
>Respectfully,
>Cliff White, W5CNW
><mailto:w5cnw%40arrl.net>w5cnw@arrl.net <mailto:w5cnw%40arrl.net>w5cnw@...>
>On 02/07/2013 07:52 PM, Mark L. Hammond wrote:
>> Hi Jack,
>>
>> Thanks for the tips. I wasn't clear--the tube I was talking about is a New Old Stock 1987 era JAN GE 6146B that has apparently never been used---it didn't come out of my rig that way. Quite the opposite---I didn't want to put it in! hi hi
>>
>> My rig has no visible evidence of abuse. The plate choke looks "shiny new" and while I did replace the four cathode resisors--they tested fine and looked OK. Precautionary, mostly...
>>
>> Thanks,
>>
>> Mark N8MH
>>
>>

>>
>> At 05:12 PM 2/7/2013 -0800, you wrote:
>>>
>>>
>>> Mark,
>>>
>>> When the cap cement has crystallized and disintegrated, it's almost always an indication that the tube has been way overheated.
>>> Back in the late 60's, it was common to see the plate cap of the horizontal output tube of the larger screen color sets loose even
>>> though the envelope was still intact and had a vacuum. In the worst cases, the envelope had been so hot that it was sucked in
>>> and distorted. Lots of 6JE6 and 6JF6 outputs suffered that fate when the flyback or the damper shorted. I have a TS-520 sitting
>>> downstairs right now that has one of it's 6146Bs sucked in.Â Both cathode resistors are shot and the plate choke is black.Â Some
>>> rebuilding to do on this one before it is back on the air.Â I would assume that the outputs on your rig have been cherried up way too
>>> much and the associated components should all be suspect now.
>>>
>>> Jack DonnellyÂ Â Â Â Â Â Â KV4JX
>>> Ball Ground Video Productions
>>> 308 Calusa Place
>>>
>>> Ball Ground, GA 30107
>>> Phone 678-592-9974
>>> www.ballgroundvideo.com
>>>
>>> _____
>>> From: Mark L. Hammond <mailto:marklhammond%40gmail.com>marklhammond@...>
>>> To: <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>>> Sent: Thursday, February 7, 2013 7:54 PM
>>> Subject: RE: [TS-520_820_530_830] 6146W tube "cap" question
>>>
>>>
>>> Â
>>> Thanks, Dave. It does look like the black compound isn't intact around the cap. I think I'll follow your example!
>>>
>>> I'm thinking that there might be something wrong with the existing tubes---last thing I need is to introduce another variable in the equation.
>>>
>>> 73,
>>>
>>> Mark N8MH
>>>
>>> At 10:14 AM 2/8/2013 +1030, you wrote:
>>>
>>>> Mark
>>>> It could be as simple as the fixing compound has just broken away. Personally any that

I have received like that, including new ones I usually use for target practice at 300 metres. I have found in the past the wire usually breaks or the vaccum has been breeched.
>>>>
>>>> Dave
>>>> VK5PDL
>>>>
>>>>
>>>>
>>>> To: <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>>>> From: <mailto:marklhammond%40gmail.com>marklhammond@...
>>>> Date: Thu, 7 Feb 2013 18:40:21 -0500
>>>> Subject: [TS-520_820_530_830] 6146W tube "cap" question
>>>>
>>>>
>>>>
>>>>
>>>>
>>>> Hi all,
>>>>
>>>> A buddy of mine sent me some tubes. The cap (or nipple) of one of the 6146W tubes wiggles a little bit.
>>>>
>>>> That CAN'T be good, can it? Meaning, is there any amount of wiggle that is OK? Or is it trash...
>>>>
>>>> 73,
>>>>
>>>> Mark L. Hammond [N8MH]
>>>>
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40991. Best grease for Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-14 15:51:28 UTC
From: John Donnelly
Topic: 40991 Message: 40991

Hi All,

I've got a TS-520 that I'm trying to get back on the air. It was sitting in the humid Florida environment for quite some
time, I suspect maybe in a garage, because it was loaded with dust, greasy film and palmetto bugs. I've washed it out
with some CRC electronics cleaner, blown it out with the compressor and air chuck and the chassis and boards look
pretty good now. The receiver seems to beworking pretty well and the VFO dial is dead on frequency.

I've lubed the controls andband switches with deoxit gold but I'm not sure what to use for the tuning caps and other lube
points. What's theconsensus on the best grease and where can I get it? Next step is to rebuild the RF cage and power
supply with partsthat are in the mail. Can't believe it, but I had to break down and buy a Weller soldering gun. My 15 watt
pencil iron that I've been using all these years somehow won't heat those chassis fangs to get the cathode resistors off.

;-)

Thanks,

Jack   KV4JX

[Non-text portions of this message have been removed]

40992. Re: [TS-520_820_530_830] Best grease for Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-14 18:47:25 UTC
From: Dave & Loraine
Topic: 40991 Message: 40992

Jack,
Using Deoxit Gold on non-gold contacts may a bad idea, like using grease on cap's.
Deoxit D5 is a recommended cleaner of contacts and variable cap wipers.
There have been reported issues with CRC cleaner on plastic parts.
See previous posts on the subject.
73 Dave f4eyk

40993. Re: Best grease for Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-14 18:59:18 UTC
From: roberteleazer@rocketmail.com
Topic: 40991 Message: 40993

Jack:

Yes, I live in Florida, too, and I know how it can be. And while CRC makes some great electronics cleaners, including some designed for a marine environment, DO NOT use CRC Electro cleaner! I have a ruined DX-150A and a messed up dial on a Heathkit GDO from using that Electro cleaner. It was fine on WWII vintage gear but some of the plastics that came out in the mid-60's just melt when it hits them - and I am talking about visable vapors being produced!

For lubing pots and switches I recomemnd LPS-1, which is a lightweight lube that I have used for over 30 years. I get mine at Ace Hardware. It works wonders on scratchy volume control pots - it does not fix them permanently, but lasts quite a while before you have to reapply it. I saved myself over $600 by using LPS-1 to fix an erratic mass airflow sensor on a Toyota truck. The pot on the sensor went from jitter-jitter acorss most of the range to smooth with just one little bump after I applied the LPS-1

I understand that LPS-1 is sometimes found at bike and motorcycle shops because it is one of the very few things that will lube a chain and not encourage more dirt to collect on it.

I am rebuilding a TS-520 right now. It has some severe power supply problems (as in smoke!) and I am replacing just about everything in that circuit but the transformer. I was sure the 500V 100 uf caps were shot but after I got them out it they seem to test good. I'll replace all the HV caps anyway; and I'm rolling my own for that rather than buying the kits.

Good luck!

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, John Donnelly wrote:
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> Hi All,
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> pretty good now. The receiver seems to beworking pretty well and the VFO dial is dead on frequency.
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> I've lubed the controls andband switches with deoxit gold but I'm not sure what to use for the tuning caps and other lube
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> supply with partsthat are in the mail. Can't believe it, but I had to break down and buy a Weller soldering gun. My 15 watt
> pencil iron that I've been using all these years somehow won't heat those chassis fangs to get the cathode resistors off.
>
> ;-)
>
>
> Thanks,
>
>
> Jack   KV4JX
>
> [Non-text portions of this message have been removed]
>

40994. 2M emergency J-pole

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-14 20:01:06 UTC
From: theron
Topic: 40994 Message: 40994

Good afternoon, just thought I would pass this special offer along from
Amateur Radio Suppllies on everything you need to build a 2M roll-up jpole.
You can hang it from your ceiling and have instant communications into your
local repeater, or if you have antenna restrictions this is the antenna to
go with.

Now is the time to build that first 2M emergency j-pole, and you can get
everything you need for under 10 bucks and build it yourself over at
Amateur Radio Supplies.
http://www.amateurradiosupplies.com//ProductDetails.asp?ProductCode=11503?Click=2662

Tnx es 73 de Don W7DTG

[Non-text portions of this message have been removed]

40995. Re: [TS-520_820_530_830] Re: Best grease for Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-14 20:52:52 UTC
From: John Donnelly
Topic: 40991 Message: 40995

Robert,

Would you use the LPS-1 on the capacitor shaft and through the chassis bearings?

Jack Donnelly KV4JX
Ball Ground Video Productions
308 Calusa Place

Ball Ground, GA 30107
Phone 678-592-9974
www.ballgroundvideo.com

From: "roberteleazer@..." <roberteleazer@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, February 14, 2013 1:59 PM
Subject: [TS-520_820_530_830] Re: Best grease for Kenwoods

Jack:

Yes, I live in Florida, too, and I know how it can be. And while CRC makes some great electronics cleaners, including some designed for a marine environment, DO NOT use CRC Electro cleaner! I have a ruined DX-150A and a messed up dial on a Heathkit GDO from using that Electro cleaner. It was fine on WWII vintage gear but some of the plastics that came out in the mid-60's just melt when it hits them - and I am talking about visable vapors being produced!

For lubing pots and switches I recomemnd LPS-1, which is a lightweight lube that I have used for over 30 years. I get mine at Ace Hardware. It works wonders on scratchy volume control pots - it does not fix them permanently, but lasts quite a while before you have to reapply it. I saved myself over $600 by using LPS-1 to fix an erratic mass airflow sensor on a Toyota truck. The pot on the sensor went from jitter-jitter acorss most of the range to smooth with just one little bump after I applied the LPS-1

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Good luck!

Robert
WB5WSV

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> ;-)
>
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> Thanks,
>
>
> Jack   KV4JX
>
> [Non-text portions of this message have been removed]
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40996. Re: [TS-520_820_530_830] Re: Best grease for Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-14 20:56:38 UTC
From: John Donnelly
Topic: 40991 Message: 40996

Robert,

My TS-520 had power supply problems as well but not catastrophic like you seem to have. Some diode problems
and just old dried out electrolytics on mine. It was blowing fuses until I replaced the diodes in the 13.8v supply.
Someone really fried the RF though. One of the 6146Bs got so hot that it sucked in the envelope on one side. The
choke, the RF caps and the cathode resistors are suffering from the current and heat as well so they have to be replaced.

Jack Donnelly KV4JX
Ball Ground Video Productions
308 Calusa Place

Ball Ground, GA 30107
Phone 678-592-9974
www.ballgroundvideo.com

_____
From: "roberteleazer@..." <roberteleazer@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, February 14, 2013 1:59 PM
Subject: [TS-520_820_530_830] Re: Best grease for Kenwoods

Jack:

Yes, I live in Florida, too, and I know how it can be. And while CRC makes some great electronics cleaners, including some designed for a marine environment, DO NOT use CRC Electro cleaner! I have a ruined DX-150A and a messed up dial on a Heathkit GDO from using that Electro cleaner. It was fine on WWII vintage gear but some of the plastics that came out in the mid-60's just melt when it hits them - and I am talking about visable vapors being produced!

For lubing pots and switches I recomemnd LPS-1, which is a lightweight lube that I have used for over 30 years. I get mine at Ace Hardware. It works wonders on scratchy volume control pots - it does not fix them permanently, but lasts quite a while before you have to reapply it. I saved myself over $600 by using LPS-1 to fix an erratic mass airflow sensor on a Toyota truck. The pot on the sensor went from jitter-jitter acorss most of the range to smooth with just one little bump after I applied the LPS-1

I understand that LPS-1 is sometimes found at bike and motorcycle shops because it is one of the very few things that will lube a chain and not encourage more dirt to collect on it.

I am rebuilding a TS-520 right now. It has some severe power supply problems (as in smoke!) and I am replacing just about everything in that circuit but the transformer. I was sure the 500V 100 uf caps were shot but after I got them out it they seem to test good. I'll

replace all the HV caps anyway; and I'm rolling my own for that rather than buying the kits.

Good luck!

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, John Donnelly wrote:
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>
> ;-)
>
>
> Thanks,
>
>
> Jack   KV4JX
>
> [Non-text portions of this message have been removed]
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40997. Re: Best grease for Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-15 01:01:20 UTC
From: roberteleazer@rocketmail.com
Topic: 40991 Message: 40997

Jack:

Yes I would. And I did. When my TS-820S had a serious VFO problem, with the frequency jumping 500 KHZ, even out of the band at varios spots, I took the VFO out, removed the cover, cleaned it with electronic spray cleaner and then lubed it with LPS-1. Problem solved. Other controls and switches got similar treatment.

I do need to take the bottom cover off my currently operating TS-520 and clean and lube the WWV switch. If you push it in it just right and then back out then the switch does not make proper contact and the received signal level drops way doan.

Robert

Robert

--- In TS-520_820_530_830@yahoogroups.com, John Donnelly wrote:
>
> Robert,
>
> Would you use the LPS-1 on the capacitor shaft and through the chassis bearings?
>
>
> Jack DonnellyÂ Â Â Â Â Â Â KV4JX
> Ball Ground Video Productions
> 308 Calusa Place
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> Ball Ground, GA 30107
> Phone 678-592-9974
> www.ballgroundvideo.com
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> From: "roberteleazer@..."
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, February 14, 2013 1:59 PM
> Subject: [TS-520_820_530_830] Re: Best grease for Kenwoods
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> Yes, I live in Florida, too, and I know how it can be. And while CRC makes some great electronics cleaners, including some designed for a marine environment, DO NOT use CRC Electro cleaner! I have a ruined DX-150A and a messed up dial on a Heathkit GDO from using that Electro cleaner. It was fine on WWII vintage gear but some of the plastics that came

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> Good luck!
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40998. Re: Best grease for Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-15 01:18:43 UTC
From: roberteleazer@rocketmail.com
Topic: 40991 Message: 40998

Well, on this latest one I am working on the 6146's are gone, as is the cover over that section. I'll have to make a new cover out of aluminum plate. The cover over the relay on the bottom is gone as well, and the 12BY7A is missing. Other than the power supply damage everything looks pretty good.

A former owner went through it and cut the wires to the power supply section, apparently as part of an attempt to isolate the problem. He tacked in temporary extra wire lengths as part of that. I have been going through the schematic and tracing wires to make sure they go where they are supposed to.

I had bought an extra rectifer board a while back and put new caps in it and used it to replace the board that was smoking.

And I replaced all of the resistors on the HV board. By the way, since Radio Shack did not have them I ordered 100 of each, so if you need any I have them. I may make up little packets of them and sell them.

I made up a new filter cap assembly today using a piece of RS perfboard, four 68uf 500V caps I got pretty cheap a while back (like $1.50 each), and a hunk of 1/4 in phenolic I salvaged out of an old aircraft autopilot. I will do the same for the 22uf HV caps under the chassis on the left bottom side.

Already having a TS-520 and an TS-820S, both of which I had to repair (the 820S was a real bear), I need another one like I need another cranial orifice, but it's fun!

And one of these will go to my brother in Augusta, GA who I am encouraging to get his ham license.

Robert
WB5WSV

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> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, February 14, 2013 1:59 PM
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> >
> > JackÂ Â Â KV4JX
> >
> > [Non-text portions of this message have been removed]
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>

40999. Re: 2M emergency J-pole

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-15 15:19:31 UTC
From: John Holden
Topic: 40994 Message: 40999

Never mind the post looking like SPAM...the product described no longer exists.

Although...it would be nice to have an emergency 2-meter antenna if somehow my TS-520 was able to reach 2 meters on its own...

John/N7IQV

[Non-text portions of this message have been removed]

41000. Re: [TS-520_820_530_830] Re: 2M emergency J-pole

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-15 15:46:23 UTC
From: Mark L. Hammond
Topic: 40994 Message: 41000

How about the 41st harmonic of an 80M frequency? ;)

73!

Mark N8MH

On Fri, Feb 15, 2013 at 10:19 AM, John Holden <n7iqv@...> wrote:

> **
>
>
> Never mind the post looking like SPAM...the product described no longer
> exists.
>
> Although...it would be nice to have an emergency 2-meter antenna if
> somehow my TS-520 was able to reach 2 meters on its own...
>
> John/N7IQV
>
> [Non-text portions of this message have been removed]
>
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>

--
Mark L. Hammond [N8MH]

[Non-text portions of this message have been removed]

41001. Re: [TS-520_820_530_830] Re: 2M emergency J-pole

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-15 16:01:42 UTC
From: theron
Topic: 40994 Message: 41001

Sorry for the spam, didnt take this group out before I sent the deal of
the day.

W7DTG Don

On Fri, Feb 15, 2013 at 7:46 AM, Mark L. Hammond <marklhammond@...>wrote:

> How about the 41st harmonic of an 80M frequency? ;)
>
> 73!
>
> Mark N8MH
>
> On Fri, Feb 15, 2013 at 10:19 AM, John Holden <n7iqv@...> wrote:
>
> > **
> >
> >
> > Never mind the post looking like SPAM...the product described no longer
> > exists.
> >
> > Although...it would be nice to have an emergency 2-meter antenna if
> > somehow my TS-520 was able to reach 2 meters on its own...
> >
> > John/N7IQV
> >
> > [Non-text portions of this message have been removed]
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>
> --
> Mark L. Hammond [N8MH]
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> [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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41002. Re: [TS-520_820_530_830] Best grease for Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-15 15:21:29 UTC
From: John Donnelly
Topic: 40991 Message: 41002

Dave,

I just checked the label on the can of CRC I used and it doesn't contain and chlorides any more which were deadly on plastic.
Their chemistry used to be mainly trichloroethylene but now it is hexane isomer based. It didn't hurt anything on the TS-520
and did an excellent job stripping the years of grease, dirt and insect parts off the boards and left the chassis nice and clean.

I'm wondering if people experienced problems with the QD cleaner or the older CRC.

Thanks for the tip.

Jack Donnelly KV4JX
Ball Ground Video Productions
308 Calusa Place

Ball Ground, GA 30107
Phone 678-592-9974
www.ballgroundvideo.com

From: Dave & Loraine <dave.crooks@aliceadsl.fr>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, February 14, 2013 1:47 PM
Subject: Re: [TS-520_820_530_830] Best grease for Kenwoods

Jack,
Using Deoxit Gold on non-gold contacts may a bad idea, like using grease on cap's.
Deoxit D5 is a recommended cleaner of contacts and variable cap wipers.
There have been reported issues with CRC cleaner on plastic parts.
See previous posts on the subject.
73 Dave f4eyk

[Non-text portions of this message have been removed]

41003. Re: [TS-520_820_530_830] Re: 2M emergency J-pole

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-15 16:07:52 UTC
From: <basketoak@...>
Topic: 40994 Message: 41003

The product exists....the link was bad.....simply go to the "Basic" web site and then click on VHF/UHF.

It is listed for sale....

Dave
KG4MGB

---- "Mark L. Hammond" <marklhammond@...> wrote:

==========
How about the 41st harmonic of an 80M frequency? ;)

73!

Mark N8MH

On Fri, Feb 15, 2013 at 10:19 AM, John Holden <n7iqv@...> wrote:

> **
>
>
> Never mind the post looking like SPAM...the product described no longer
> exists.
>
> Although...it would be nice to have an emergency 2-meter antenna if
> somehow my TS-520 was able to reach 2 meters on its own...
>
> John/N7IQV
>
> [Non-text portions of this message have been removed]
>
>
>

--
Mark L. Hammond [N8MH]

[Non-text portions of this message have been removed]

Yahoo! Groups Links

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Dave Beadner

41004. Re: [TS-520_820_530_830] Re: 2M emergency J-pole

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-15 16:11:19 UTC
From: theron
Topic: 40994 Message: 41004

I can repost the link if anyone is interested, just dont want to get
banned from the group for spamming.

W7DTG Don

Last time http://www.amateurradiosupplies.com/dealoftheday.asp?Click=2662

On Fri, Feb 15, 2013 at 8:07 AM, <basketoak@...> wrote:

> **
>
>
> The product exists....the link was bad.....simply go to the "Basic" web
> site and then click on VHF/UHF.
>
> It is listed for sale....
>
> Dave
> KG4MGB
>
> ---- "Mark L. Hammond" marklhammond@...> wrote:
>
> =============
>
> How about the 41st harmonic of an 80M frequency? ;)
>
> 73!
>
> Mark N8MH
>
> On Fri, Feb 15, 2013 at 10:19 AM, John Holden n7iqv@...> wrote:
>
> > **
> >
> >
> > Never mind the post looking like SPAM...the product described no longer
> > exists.
> >
> > Although...it would be nice to have an emergency 2-meter antenna if
> > somehow my TS-520 was able to reach 2 meters on its own...
> >
> > John/N7IQV
> >
> > [Non-text portions of this message have been removed]
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> >
>
> --
> Mark L. Hammond [N8MH]
>
> [Non-text portions of this message have been removed]
>
> ------------------------------------
>
> Yahoo! Groups Links
>
> --
> Dave Beadner
>
>
>

[Non-text portions of this message have been removed]

41005. BS-5

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-15 20:35:25 UTC
From: Rick
Topic: 41005 Message: 41005

I have a BS-8 I would swap for a BS-5 or would purchase a BS-5 if anyone has one for sale.

Rick / K5IAR

41006. Kenwood ts520 e

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-16 19:04:22 UTC
From: david
Topic: 41006 Message: 41006

Hi all,
How do I change the 12BY7A driver valve cover? Does it just slip off or is there a technique do this?

Any help advise many thanks beforehand

Regards Dave M0GGK

41007. Re: [TS-520_820_530_830] Kenwood ts520 e

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-16 19:49:25 UTC
From: John Donnelly
Topic: 41006 Message: 41007

The RF shield is wrapped in a clockwise direction. The easiest way to remove it is to pull the 12BY7 out of it's socket
with the shield on it then push the tube out of the shield while prying it open gently. It comes out pretty easily. Replacing
it is easy as well. Make sure you have the larger opening down and press it over the installed tube.

Jack Donnelly KV4JX
Ball Ground Video Productions
308 Calusa Place

Ball Ground, GA 30107
Phone 678-592-9974
www.ballgroundvideo.com

From: david <dave.2e0ncb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, February 16, 2013 2:04 PM
Subject: [TS-520_820_530_830] Kenwood ts520 e

Hi all,
How do I change the 12BY7A driver valve cover? Does it just slip off or is there a technique do this?

Any help advise many thanks beforehand

Regards Dave M0GGK

[Non-text portions of this message have been removed]

41008. TS-520 Birdies

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-17 06:32:17 UTC
From: rkings1956
Topic: 41008 Message: 41008

Hello Group,

I notice while checking the different bands on my TS-520 that there are numerous Birdies in the receiving mode. Here are some of the results:

10 Meters
28.439, 28.409, 28.378, 28.348, 28.317

15 Meters
No Birdies

20 Meters
14.335, 14.275, 14.212

40 Meters
7.222, 7.253, 7.275, 7.282

80 Meters
3.832, 3.863, 3.870, 3.892, 3.953

Hopefully someone can help explain this issue or is this standard for the TS-520 ?

Robert
KD6FSK

41009. Re: [TS-520_820_530_830] TS-520 Birdies

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-17 16:08:21 UTC
From: John Davidson
Topic: 41008 Message: 41009

Is with the antenna disconnected? I think mine had a birdie around 3530 but not sure of the other bands. It may be an internal mixing product and is usually right even with the noise level on most bands and was not bad enough to redesign the receiver.

From: rkings1956 <rkings1956@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, February 17, 2013 1:32 AM
Subject: [TS-520_820_530_830] TS-520 Birdies

Hello Group,

I notice while checking the different bands on my TS-520 that there are numerous Birdies in the receiving mode. Here are some of the results:

10 Meters
28.439, 28.409, 28.378, 28.348, 28.317

15 Meters
No Birdies

20 Meters
14.335, 14.275, 14.212

40 Meters
7.222, 7.253, 7.275, 7.282

80 Meters
3.832, 3.863, 3.870, 3.892, 3.953

Hopefully someone can help explain this issue or is this standard for the TS-520 ?

Robert
KD6FSK

[Non-text portions of this message have been removed]

41010. So, anybody else have a 14.316 MHz birdie?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-17 17:24:05 UTC
From: Mark L. Hammond
Topic: 41010 Message: 41010

It's on days like that I get aggravated about a loud birdie right at 14.316 MHz (the Hybrid Net freq. of course).

Wipes me out on both the TS-520 and the TS-830S. Of course, the notch/IF shift in the TS-830 helps a lot and is ...but still. Arggh!

No idea where it comes from...and shutting stuff off one by one is a task.

Complaining out loud. Feel free to ignore ;)

73!

Mark L. Hammond [N8MH]

41011. Re: [TS-520_820_530_830] So, anybody else have a 14.316 MHz birdie?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-17 17:42:50 UTC
From: Bob Macklin
Topic: 41010 Message: 41011

Color burst crystal in your TV set.

I can't tune to the net because of it.

Video recorders that bring in composite video also have this crystal.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: Mark L. Hammond
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, February 17, 2013 9:24 AM
Subject: [TS-520_820_530_830] So, anybody else have a 14.316 MHz birdie?

It's on days like that I get aggravated about a loud birdie right at 14.316 MHz (the Hybrid Net freq. of course).

Wipes me out on both the TS-520 and the TS-830S. Of course, the notch/IF shift in the TS-830 helps a lot and is ...but still. Arggh!

No idea where it comes from...and shutting stuff off one by one is a task.

Complaining out loud. Feel free to ignore ;)

73!

Mark L. Hammond [N8MH]

[Non-text portions of this message have been removed]

41012. Re: [TS-520_820_530_830] So, anybody else have a 14.316 MHz birdie?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-17 18:08:23 UTC
From: Mark L. Hammond
Topic: 41010 Message: 41012

Bingo, Bob. Hadn't even thought of that. I see it's exactly the 4th harmonic of the classic 3.579 colorburst xtal. Doggonnit! I bet it's not even in my house...

Maybe we can hold an alternate net at 14.320 ;)

73,

At 09:42 AM 2/17/2013 -0800, you wrote:
>
>
>Color burst crystal in your TV set.
>
>I can't tune to the net because of it.
>
>Video recorders that bring in composite video also have this crystal.
>
>Bob Macklin
>K5MYJ
>Seattle, Wa.
>"Real Radios Glow In The Dark"
>
>----- Original Message -----
>From: Mark L. Hammond
>To: <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>Sent: Sunday, February 17, 2013 9:24 AM
>Subject: [TS-520_820_530_830] So, anybody else have a 14.316 MHz birdie?
>
>It's on days like that I get aggravated about a loud birdie right at 14.316 MHz (the Hybrid Net freq. of course).
>
>Wipes me out on both the TS-520 and the TS-830S. Of course, the notch/IF shift in the TS-830 helps a lot and is ...but still. Arggh!
>
>No idea where it comes from...and shutting stuff off one by one is a task.
>
>Complaining out loud. Feel free to ignore ;)
>
>73!
>
>Mark L. Hammond [N8MH]
>
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>
>

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41013. RE: [TS-520_820_530_830] So, anybody else have a 14.316 MHz birdie?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-17 18:14:21 UTC
From: Cal Vasquez
Topic: 41010 Message: 41013

No birdie here, just can't hear anyone. I have a s7 noise level here in California.

Cal Vasquez

K6VT

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Mark L. Hammond
Sent: Sunday, February 17, 2013 10:08 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] So, anybody else have a 14.316 MHz birdie?

Bingo, Bob. Hadn't even thought of that. I see it's exactly the 4th harmonic of the classic 3.579 colorburst xtal. Doggonnit! I bet it's not even in my house...

Maybe we can hold an alternate net at 14.320 ;)

73,

At 09:42 AM 2/17/2013 -0800, you wrote:
>
>
>Color burst crystal in your TV set.
>
>I can't tune to the net because of it.
>
>Video recorders that bring in composite video also have this crystal.
>
>Bob Macklin
>K5MYJ
>Seattle, Wa.
>"Real Radios Glow In The Dark"
>
>----- Original Message -----
>From: Mark L. Hammond
>To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
>Sent: Sunday, February 17, 2013 9:24 AM
>Subject: [TS-520_820_530_830] So, anybody else have a 14.316 MHz birdie?
>
>It's on days like that I get aggravated about a loud birdie right at 14.316 MHz (the Hybrid Net freq. of course).
>

>Wipes me out on both the TS-520 and the TS-830S. Of course, the notch/IF
shift in the TS-830 helps a lot and is ...but still. Arggh!
>
>No idea where it comes from...and shutting stuff off one by one is a task.
>
>Complaining out loud. Feel free to ignore ;)
>
>73!
>
>Mark L. Hammond [N8MH]
>
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>

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[Non-text portions of this message have been removed]

41014. RE: [TS-520_820_530_830] So, anybody else have a 14.316 MHz birdie?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-17 18:22:40 UTC
From: Mark L. Hammond
Topic: 41010 Message: 41014

I can hear W9DCQ loud and clear, but that's about it. Somebody at .313 is splattering quite a bit.

73,

Mark N8MH

At 10:14 AM 2/17/2013 -0800, you wrote:
>
>
>No birdie here, just can't hear anyone. I have a s7 noise level here in
>California.
>
>Cal Vasquez
>
>K6VT
>
>From: <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Mark L. Hammond
>Sent: Sunday, February 17, 2013 10:08 AM
>To: <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>Subject: Re: [TS-520_820_530_830] So, anybody else have a 14.316 MHz birdie?
>
>Bingo, Bob. Hadn't even thought of that. I see it's exactly the 4th harmonic
>of the classic 3.579 colorburst xtal. Doggonnit! I bet it's not even in my
>house...
>
>Maybe we can hold an alternate net at 14.320 ;)
>
>73,
>
>At 09:42 AM 2/17/2013 -0800, you wrote:
>>
>>
>>Color burst crystal in your TV set.
>>
>>I can't tune to the net because of it.
>>
>>Video recorders that bring in composite video also have this crystal.
>>
>>Bob Macklin
>>K5MYJ
>>Seattle, Wa.
>>"Real Radios Glow In The Dark"

>>
>>----- Original Message -----
>>From: Mark L. Hammond
>>To: <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>
>>Sent: Sunday, February 17, 2013 9:24 AM
>>Subject: [TS-520_820_530_830] So, anybody else have a 14.316 MHz birdie?
>>
>>It's on days like that I get aggravated about a loud birdie right at 14.316
>MHz (the Hybrid Net freq. of course).
>>
>>Wipes me out on both the TS-520 and the TS-830S. Of course, the notch/IF
>shift in the TS-830 helps a lot and is ...but still. Arggh!
>>
>>No idea where it comes from...and shutting stuff off one by one is a task.
>>
>>Complaining out loud. Feel free to ignore ;)
>>
>>73!
>>
>>Mark L. Hammond [N8MH]
>>
>>[Non-text portions of this message have been removed]
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>[Non-text portions of this message have been removed]
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41015. Re: [TS-520_820_530_830] So, anybody else have a 14.316 MHz birdie?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-17 18:27:12 UTC
From: Bob Macklin
Topic: 41010 Message: 41015

Because of this problem I wish they would move to a better frequency and I would try again.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Mark L. Hammond
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, February 17, 2013 10:08 AM
Subject: Re: [TS-520_820_530_830] So, anybody else have a 14.316 MHz birdie?

Bingo, Bob. Hadn't even thought of that. I see it's exactly the 4th harmonic of the classic 3.579 colorburst xtal. Doggonnit! I bet it's not even in my house...

Maybe we can hold an alternate net at 14.320 ;)

73,

At 09:42 AM 2/17/2013 -0800, you wrote:
>
>
>Color burst crystal in your TV set.
>
>I can't tune to the net because of it.
>
>Video recorders that bring in composite video also have this crystal.
>
>Bob Macklin
>K5MYJ
>Seattle, Wa.
>"Real Radios Glow In The Dark"
>
>----- Original Message -----
>From: Mark L. Hammond
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Sunday, February 17, 2013 9:24 AM
>Subject: [TS-520_820_530_830] So, anybody else have a 14.316 MHz birdie?
>
>It's on days like that I get aggravated about a loud birdie right at 14.316 MHz (the Hybrid Net freq. of course).
>
>Wipes me out on both the TS-520 and the TS-830S. Of course, the notch/IF shift in the TS-830 helps a lot and is ...but still. Arggh!
>
>No idea where it comes from...and shutting stuff off one by one is a task.

>
>Complaining out loud. Feel free to ignore ;)
>
>73!
>
>Mark L. Hammond [N8MH]
>
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>
>

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[Non-text portions of this message have been removed]

41016. Re: [TS-520_820_530_830] TS-520 Birdies

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-17 18:27:59 UTC
From: Robert Reyes
Topic: 41008 Message: 41016

John, with the antenna disconected there are no Birdies on any of the bands.

Robert
KD6FSK

--- On Sun, 2/17/13, John Davidson <k8jd@...> wrote:

From: John Davidson <k8jd@...>
Subject: Re: [TS-520_820_530_830] TS-520 Birdies
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Date: Sunday, February 17, 2013, 4:08 PM

Is with the antenna disconnected? I think mine had a birdie around 3530 but not sure of the other bands. It may be an internal mixing product and is usually right even with the noise level on most bands and was not bad enough to redesign the receiver.

From: rkings1956 <rkings1956@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, February 17, 2013 1:32 AM
Subject: [TS-520_820_530_830] TS-520 Birdies

Hello Group,

I notice while checking the different bands on my TS-520 that there are numerous Birdies in the receiving mode. Here are some of the results:

10 Meters
28.439, 28.409, 28.378, 28.348, 28.317

15 Meters
No Birdies

20 Meters
14.335, 14.275, 14.212

40 Meters
7.222, 7.253, 7.275, 7.282

80 Meters
3.832, 3.863, 3.870, 3.892, 3.953

Hopefully someone can help explain this issue or is this standard for the TS-520 ?

Robert
KD6FSK

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Yahoo! Groups Links

[Non-text portions of this message have been removed]

41017. KENWOOD HYBRID USER NET (February 17th, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-17 19:10:27 UTC
From: mvgilger
Topic: 41017 Message: 41017

The Saturday's net on 40 meter we had 28 stations checking with good band conditions. Out of those, there was:

5 running TS-520(x)
3 running TS-530(x)
5 running TS-820(x)
7 running TS-830S

I was running a TS830. The rest were running non hybrids of one model or another.

The Sunday 20 meter net we had 23 stations checking in under good band conditions. There were 10 new stations checking in today. Out of all the check-ins, there were:
7 running TS-520(x)
0 running TS-530(x)
3 running TS-820(x)
4 running TS-830S
1 running 599D twiins

I was running a non hybrid TS-940. The rest were running non hybrids of one model or another.

We have been having several people checking in regularly with their TS-430, TS-440, and TS-940's, which of course is not a hybrid, although over 30+ years old. Everyone is welcome as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a net control station, please send me an email. Currently it's just myself, WB2KNR and WB0SGA. I would like to get several more. If we do, we can alternate so everyone might be on a 3-4 week rotation. It's a lot of fun and a good way to make sure you station is optimized.

For anyone that has not heard, we have a new web site that WB4HFN is hosting. He currently has a very nice site for Drake, Collins and Heathkit and now Kenwood Hybrids. Good quality manuals plus sale flyers and brochures will be found here, along with user supplied information for all Hybrids.

His URL is:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754 check-ins, Sunday total 563 check-ins

November 2012, Saturday's, net total = 47, Sundays total = 20
December 2012, Saturday's, net total = 74, Sunday's total = 70
January 2013, Saturday's, net total = 93, Sunday's total = 87
February 2013, Saturday's net total = 82, Sundays total = 67. (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

41018. Re: [TS-520_820_530_830] TS-520 Birdies

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-17 19:18:35 UTC
From: John Davidson
Topic: 41008 Message: 41018

Don't call an external interference a BIRDIE !
 Internally generated signals have been called birdies for many years . Outside interference is just interference !
"sometimes words have no meaning" is only true in song lyrics !

From: Robert Reyes <rkings1956@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, February 17, 2013 1:27 PM
Subject: Re: [TS-520_820_530_830] TS-520 Birdies

John, with the antenna disconected there are no Birdies on any of the bands.

Robert
KD6FSK

--- On Sun, 2/17/13, John Davidson mailto:k8jd%40yahoo.com> wrote:

From: John Davidson mailto:k8jd%40yahoo.com>
Subject: Re: [TS-520_820_530_830] TS-520 Birdies
To: "mailto:TS-520_820_530_830%40yahoogroups.com"
mailto:TS-520_820_530_830%40yahoogroups.com>
Date: Sunday, February 17, 2013, 4:08 PM

Is with the antenna disconnected? I think mine had a birdie around 3530 but not sure of the other bands. It may be an internal mixing product and is usually right even with the noise level on most bands and was not bad enough to redesign the receiver.

From: rkings1956 mailto:rkings1956%40yahoo.com>
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Sunday, February 17, 2013 1:32 AM
Subject: [TS-520_820_530_830] TS-520 Birdies

Hello Group,

I notice while checking the different bands on my TS-520 that there are numerous Birdies in the receiving mode. Here are some of the results:

10 Meters
28.439, 28.409, 28.378, 28.348, 28.317

15 Meters
No Birdies

20 Meters
14.335, 14.275, 14.212

40 Meters
7.222, 7.253, 7.275, 7.282

80 Meters
3.832, 3.863, 3.870, 3.892, 3.953

Hopefully someone can help explain this issue or is this standard for the TS-520 ?

Robert
KD6FSK

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Yahoo! Groups Links

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41019. Re: [TS-520_820_530_830] So, anybody else have a 14.316 MHz birdie?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-17 19:06:54 UTC
From: w3cpo@...
Topic: 41010 Message: 41019

14.313 MHz is a zoo. Some guy in Canada preaches against the US, another plays country music and sing, and all in all it's an embarrassment to HAM radio. I've recorded some of the nonsense and sent it to the ARRL but they said the FCC is too busy to go after them. They crank their mike gain up, use echo mikes, and act worse than CB'ers. A few use call signs, but more than likely, they belong to some neighbor or other person that the bootlegger doesn't like. Only an idiot would use their actual call sign.

73,

John, w3cpo

In a message dated 2/17/2013 1:22:45 P.M. Eastern Standard Time, marklhammond@... writes:

I can hear W9DCQ loud and clear, but that's about it. Somebody at .313 is splattering quite a bit.

73,

Mark N8MH

At 10:14 AM 2/17/2013 -0800, you wrote:
>
>
>No birdie here, just can't hear anyone. I have a s7 noise level here in
>California.
>
>Cal Vasquez
>
>K6VT
>
>From: _TS-520_820_530_830@yahoogroups.com_
(mailto:TS-520_820_530_830@yahoogroups.com)
>[mailto:_TS-520_820_530_830@yahoogroups.com_
(mailto:TS-520_820_530_830@yahoogroups.com)] On Behalf Of Mark L. Hammond
>Sent: Sunday, February 17, 2013 10:08 AM
>To: _TS-520_820_530_830@yahoogroups.com_
(mailto:TS-520_820_530_830@yahoogroups.com)
>Subject: Re: [TS-520_820_530_830] So, anybody else have a 14.316 MHz
birdie?
>
>Bingo, Bob. Hadn't even thought of that. I see it's exactly the 4th
harmonic
>of the classic 3.579 colorburst xtal. Doggonnit! I bet it's not even in my
>house...
>

>Maybe we can hold an alternate net at 14.320 ;)
>
>73,
>
>At 09:42 AM 2/17/2013 -0800, you wrote:
>>
>>
>>Color burst crystal in your TV set.
>>
>>I can't tune to the net because of it.
>>
>>Video recorders that bring in composite video also have this crystal.
>>
>>Bob Macklin
>>K5MYJ
>>Seattle, Wa.
>>"Real Radios Glow In The Dark"
>>
>>----- Original Message -----
>>From: Mark L. Hammond
>>To: _TS-520_820_530_830@yahoogroups.com_
(mailto:TS-520_820_530_830@yahoogroups.com)
>
>>Sent: Sunday, February 17, 2013 9:24 AM
>>Subject: [TS-520_820_530_830] So, anybody else have a 14.316 MHz birdie?
>>
>>It's on days like that I get aggravated about a loud birdie right at
14.316
>MHz (the Hybrid Net freq. of course).
>>
>>Wipes me out on both the TS-520 and the TS-830S. Of course, the notch/IF
>shift in the TS-830 helps a lot and is ...but still. Arggh!
>>
>>No idea where it comes from...and shutting stuff off one by one is a
task.
>>
>>Complaining out loud. Feel free to ignore ;)
>>
>>73!
>>
>>Mark L. Hammond [N8MH]
>>
>>[Non-text portions of this message have been removed]
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41020. Re: So, anybody else have a 14.316 MHz birdie?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-17 23:16:03 UTC
From: roberteleazer@rocketmail.com
Topic: 41010 Message: 41020

Like Bob says, what you are hearing the 4th harmonic of the 3.579 MHZ color burst frequency used by the older CRT TV sets.

When I found intefered with the Hybrids net I turned off the one CRT TV we have left in the house and sure enough, it decreased in intensity and changed in tone, but it is still there. There are still enough of the older TVs in use in my neighborhood to make that frequency unusable. I no longer try to tune into the 20 Meter net as a result - it's too irritating.

It's possible there may be other equipment around your place that uses that color burst crystal oscillator as well. For example, digital clocks that have a battery backup need some kind of reference oscillator, and once upon a time that was the cheapest and easiest type available.

So it's not coming from the Kenwood!

Robert

--- In TS-520_820_530_830@yahoogroups.com, "Mark L. Hammond" <marklhammond@...> wrote:
>
> It's on days like that I get aggravated about a loud birdie right at 14.316 MHz (the Hybrid Net freq. of course).
>
> Wipes me out on both the TS-520 and the TS-830S. Of course, the notch/IF shift in the TS-830 helps a lot and is ...but still. Arggh!
>
> No idea where it comes from...and shutting stuff off one by one is a task.
>
> Complaining out loud. Feel free to ignore ;)
>
> 73!
>
>
>
> Mark L. Hammond [N8MH]
>

41021. Re: [TS-520_820_530_830] So, anybody else have a 14.316 MHz birdie?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-17 23:05:27 UTC
From: John Donnelly
Topic: 41010 Message: 41021

I second the motion that the net be moved a little higher to get away from the Canadian that runs a kw and hogs 24.313. all day.
I tuned in this afternoon and quickly gave up because I know my meager 830s and 20m dipole can't compete with his insanity
and splatter.

Jack Donnelly KV4JX
Ball Ground Video Productions
308 Calusa Place

Ball Ground, GA 30107
Phone 678-592-9974
www.ballgroundvideo.com

From: "w3cpo@..." <w3cpo@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, February 17, 2013 2:06 PM
Subject: Re: [TS-520_820_530_830] So, anybody else have a 14.316 MHz birdie?

14.313 MHz is a zoo. Some guy in Canada preaches against the US, another plays country music and sing, and all in all it's an embarrassment to HAM radio. I've recorded some of the nonsense and sent it to the ARRL but they said the FCC is too busy to go after them. They crank their mike gain up, use echo mikes, and act worse than CB'ers. A few use call signs, but more than likely, they belong to some neighbor or other person that the bootlegger doesn't like. Only an idiot would use their actual call sign.

73,

John, w3cpo

In a message dated 2/17/2013 1:22:45 P.M. Eastern Standard Time, marklhammond@... writes:

I can hear W9DCQ loud and clear, but that's about it. Somebody at .313 is splattering quite a bit.

73,

Mark N8MH

At 10:14 AM 2/17/2013 -0800, you wrote:
>
>
>No birdie here, just can't hear anyone. I have a s7 noise level here in
>California.
>

>Cal Vasquez
>
>K6VT
>
>From: _TS-520_820_530_830@yahoogroups.com_
(mailto:TS-520_820_530_830@yahoogroups.com)
>[mailto:_TS-520_820_530_830@yahoogroups.com_
(mailto:TS-520_820_530_830@yahoogroups.com)] On Behalf Of Mark L. Hammond
>Sent: Sunday, February 17, 2013 10:08 AM
>To: _TS-520_820_530_830@yahoogroups.com_
(mailto:TS-520_820_530_830@yahoogroups.com)
>Subject: Re: [TS-520_820_530_830] So, anybody else have a 14.316 MHz
birdie?
>
>Bingo, Bob. Hadn't even thought of that. I see it's exactly the 4th
harmonic
>of the classic 3.579 colorburst xtal. Doggonnit! I bet it's not even in my
>house...
>
>Maybe we can hold an alternate net at 14.320 ;)
>
>73,
>
>At 09:42 AM 2/17/2013 -0800, you wrote:
>>
>>
>>Color burst crystal in your TV set.
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>>I can't tune to the net because of it.
>>
>>Video recorders that bring in composite video also have this crystal.
>>
>>Bob Macklin
>>K5MYJ
>>Seattle, Wa.
>>"Real Radios Glow In The Dark"
>>
>>----- Original Message -----
>>From: Mark L. Hammond
>>To: _TS-520_820_530_830@yahoogroups.com_
(mailto:TS-520_820_530_830@yahoogroups.com)
>
>>Sent: Sunday, February 17, 2013 9:24 AM
>>Subject: [TS-520_820_530_830] So, anybody else have a 14.316 MHz birdie?
>>
>>It's on days like that I get aggravated about a loud birdie right at
14.316
>MHz (the Hybrid Net freq. of course).
>>
>>Wipes me out on both the TS-520 and the TS-830S. Of course, the notch/IF

>shift in the TS-830 helps a lot and is ...but still. Arggh!
>>
>>No idea where it comes from...and shutting stuff off one by one is a
task.
>>
>>Complaining out loud. Feel free to ignore ;)
>>
>>73!
>>
>>Mark L. Hammond [N8MH]
>>
>>[Non-text portions of this message have been removed]
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41022. Re: [TS-520_820_530_830] Re: So, anybody else have a 14.316 MHz birdie?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-18 00:16:26 UTC
From: Bob Macklin
Topic: 41010 Message: 41022

The other item that has the color burst crystal is video recorders.

I live in a retirement complex where we each have 20X20 CLOSETS. There are a lot of seniors here that still have CRT TV sets.

I wish they would move the net to a different frequency. What is special about 14.313?

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: roberteleazer@...
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, February 17, 2013 3:16 PM
Subject: [TS-520_820_530_830] Re: So, anybody else have a 14.316 MHz birdie?

Like Bob says, what you are hearing the 4th harmonic of the 3.579 MHZ color burst frequency used by the older CRT TV sets.

When I found intefered with the Hybrids net I turned off the one CRT TV we have left in the house and sure enough, it decreased in intensity and changed in tone, but it is still there. There are still enough of the older TVs in use in my neighborhood to make that frequency unusable. I no longer try to tune into the 20 Meter net as a result - it's too irritating.

It's possible there may be other equipment around your place that uses that color burst crystal oscillator as well. For example, digital clocks that have a battery backup need some kind of reference oscillator, and once upon a time that was the cheapest and easiest type available.

So it's not coming from the Kenwood!

Robert

--- In TS-520_820_530_830@yahoogroups.com, "Mark L. Hammond" wrote:
>
> It's on days like that I get aggravated about a loud birdie right at 14.316 MHz (the Hybrid Net freq. of course).
>
> Wipes me out on both the TS-520 and the TS-830S. Of course, the notch/IF shift in the TS-830 helps a lot and is ...but still. Arggh!
>
> No idea where it comes from...and shutting stuff off one by one is a task.
>
> Complaining out loud. Feel free to ignore ;)

>
> 73!
>
>
>
> Mark L. Hammond [N8MH]
>

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41023. Re: [TS-520_820_530_830] So, anybody else have a 14.316 MHz birdie?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-18 03:40:02 UTC
From: w3cpo@...
Topic: 41010 Message: 41023

Yes, he is definitely a mental case. There are several of them up on
14.313. It's truly sad, and embarrassing.

John w3cpo

In a message dated 2/17/2013 6:51:58 P.M. Eastern Standard Time,
jack@... writes:

I second the motion that the net be moved a little higher to get away from
the Canadian that runs a kw and hogs 24.313. all day.
I tuned in this afternoon and quickly gave up because I know my meager
830s and 20m dipole can't compete with his insanity
and splatter.

Jack Donnelly KV4JX
Ball Ground Video Productions
308 Calusa Place

Ball Ground, GA 30107
Phone 678-592-9974
www.ballgroundvideo.com

From: "_w3cpo@..._ (mailto:w3cpo@...) " _w3cpo@..._
(mailto:w3cpo@...) >
To: _TS-520_820_530_830@yahoogroups.com_
(mailto:TS-520_820_530_830@yahoogroups.com)
Sent: Sunday, February 17, 2013 2:06 PM
Subject: Re: [TS-520_820_530_830] So, anybody else have a 14.316 MHz
birdie?

14.313 MHz is a zoo. Some guy in Canada preaches against the US, another
plays country music and sing, and all in all it's an embarrassment to HAM
radio. I've recorded some of the nonsense and sent it to the ARRL but they
said the FCC is too busy to go after them. They crank their mike gain up,
use
echo mikes, and act worse than CB'ers. A few use call signs, but more than
likely, they belong to some neighbor or other person that the bootlegger
doesn't like. Only an idiot would use their actual call sign.

73,

John, w3cpo

In a message dated 2/17/2013 1:22:45 P.M. Eastern Standard Time,
marklhammond@... (mailto:marklhammond@gmail.com) writes:

I can hear W9DCQ loud and clear, but that's about it. Somebody at .313 is splattering quite a bit.

73,

Mark N8MH

At 10:14 AM 2/17/2013 -0800, you wrote:
>
>
>No birdie here, just can't hear anyone. I have a s7 noise level here in
>California.
>
>Cal Vasquez
>
>K6VT
>
>From: __TS-520_820_530_830@yahoogroups.com_
(mailto:_TS-520_820_530_830@yahoogroups.com) _
(mailto:_TS-520_820_530_830@yahoogroups.com_
(mailto:TS-520_820_530_830@yahoogroups.com))
>[mailto:__TS-520_820_530_830@yahoogroups.com_
(mailto:_TS-520_820_530_830@yahoogroups.com) _
(mailto:_TS-520_820_530_830@yahoogroups.com_
(mailto:TS-520_820_530_830@yahoogroups.com))] On Behalf Of Mark L. Hammond
>Sent: Sunday, February 17, 2013 10:08 AM
>To: __TS-520_820_530_830@yahoogroups.com_
(mailto:_TS-520_820_530_830@yahoogroups.com) _
(mailto:_TS-520_820_530_830@yahoogroups.com_
(mailto:TS-520_820_530_830@yahoogroups.com))
>Subject: Re: [TS-520_820_530_830] So, anybody else have a 14.316 MHz
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>
>Bingo, Bob. Hadn't even thought of that. I see it's exactly the 4th
harmonic
>of the classic 3.579 colorburst xtal. Doggonnit! I bet it's not even in my
>house...
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>Maybe we can hold an alternate net at 14.320 ;)
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>73,
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>At 09:42 AM 2/17/2013 -0800, you wrote:
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>>I can't tune to the net because of it.
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>>Video recorders that bring in composite video also have this crystal.
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>>Bob Macklin

>>K5MYJ
>>Seattle, Wa.
>>"Real Radios Glow In The Dark"
>>
>>----- Original Message -----
>>From: Mark L. Hammond
>>To: __TS-520_820_530_830@yahoogroups.com_
(mailto:_TS-520_820_530_830@yahoogroups.com) _
(mailto:_TS-520_820_530_830@yahoogroups.com_
(mailto:TS-520_820_530_830@yahoogroups.com))
>
>>Sent: Sunday, February 17, 2013 9:24 AM
>>Subject: [TS-520_820_530_830] So, anybody else have a 14.316 MHz birdie?
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>>It's on days like that I get aggravated about a loud birdie right at
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>MHz (the Hybrid Net freq. of course).
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>>No idea where it comes from...and shutting stuff off one by one is a
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>>73!
>>
>>Mark L. Hammond [N8MH]
>>
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41024. Re: Best grease for Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-18 17:35:24 UTC
From: w7jpg
Topic: 40991 Message: 41024

Robert,
Very helpful info as I will be cleaning up my 830S in preparation for the wake up after it's long nap.
I would like to know what the name is of the "cleaned it with electronic spray cleaner" in this reference from your post.
Haven't used LPS-1 but will be ordering it also. Sounds like an excellent product.
Thanks,
Chris
W7JPG

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> Jack:
>
> Yes I would. And I did. When my TS-820S had a serious VFO problem, with the frequency jumping 500 KHZ, even out of the band at varios spots, I took the VFO out, removed the cover, cleaned it with electronic spray cleaner and then lubed it with LPS-1. Problem solved. Other controls and switches got similar treatment.
>
> I do need to take the bottom cover off my currently operating TS-520 and clean and lube the WWV switch. If you push it in it just right and then back out then the switch does not make proper contact and the received signal level drops way doan.
>
> Robert
>
> Robert
>
> --- In TS-520_820_530_830@yahoogroups.com, John Donnelly wrote:
> >
> > Robert,
> >
> > Would you use the LPS-1 on the capacitor shaft and through the chassis bearings?
> >
> >
> > Jack DonnellyÂ Â Â Â Â Â Â KV4JX
> > Ball Ground Video Productions
> > 308 Calusa Place
> >
> > Ball Ground, GA 30107
> > Phone 678-592-9974
> > www.ballgroundvideo.com
> >
> >
> >
> > _____

> > From: "roberteleazer@"
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Thursday, February 14, 2013 1:59 PM
> > Subject: [TS-520_820_530_830] Re: Best grease for Kenwoods
> >
> >
> > Â
> > Jack:
> >
> > Yes, I live in Florida, too, and I know how it can be. And while CRC makes some great electronics cleaners, including some designed for a marine environment, DO NOT use CRC Electro cleaner! I have a ruined DX-150A and a messed up dial on a Heathkit GDO from using that Electro cleaner. It was fine on WWII vintage gear but some of the plastics that came out in the mid-60's just melt when it hits them - and I am talking about visable vapors being produced!
> >
> > For lubing pots and switches I recomemnd LPS-1, which is a lightweight lube that I have used for over 30 years. I get mine at Ace Hardware. It works wonders on scratchy volume control pots - it does not fix them permanently, but lasts quite a while before you have to reapply it. I saved myself over $600 by using LPS-1 to fix an erratic mass airflow sensor on a Toyota truck. The pot on the sensor went from jitter-jitter acorss most of the range to smooth with just one little bump after I applied the LPS-1
> >
> > I understand that LPS-1 is sometimes found at bike and motorcycle shops because it is one of the very few things that will lube a chain and not encourage more dirt to collect on it.
> >
> > I am rebuilding a TS-520 right now. It has some severe power supply problems (as in smoke!) and I am replacing just about everything in that circuit but the transformer. I was sure the 500V 100 uf caps were shot but after I got them out it they seem to test good. I'll replace all the HV caps anyway; and I'm rolling my own for that rather than buying the kits.
> >
> > Good luck!
> >
> > Robert
> > WB5WSV
> >
> > --- In TS-520_820_530_830@yahoogroups.com, John Donnelly wrote:
> > >
> > > Hi All,
> > >
> > >
> > > I've got a TS-520 that I'm trying to get back on the air.Â It was sitting in the humid Florida environment for quite some
> > > time, I suspect maybe in a garage, because it was loaded with dust, greasy film and palmetto bugs.Â I've washed it out
> > > with some CRC electronics cleaner, blown it out with the compressor and air chuck and the chassis and boards look
> > > pretty good now.Â The receiver seems to beworking pretty well and the VFO dial is

dead on frequency.
> > >
> > > I've lubed the controls andband switches with deoxit gold but I'm not sure what to use for the tuning caps and other lube
> > > points.Â What's theconsensus on the best grease and where can I get it?Â Next step is to rebuild the RF cage and power
> > > supply with partsthat are in the mail.Â Can't believe it, but I had to break down and buy a Weller soldering gun. My 15 watt
> > > pencil iron that I've been using all these years somehow won't heat those chassis fangs to get the cathode resistors off.
> > >
> > > ;-)
> > >
> > >
> > > Thanks,
> > >
> > >
> > > JackÂ Â Â KV4JX
> > >
> > > [Non-text portions of this message have been removed]
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41025. SM220 Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-18 17:50:06 UTC
From: ve3tmt
Topic: 41025 Message: 41025

Hi group,

Question concerning my SM220. When on the lower bands, ie 160, 80 and somewhat 40, when monitoring the TX signal, the pattern is tearing to the left of the SM220 display. It doesn't do it on any other the higher bands, the display stays nice and centered. I did hear a loud popping one night that sounded like a cap exploding, but after performing a thorough inspection inside the unit, I could not see anything out of the ordinary.

Any ideas?

Max

41026. Rf problem with my external vfo

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-18 20:37:04 UTC
From: Brian
Topic: 41026 Message: 41026

I have a TS 830s and the external vfo 240. Works great on 40. On 15 and 17 meters I believe there is a rf problem. My ssb signal splatters and is distorted. I have key clicks on cw. I moved the vfo far as I could from the 830 and that seemed to clear things up but then it came back.

I don't believe it is a problem with the vfo. I was using a vfo 12o prior to this one and it had the same problem.

I have installed 2 ferrit loops on the line. One on each end and it does not help. The rig and vfo is grounded.

Any suggestions?

Thanks Brian

41027. Re: [TS-520_820_530_830] Rf problem with my external vfo

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-18 21:06:06 UTC
From: Ken Winterling
Topic: 41026 Message: 41027

Brian,

Check the wiring at the back of the VFO socket in the TS-830.

Ken
WA2LBI

On Mon, Feb 18, 2013 at 3:37 PM, Brian <bsa0791@...> wrote:

> **
>
>
> I have a TS 830s and the external vfo 240. Works great on 40. On 15 and 17
> meters I believe there is a rf problem. My ssb signal splatters and is
> distorted. I have key clicks on cw. I moved the vfo far as I could from the
> 830 and that seemed to clear things up but then it came back.
>
> I don't believe it is a problem with the vfo. I was using a vfo 12o prior
> to this one and it had the same problem.
>
> I have installed 2 ferrit loops on the line. One on each end and it does
> not help. The rig and vfo is grounded.
>
> Any suggestions?
>
> Thanks Brian
>

[Non-text portions of this message have been removed]

41028. Re: [TS-520_820_530_830] Rf problem with my external vfo

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-18 22:46:02 UTC
From: John Davidson
Topic: 41026 Message: 41028

Do you operate with different antennas? Is the problem with all of them. Is there high SWR on your antenna system, Just wonder if there is high RF level at your operating position, getting back into your VFO> ?
You should put your amateur call sign in your signature so we know who we are talking to !
73, K8JD

From: Brian <bsa0791@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, February 18, 2013 3:37 PM
Subject: [TS-520_820_530_830] Rf problem with my external vfo

I have a TS 830s and the external vfo 240. Works great on 40. On 15 and 17 meters I believe there is a rf problem. My ssb signal splatters and is distorted. I have key clicks on cw. I moved the vfo far as I could from the 830 and that seemed to clear things up but then it came back.

I don't believe it is a problem with the vfo. I was using a vfo 12o prior to this one and it had the same problem.

I have installed 2 ferrit loops on the line. One on each end and it does not help. The rig and vfo is grounded.

Any suggestions?

Thanks Brian

[Non-text portions of this message have been removed]

41029. Re: [TS-520_820_530_830] So, anybody else have a 14.316 MHz birdie?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-18 23:30:45 UTC
From: Ted Wright
Topic: 41010 Message: 41029

Hi guys
Sadly that crap has been going on for years it is twenty by day then
75 meters at night. Are you trying to conduct a net ?? On or nearby that
frequency ??
It seems that it is some of the same group that use to carry-on the
same way on 3.901.000 14 years ago . Riley stopped some of it . But
since his retirement it appears his replacement has no teeth .. We shall
see .
ted n3zrx
John Donnelly wrote:
>
> I second the motion that the net be moved a little higher to get away
> from the Canadian that runs a kw and hogs 24.313. all day.
> I tuned in this afternoon and quickly gave up because I know my meager
> 830s and 20m dipole can't compete with his insanity
> and splatter.
>
> Jack Donnelly KV4JX
> Ball Ground Video Productions
> 308 Calusa Place
>
> Ball Ground, GA 30107
> Phone 678-592-9974
> www.ballgroundvideo.com
>
> _____
> From: "w3cpo@... <mailto:w3cpo%40aol.com>" w3cpo@...
> <mailto:w3cpo%40aol.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Sunday, February 17, 2013 2:06 PM
> Subject: Re: [TS-520_820_530_830] So, anybody else have a 14.316 MHz
> birdie?
>
>
>
> 14.313 MHz is a zoo. Some guy in Canada preaches against the US, another
> plays country music and sing, and all in all it's an embarrassment to HAM
> radio. I've recorded some of the nonsense and sent it to the ARRL but
> they
> said the FCC is too busy to go after them. They crank their mike gain
> up, use
> echo mikes, and act worse than CB'ers. A few use call signs, but more
> than
> likely, they belong to some neighbor or other person that the bootlegger

> doesn't like. Only an idiot would use their actual call sign.
>
> 73,
>
> John, w3cpo
>
> In a message dated 2/17/2013 1:22:45 P.M. Eastern Standard Time,
> marklhammond@... <mailto:marklhammond%40gmail.com> writes:
>
> I can hear W9DCQ loud and clear, but that's about it. Somebody at .313 is
> splattering quite a bit.
>
> 73,
>
> Mark N8MH
>
> At 10:14 AM 2/17/2013 -0800, you wrote:
> >
> >
> >No birdie here, just can't hear anyone. I have a s7 noise level here in
> >California.
> >
> >Cal Vasquez
> >
> >K6VT
> >
> >From: _TS-520_820_530_830@yahoogroups.com
> <mailto:_TS-520_820_530_830%40yahoogroups.com>_
> (mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>)
> >[mailto:_TS-520_820_530_830@yahoogroups.com
> <mailto:_TS-520_820_530_830%40yahoogroups.com>_
> (mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>)] On Behalf Of Mark L.
> Hammond
> >Sent: Sunday, February 17, 2013 10:08 AM
> >To: _TS-520_820_530_830@yahoogroups.com
> <mailto:_TS-520_820_530_830%40yahoogroups.com>_
> (mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>)
> >Subject: Re: [TS-520_820_530_830] So, anybody else have a 14.316 MHz
> birdie?
> >
> >Bingo, Bob. Hadn't even thought of that. I see it's exactly the 4th
> harmonic
> >of the classic 3.579 colorburst xtal. Doggonnit! I bet it's not even
> in my
> >house...
> >
> >Maybe we can hold an alternate net at 14.320 ;)

> >
> >73,
> >
> >At 09:42 AM 2/17/2013 -0800, you wrote:
> >>
> >>
> >>Color burst crystal in your TV set.
> >>
> >>I can't tune to the net because of it.
> >>
> >>Video recorders that bring in composite video also have this crystal.
> >>
> >>Bob Macklin
> >>K5MYJ
> >>Seattle, Wa.
> >>"Real Radios Glow In The Dark"
> >>
> >>----- Original Message -----
> >>From: Mark L. Hammond
> >>To: _TS-520_820_530_830@yahoogroups.com
> <mailto:_TS-520_820_530_830%40yahoogroups.com>_
> (mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>)
> >
> >>Sent: Sunday, February 17, 2013 9:24 AM
> >>Subject: [TS-520_820_530_830] So, anybody else have a 14.316 MHz birdie?
> >>
> >>It's on days like that I get aggravated about a loud birdie right at
> 14.316
> >MHz (the Hybrid Net freq. of course).
> >>
> >>Wipes me out on both the TS-520 and the TS-830S. Of course, the notch/IF
> >shift in the TS-830 helps a lot and is ...but still. Arggh!
> >>
> >>No idea where it comes from...and shutting stuff off one by one is a
> task.
> >>
> >>Complaining out loud. Feel free to ignore ;)
> >>
> >>73!
> >>
> >>Mark L. Hammond [N8MH]
> >>
> >>[Non-text portions of this message have been removed]
> >>
> >>
> >
> >[Non-text portions of this message have been removed]
> >
> >[Non-text portions of this message have been removed]

> >
> >
>
> [Non-text portions of this message have been removed]
>
> [Non-text portions of this message have been removed]
>
> [Non-text portions of this message have been removed]
>
>
>
> No virus found in this message.
> Checked by AVG - www.avg.com <http://www.avg.com>
> Version: 2013.0.2899 / Virus Database: 2639/6102 - Release Date: 02/13/13
>

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.2899 / Virus Database: 2639/6102 - Release Date: 02/13/13

[Non-text portions of this message have been removed]

41030. Re: [TS-520_820_530_830] Rf problem with my external vfo

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-19 00:58:02 UTC
From: John Donnelly
Topic: 41026 Message: 41030

Brian,

Sounds to me more like your balanced modulator may be the culprit. The two diodes have to be matched to give a good clean SSB
signal with no carrier and opposite sideband. I remember seeing someone on the web selling a newer replacement for the diodes
but old age prevents me from remembering where I saw it. See what too much Kenwood surfing does to you!!!

Jack Donnelly   KV4JX

From: Brian <bsa0791@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, February 18, 2013 3:37 PM
Subject: [TS-520_820_530_830] Rf problem with my external vfo

I have a TS 830s and the external vfo 240. Works great on 40. On 15 and 17 meters I believe there is a rf problem. My ssb signal splatters and is distorted. I have key clicks on cw. I moved the vfo far as I could from the 830 and that seemed to clear things up but then it came back.

I don't believe it is a problem with the vfo. I was using a vfo 12o prior to this one and it had the same problem.

I have installed 2 ferrit loops on the line. One on each end and it does not help. The rig and vfo is grounded.

Any suggestions?

Thanks Brian

[Non-text portions of this message have been removed]

41031. Antenna choice question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-19 01:52:29 UTC
From: John Donnelly
Topic: 41031 Message: 41031

Has anyone had experience with an end-fed long wire and balun with their hybrid? I'm limited to what I can
hang in the yard and so far I'm not havingany luck with the 20m dipole I've put up. It's only about 20' off the
ground so I'm sure it's acting more like an NVIS antenna and for some reason I seem to do better off the ends
than I do broadside even though it seems to be resonant in the middle of the 20m band. Several folks have
recommended a Zepp or end fed and said they work really well with the hybrids but I would prefer to hear the
opinions and experience of some actual hybrid folks. I do have some really tall trees in the back yard that
I could hang a long wire on.

Jack KV4JX

[Non-text portions of this message have been removed]

41032. Clipperton L amp

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-19 02:53:00 UTC
From: don.stefanik
Topic: 41032 Message: 41032

Hi everyone. I am looking at running my CLipperton L amp with the TS830s, but only want to run around 500watts PEP.
To accomplish this the I only need to drive the amp with about 30 to 40 watts exciter.
How can I lower the power of the TS830s so as to acomplish this?

The Clipperton L is on 120volts.
I have the Amp interface cable coming and it has the ALC cable as well.
The Clippereton L has ALC in the back, and I'm wondering if it can be used to keep the exciter power down.
Any thoughts?

73, DJ
VA3KBC

41033. Re: Antenna choice question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-19 03:55:24 UTC
From: k5hfg
Topic: 41031 Message: 41033

Hey Jack,

I just finished typing a 50 word reply to your post and this cotton pickin Yahoo lost it again!!
I may be able to give you some advise to ponder about the wire and dipole thing. Shoot me an Email and we can talk. I have used a long wire and a dipole with my hybrids since the mid 70's. I enjoy the hobby and have no problems with my antennas. But there may be some things you should know before you waste your dipole.

73, Don K5HFG, dlbowders@...

41034. Re: Antenna choice question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-19 06:28:58 UTC
From: scott10k
Topic: 41031 Message: 41034

Hi John,
All my attempts at end-fed wires have been poor. I get Rf in the shack and little to no contacts. In my opinion, there is nothing like a dipole if you can get it up higher. You can configure it as an inverted Vee or using your tall trees, as a sloper. All work better than an end-fed wire in my experience. Others may differ.
Good luck and 73s,
Scott, N6CIC

--- In TS-520_820_530_830@yahoogroups.com, John Donnelly <jack@...> wrote:
>
> Has anyone had experience with an end-fed long wire and balun with their hybrid? I'm limited to what I can
> hang in the yard and so far I'm not havingany luck with the 20m dipole I've put up. It's only about 20' off the
> ground so I'm sure it's acting more like an NVIS antenna and for some reason I seem to do better off the ends
> than I do broadside even though it seems to be resonant in the middle of the 20m band. Several folks have
> recommended a Zepp or end fed and said they work really well with the hybrids but I would prefer to hear the
> opinions and experience of some actual hybrid folks. I do have some really tall trees in the back yard that
> I could hang a long wire on.
>
>
> Jack KV4JX
>
> [Non-text portions of this message have been removed]
>

41035. Re: [TS-520_820_530_830] Re: Antenna choice question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-19 06:38:30 UTC
From: John Davidson
Topic: 41031 Message: 41035

No 20M ant is going to work well at 20 ft high unless it's a vertical.

From: scott10k <scottandalene@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, February 19, 2013 1:28 AM
Subject: [TS-520_820_530_830] Re: Antenna choice question

Hi John,
All my attempts at end-fed wires have been poor. I get Rf in the shack and little to no contacts. In my opinion, there is nothing like a dipole if you can get it up higher. You can configure it as an inverted Vee or using your tall trees, as a sloper. All work better than an end-fed wire in my experience. Others may differ.
Good luck and 73s,
Scott, N6CIC

--- In mailto:TS-520_820_530_830%40yahoogroups.com, John Donnelly wrote:
>
> Has anyone had experience with an end-fed long wire and balun with their hybrid? I'm limited to what I can
> hang in the yard and so far I'm not havingany luck with the 20m dipole I've put up. It's only about 20' off the
> ground so I'm sure it's acting more like an NVIS antenna and for some reason I seem to do better off the ends
> than I do broadside even though it seems to be resonant in the middle of the 20m band. Several folks have
> recommended a Zepp or end fed and said they work really well with the hybrids but I would prefer to hear the
> opinions and experience of some actual hybrid folks. I do have some really tall trees in the back yard that
> I could hang a long wire on.
>
>
> Jack KV4JX
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

41036. Re: [TS-520_820_530_830] Rf problem with my external vfo

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-19 11:43:49 UTC
From: Ken Winterling
Topic: 41026 Message: 41036

Brian,

Unless I missed it, nobody has asked if the rig works properly when the external VFO is NOT connected. So, does the TS-830 work properly without the external VFO?

Ken
WA2LBI

On Mon, Feb 18, 2013 at 7:58 PM, John Donnelly <jack@...>wrote:

> **
>
>
> Brian,
>
> Sounds to me more like your balanced modulator may be the culprit. The
> two diodes have to be matched to give a good clean SSB
> signal with no carrier and opposite sideband. I remember seeing someone
> on the web selling a newer replacement for the diodes
> but old age prevents me from remembering where I saw it. See what too
> much Kenwood surfing does to you!!!
>
> Jack Donnelly KV4JX
>
>
> _____
> From: Brian bsa0791@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, February 18, 2013 3:37 PM
> Subject: [TS-520_820_530_830] Rf problem with my external vfo
>
>
>
> I have a TS 830s and the external vfo 240. Works great on 40. On 15 and 17
> meters I believe there is a rf problem. My ssb signal splatters and is
> distorted. I have key clicks on cw. I moved the vfo far as I could from the
> 830 and that seemed to clear things up but then it came back.
>
> I don't believe it is a problem with the vfo. I was using a vfo 12o prior
> to this one and it had the same problem.
>
> I have installed 2 ferrit loops on the line. One on each end and it does
> not help. The rig and vfo is grounded.
>
> Any suggestions?

>
> Thanks Brian
>
> [Non-text portions of this message have been removed]
>
>
>

[Non-text portions of this message have been removed]

41037. Re: Rf problem with my external vfo

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-19 13:11:59 UTC
From: Brian
Topic: 41026 Message: 41037

The TS 830 works great by itself. It works ok with the vfo on 40 meters. The problem crops up on 17 and 15. I have got the problem on 17 to go away by positioning the vfo as far away from the 830 that I can get it.

--- In TS-520_820_530_830@yahoogroups.com, Ken Winterling <wa2lbi@...> wrote:

> Brian,
>
> Unless I missed it, nobody has asked if the rig works properly when the
> external VFO is NOT connected. So, does the TS-830 work properly without
> the external VFO?
>
>
> Ken
> WA2LBI
>
>
> On Mon, Feb 18, 2013 at 7:58 PM, John Donnelly <jack@...>wrote:
>
> > **
> > >
> > >
> > > Brian,
> > >
> > > Sounds to me more like your balanced modulator may be the culprit. The
> > > two diodes have to be matched to give a good clean SSB
> > > signal with no carrier and opposite sideband. I remember seeing someone
> > > on the web selling a newer replacement for the diodes
> > > but old age prevents me from remembering where I saw it. See what too
> > > much Kenwood surfing does to you!!!
> > >
> > > Jack Donnelly KV4JX
> > >
> > >
> > > _____
> > > From: Brian bsa0791@...>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Monday, February 18, 2013 3:37 PM
> > > Subject: [TS-520_820_530_830] Rf problem with my external vfo
> > >
> > >
> > >
> > > I have a TS 830s and the external vfo 240. Works great on 40. On 15 and 17
> > > meters I believe there is a rf problem. My ssb signal splatters and is
> > > distorted. I have key clicks on cw. I moved the vfo far as I could from the
> > > 830 and that seemed to clear things up but then it came back.

> >
> > I don't believe it is a problem with the vfo. I was using a vfo 12o prior
> > to this one and it had the same problem.
> >
> > I have installed 2 ferrit loops on the line. One on each end and it does
> > not help. The rig and vfo is grounded.
> >
> > Any suggestions?
> >
> > Thanks Brian
> >
> > [Non-text portions of this message have been removed]
> >
> >
> >
>
>
> [Non-text portions of this message have been removed]
>

41038. DW

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-19 15:24:01 UTC
From: DW
Topic: 41038 Message: 41038

http://www.afolcloricaraices.com/jazqqs/s/7dfb8fh2gqa4e=d8cyob4lzx1mdg4

[Non-text portions of this message have been removed]

41039. Kenwood 599 twin plug

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-19 17:40:31 UTC
From: Jan Servaites
Topic: 41039 Message: 41039

I'm putting together a 599 twins station and I need just one mating plug. I remember someone advertising that they had some for sale, and I think they are all gone now. Anyone want to sell me just one plug?
Jan N8CBX

41040. [TS-520_820_530_830] Kenwood 599 twin plug

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-19 17:47:10 UTC
From: Behiels JeanPierre
Topic: 41039 Message: 41040

Yes this person was N6WK
Maby you could ask him again.
He hat a supplyer witch maby could help you on a new pair when he buy a new batch.

Regards Jean ON4AEF.

----- Original Message -----
From: Jan Servaites
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, February 19, 2013 6:40 PM
Subject: [TS-520_820_530_830] Kenwood 599 twin plug

I'm putting together a 599 twins station and I need just one mating
plug. I remember someone advertising that they had some for sale, and I
think they are all gone now. Anyone want to sell me just one plug?
Jan N8CBX

[Non-text portions of this message have been removed]

41041. Re: [TS-520_820_530_830] Antenna choice question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-19 21:42:45 UTC
From: KB1TCD
Topic: 41031 Message: 41041

I use a PAR End Fed 6m antenna (obviously not w/the 830S) for both voice and digital on SSB as well as FM w/excellent results; swr 1:0 across the band. I have it set up horisontal about 100 ft from the shack and about 20 ft up.
I just got done talking to a friend on 6m using the antenna, Steve, KB1TCE, swears by them!
He has a 6m, a 20m, a 30m, an 80m, a 20/40/80 and a 20/40. Swr is 1:3 to 1:4 and no RF problems in the shack.
These antennas are usually rated at no more than 200 watts though.

73 de Jose, KB1TCD

41042. Re: [TS-520_820_530_830] Antenna choice question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-19 21:48:15 UTC
From: theron
Topic: 41031 Message: 41042

Are the Alpha Delta dipole antennas comparable to the Par EndFed types ?
http://www.amateurradiosupplies.com/alpha-delta-antennas-s/80.htm&Click=2662

Don W7DTG

On Tue, Feb 19, 2013 at 1:42 PM, KB1TCD <kb1tcd@...> wrote:

> **
>
>
> I use a PAR End Fed 6m antenna (obviously not w/the 830S) for both voice
> and digital on SSB as well as FM w/excellent results; swr 1:0 across the
> band. I have it set up horisontal about 100 ft from the shack and about
> 20 ft up.
> I just got done talking to a friend on 6m using the antenna, Steve,
> KB1TCE, swears by them!
> He has a 6m, a 20m, a 30m, an 80m, a 20/40/80 and a 20/40. Swr is 1:3 to
> 1:4 and no RF problems in the shack.
> These antennas are usually rated at no more than 200 watts though.
>
> 73 de Jose, KB1TCD
>
>
>

[Non-text portions of this message have been removed]

41043. RE: [TS-520_820_530_830] Antenna choice question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-19 22:21:53 UTC
From: Daedalus
Topic: 41031 Message: 41043

Is there something special about the AD Dipole? A dipole is a dipole. Why would a ham pay a company to cut wire and connect it to a balun? Guess I'm just old-fashioned :)

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of theron
Sent: Tuesday, February 19, 2013 4:48 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Antenna choice question

Are the Alpha Delta dipole antennas comparable to the Par EndFed types ?
http://www.amateurradiosupplies.com/alpha-delta-antennas-s/80.htm&Click=2662

Don W7DTG

On Tue, Feb 19, 2013 at 1:42 PM, KB1TCD <kb1tcd@...> wrote:

> **
>
>
> I use a PAR End Fed 6m antenna (obviously not w/the 830S) for both voice
> and digital on SSB as well as FM w/excellent results; swr 1:0 across the
> band. I have it set up horisontal about 100 ft from the shack and about
> 20 ft up.
> I just got done talking to a friend on 6m using the antenna, Steve,
> KB1TCE, swears by them!
> He has a 6m, a 20m, a 30m, an 80m, a 20/40/80 and a 20/40. Swr is 1:3 to
> 1:4 and no RF problems in the shack.
> These antennas are usually rated at no more than 200 watts though.
>
> 73 de Jose, KB1TCD
>
>
>

[Non-text portions of this message have been removed]

Yahoo! Groups Links

41044. Re: [TS-520_820_530_830] Antenna choice question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-19 22:25:23 UTC
From: theron
Topic: 41031 Message: 41044

I have often wondered that myself. The hobby seems to becoming more and
more plugNplay every year.

Don W7DTG

On Tue, Feb 19, 2013 at 2:21 PM, Daedalus <jvm@...> wrote:

> **
>
>
> Is there something special about the AD Dipole? A dipole is a dipole. Why
> would a ham pay a company to cut wire and connect it to a balun? Guess I'm
> just old-fashioned :)
>
>
> -----Original Message-----
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of theron
> Sent: Tuesday, February 19, 2013 4:48 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [TS-520_820_530_830] Antenna choice question
>
> Are the Alpha Delta dipole antennas comparable to the Par EndFed types ?
>
> http://www.amateurradiosupplies.com/alpha-delta-antennas-s/80.htm&Click=2662
>
> Don W7DTG
>
> On Tue, Feb 19, 2013 at 1:42 PM, KB1TCD kb1tcd@...> wrote:
>
> > **
>
> >
> >
> > I use a PAR End Fed 6m antenna (obviously not w/the 830S) for both voice
> > and digital on SSB as well as FM w/excellent results; swr 1:0 across the
> > band. I have it set up horisontal about 100 ft from the shack and about
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> > I just got done talking to a friend on 6m using the antenna, Steve,
> > KB1TCE, swears by them!
> > He has a 6m, a 20m, a 30m, an 80m, a 20/40/80 and a 20/40. Swr is 1:3 to
> > 1:4 and no RF problems in the shack.
> > These antennas are usually rated at no more than 200 watts though.
> >
> > 73 de Jose, KB1TCD
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> Yahoo! Groups Links
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41045. Re: [TS-520_820_530_830] Antenna choice question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-19 22:31:28 UTC
From: Denise Hargreaves
Topic: 41031 Message: 41045

I agree with the "Plug and Play " comment....I wonder if it could be one of the ways that maybe we can attract a younger force into ham radio....Just the opposite is true for many of us....we enjoy the effort to make things work and figure things out....although there are times I have to get my daughter or my apprentice to sort out problems I'm having on the computer ...LOL

Regards...Wes...VA6DWH

On 2013-02-19, at 3:25 PM, theron wrote:

> I have often wondered that myself. The hobby seems to becoming more and
> more plugNplay every year.
>
> Don W7DTG
>
> On Tue, Feb 19, 2013 at 2:21 PM, Daedalus <jvm@...> wrote:
>
>> **
>>
>>
>> Is there something special about the AD Dipole? A dipole is a dipole. Why
>> would a ham pay a company to cut wire and connect it to a balun? Guess I'm
>> just old-fashioned :)
>>
>>
>> -----Original Message-----
>> From: TS-520_820_530_830@yahoogroups.com
>> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of theron
>> Sent: Tuesday, February 19, 2013 4:48 PM
>> To: TS-520_820_530_830@yahoogroups.com
>> Subject: Re: [TS-520_820_530_830] Antenna choice question
>>
>> Are the Alpha Delta dipole antennas comparable to the Par EndFed types ?
>>
>> http://www.amateurradiosupplies.com/alpha-delta-antennas-s/80.htm&Click=2662
>>
>> Don W7DTG
>>
>> On Tue, Feb 19, 2013 at 1:42 PM, KB1TCD kb1tcd@...> wrote:
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>>> I use a PAR End Fed 6m antenna (obviously not w/the 830S) for both voice
>>> and digital on SSB as well as FM w/excellent results; swr 1:0 across the

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>>> He has a 6m, a 20m, a 30m, an 80m, a 20/40/80 and a 20/40. Swr is 1:3 to
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>>> 73 de Jose, KB1TCD
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>> Yahoo! Groups Links
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> Yahoo! Groups Links
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41046. Re: [TS-520_820_530_830] Antenna choice question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-19 22:39:41 UTC
From: theron
Topic: 41031 Message: 41046

LOL guess I should have snt THIS link instead on building a G5RV.
http://www.amateurradiosupplies.com/category-s/267.htm?Click=2662

I got rid of a lot of my modern gear a few years back, and run mostly boatanchor transmitters and receivers now for that reason. Wanted to get away from being an appliance operator. Have learned a lot as well, so it has been worth it so far.

Don W7DTG

On Tue, Feb 19, 2013 at 2:31 PM, Denise Hargreaves <pioneer6@...>wrote:

> **
>
>
> I agree with the "Plug and Play " comment....I wonder if it could be one
> of the ways that maybe we can attract a younger force into ham
> radio....Just the opposite is true for many of us....we enjoy the effort to
> make things work and figure things out....although there are times I have
> to get my daughter or my apprentice to sort out problems I'm having on the
> computer ...LOL
>
> Regards...Wes...VA6DWH
>
>
> On 2013-02-19, at 3:25 PM, theron wrote:
>
> > I have often wondered that myself. The hobby seems to becoming more and
> > more plugNplay every year.
> >
> > Don W7DTG
> >
> > On Tue, Feb 19, 2013 at 2:21 PM, Daedalus jvm@d8alus.net> wrote:
> >
> >> **
>
> >>
> >>
> >> Is there something special about the AD Dipole? A dipole is a dipole.
> Why
> >> would a ham pay a company to cut wire and connect it to a balun? Guess
> I'm
> >> just old-fashioned :)
> >>
> >>
> >> -----Original Message-----

> >> From: TS-520_820_530_830@yahoogroups.com
> >> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of theron
> >> Sent: Tuesday, February 19, 2013 4:48 PM
> >> To: TS-520_820_530_830@yahoogroups.com
> >> Subject: Re: [TS-520_820_530_830] Antenna choice question
> >>
> >> Are the Alpha Delta dipole antennas comparable to the Par EndFed types ?
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> >>
> >> Don W7DTG
> >>
> >> On Tue, Feb 19, 2013 at 1:42 PM, KB1TCD kb1tcd@...> wrote:
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> >>> **
> >>
> >>>
> >>>
> >>> I use a PAR End Fed 6m antenna (obviously not w/the 830S) for both
> voice
> >>> and digital on SSB as well as FM w/excellent results; swr 1:0 across
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> >>> band. I have it set up horisontal about 100 ft from the shack and about
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> >>> 1:4 and no RF problems in the shack.
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> >>>
> >>> 73 de Jose, KB1TCD
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41047. Re: [TS-520_820_530_830] Antenna choice question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-19 22:49:57 UTC
From: 3-Cpo
Topic: 41031 Message: 41047

I think it's a matter of what you have on hand, and convenience. I bought a Maple Leaf Studios wire antenna with balun on eBay because the price I paid as a unit was less than if I went to Home Depot and bought 53' of #12 or 14 wire, a plastic outdoor grade box with eyebolts, bought the ferrite core online, and then put it all together. The first thing I did was modify it, but that's another story.

That's why I like rigs with at least a few tubes in them, like the 830s. My 130s IS all solid-state, but I had to buy the SSB narrow filter and solder it in myself, and I use it as a portable where tubes might be a bit much for a car battery. I think the radios with the built-in O'scopes and antenna tuners take the fun out of radio.

John, w3cpo

-----Original Message-----
From: Denise Hargreaves <pioneer6@xplornet.com>
To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com>
Sent: Tue, Feb 19, 2013 5:32 pm
Subject: Re: [TS-520_820_530_830] Antenna choice question

I agree with the "Plug and Play " comment....I wonder if it could be one of the ways that maybe we can attract a younger force into ham radio....Just the opposite is true for many of us....we enjoy the effort to make things work and figure things out....although there are times I have to get my daughter or my apprentice to sort out problems I'm having on the computer ...LOL

Regards...Wes...VA6DWH

On 2013-02-19, at 3:25 PM, theron wrote:

> I have often wondered that myself. The hobby seems to becoming more and
> more plugNplay every year.
>
> Don W7DTG
>
> On Tue, Feb 19, 2013 at 2:21 PM, Daedalus jvm@...> wrote:
>
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>> Is there something special about the AD Dipole? A dipole is a dipole. Why
>> would a ham pay a company to cut wire and connect it to a balun? Guess I'm
>> just old-fashioned :)
>>
>>
>> -----Original Message-----
>> From: TS-520_820_530_830@yahoogroups.com
>> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of theron

>> Sent: Tuesday, February 19, 2013 4:48 PM
>> To: TS-520_820_530_830@yahoogroups.com
>> Subject: Re: [TS-520_820_530_830] Antenna choice question
>>
>> Are the Alpha Delta dipole antennas comparable to the Par EndFed types ?
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>> http://www.amateurradiosupplies.com/alpha-delta-antennas-s/80.htm&Click=2662
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>> On Tue, Feb 19, 2013 at 1:42 PM, KB1TCD kb1tcd@...> wrote:
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41048. Re: [TS-520_820_530_830] Antenna choice question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-19 22:57:16 UTC
From: William Houghton
Topic: 41031 Message: 41048

when it comes to ham radios you can have way too many pushbuttons but you can never have too many knobs!

From: 3-Cpo <w3cpo@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, February 19, 2013 2:52:47 PM
Subject: Re: [TS-520_820_530_830] Antenna choice question

I think it's a matter of what you have on hand, and convenience. I bought a Maple Leaf Studios wire antenna with balun on eBay because the price I paid as a unit was less than if I went to Home Depot and bought 53' of #12 or 14 wire, a plastic outdoor grade box with eyebolts, bought the ferrite core online, and then put it all together. The first thing I did was modify it, but that's another story.

That's why I like rigs with at least a few tubes in them, like the 830s. My 130s IS all solid-state, but I had to buy the SSB narrow filter and solder it in myself, and I use it as a portable where tubes might be a bit much for a car battery. I think the radios with the built-in O'scopes and antenna tuners take the fun out of radio.

John, w3cpo

-----Original Message-----
From: Denise Hargreaves pioneer6@...>
To: TS-520_820_530_830 TS-520_820_530_830@yahoogroups.com>
Sent: Tue, Feb 19, 2013 5:32 pm
Subject: Re: [TS-520_820_530_830] Antenna choice question

I agree with the "Plug and Play " comment....I wonder if it could be one of the ways that maybe we can attract a younger force into ham radio....Just the opposite is true for many of us....we enjoy the effort to make things work and figure things out....although there are times I have to get my daughter or my apprentice to sort out problems I'm having on the computer ...LOL

Regards...Wes...VA6DWH

On 2013-02-19, at 3:25 PM, theron wrote:

> I have often wondered that myself. The hobby seems to becoming more and
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>> -----Original Message-----
>> From: TS-520_820_530_830@yahoogroups.com
>> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of theron
>> Sent: Tuesday, February 19, 2013 4:48 PM
>> To: TS-520_820_530_830@yahoogroups.com
>> Subject: Re: [TS-520_820_530_830] Antenna choice question
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>> Are the Alpha Delta dipole antennas comparable to the Par EndFed types ?
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41049. Re: [TS-520_820_530_830] Antenna choice question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-19 22:58:02 UTC
From: Bob Macklin
Topic: 41031 Message: 41049

The problem today's if you do got an electronics school all you learn about I computers.

There are no more commercial radio tickets required to work in the BC industry so there are few schools that teach radio stuff.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Denise Hargreaves
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, February 19, 2013 2:31 PM
Subject: Re: [TS-520_820_530_830] Antenna choice question

I agree with the "Plug and Play " comment....I wonder if it could be one of the ways that maybe we can attract a younger force into ham radio....Just the opposite is true for many of us....we enjoy the effort to make things work and figure things out....although there are times I have to get my daughter or my apprentice to sort out problems I'm having on the computer ...LOL

Regards...Wes...VA6DWH

On 2013-02-19, at 3:25 PM, theron wrote:

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> more plugNplay every year.
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> Don W7DTG
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>> -----Original Message-----
>> From: TS-520_820_530_830@yahoogroups.com
>> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of theron
>> Sent: Tuesday, February 19, 2013 4:48 PM
>> To: TS-520_820_530_830@yahoogroups.com
>> Subject: Re: [TS-520_820_530_830] Antenna choice question

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>> Are the Alpha Delta dipole antennas comparable to the Par EndFed types ?
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41050. Re: [TS-520_820_530_830] Antenna choice question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-19 23:29:16 UTC
From: amfone
Topic: 41031 Message: 41050

Hey just build a dipole or any homebrew antenna, its easy, cheap and will last and educational. Three insulators, 50 cents each at a swap or less, some copper stranded number 14 or 12 wire and insulated and some RG8X or RG213 and one coax connector, some tape or better coax seal and its done.

Tim
WB8UHZ

From: 3-Cpo <w3cpo@...m>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, February 19, 2013 5:49 PM
Subject: Re: [TS-520_820_530_830] Antenna choice question

I think it's a matter of what you have on hand, and convenience. I bought a Maple Leaf Studios wire antenna with balun on eBay because the price I paid as a unit was less than if I went to Home Depot and bought 53' of #12 or 14 wire, a plastic outdoor grade box with eyebolts, bought the ferrite core online, and then put it all together. The first thing I did was modify it, but that's another story.

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John, w3cpo

-----Original Message-----
From: Denise Hargreaves pioneer6@xplornet.com>
To: TS-520_820_530_830 TS-520_820_530_830@yahoogroups.com>
Sent: Tue, Feb 19, 2013 5:32 pm
Subject: Re: [TS-520_820_530_830] Antenna choice question

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Regards...Wes...VA6DWH

On 2013-02-19, at 3:25 PM, theron wrote:

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> Don W7DTG

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> On Tue, Feb 19, 2013 at 2:21 PM, Daedalus jvm@...> wrote:
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>> Subject: Re: [TS-520_820_530_830] Antenna choice question
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>> http://www.amateurradiosupplies.com/alpha-delta-antennas-s/80.htm&Click=2662
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41051. Re: Best grease for Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-20 00:59:34 UTC
From: roberteleazer@rocketmail.com
Topic: 40991 Message: 41051

Chris:

Just wrote you a long detailed explanation of the products I have used. And Yahoo ate it, so it is gone forever. LPS and CRC both make contact cleaners, but for the CRC products use ONLY the "CRC QD Electronic Cleaner" - NOT the one made by CRC for electric motors and such.

LPS-1 is not a bad contact cleaner in it's own right, but it will not evaporate like the electronic spray cleaners do, so use it sparingly.

Good luck!

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "w7jpg" <ckepus@...> wrote:
>
> Robert,
> Very helpful info as I will be cleaning up my 830S in preparation for the wake up after it's long nap.
> I would like to know what the name is of the "cleaned it with electronic spray cleaner" in this reference from your post.
> Haven't used LPS-1 but will be ordering it also. Sounds like an excellent product.
> Thanks,
> Chris
> W7JPG
>
> --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> >
> > Jack:
> >
> > Yes I would. And I did. When my TS-820S had a serious VFO problem, with the frequency jumping 500 KHZ, even out of the band at varios spots, I took the VFO out, removed the cover, cleaned it with electronic spray cleaner and then lubed it with LPS-1. Problem solved. Other controls and switches got similar treatment.
> >
> > I do need to take the bottom cover off my currently operating TS-520 and clean and lube the WWV switch. If you push it in it just right and then back out then the switch does not make proper contact and the received signal level drops way doan.
> >
> > Robert
> >
> > Robert
> >
> > --- In TS-520_820_530_830@yahoogroups.com, John Donnelly wrote:
> > >

> > > Robert,
> > >
> > > Would you use the LPS-1 on the capacitor shaft and through the chassis bearings?
> > >
> > >
> > > Jack DonnellyÂ Â Â Â Â Â Â KV4JX
> > > Ball Ground Video Productions
> > > 308 Calusa Place
> > >
> > > Ball Ground, GA 30107
> > > Phone 678-592-9974
> > > www.ballgroundvideo.com
> > >
> > >
> > >
> > > _____
> > > From: "roberteleazer@"
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Thursday, February 14, 2013 1:59 PM
> > > Subject: [TS-520_820_530_830] Re: Best grease for Kenwoods
> > >
> > >
> > > Â
> > > Jack:
> > >
> > > Yes, I live in Florida, too, and I know how it can be. And while CRC makes some great electronics cleaners, including some designed for a marine environment, DO NOT use CRC Electro cleaner! I have a ruined DX-150A and a messed up dial on a Heathkit GDO from using that Electro cleaner. It was fine on WWII vintage gear but some of the plastics that came out in the mid-60's just melt when it hits them - and I am talking about visable vapors being produced!
> > >
> > > For lubing pots and switches I recomemnd LPS-1, which is a lightweight lube that I have used for over 30 years. I get mine at Ace Hardware. It works wonders on scratchy volume control pots - it does not fix them permanently, but lasts quite a while before you have to reapply it. I saved myself over $600 by using LPS-1 to fix an erratic mass airflow sensor on a Toyota truck. The pot on the sensor went from jitter-jitter acorss most of the range to smooth with just one little bump after I applied the LPS-1
> > >
> > > I understand that LPS-1 is sometimes found at bike and motorcycle shops because it is one of the very few things that will lube a chain and not encourage more dirt to collect on it.
> > >
> > > I am rebuilding a TS-520 right now. It has some severe power supply problems (as in smoke!) and I am replacing just about everything in that circuit but the transformer. I was sure the 500V 100 uf caps were shot but after I got them out it they seem to test good. I'll replace all the HV caps anyway; and I'm rolling my own for that rather than buying the kits.
> > >
> > > Good luck!

> > >
> > > Robert
> > > WB5WSV
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, John Donnelly wrote:
> > > >
> > > > Hi All,
> > > >
> > > >
> > > > I've got a TS-520 that I'm trying to get back on the air.Â It was sitting in the humid Florida environment for quite some
> > > > time, I suspect maybe in a garage, because it was loaded with dust, greasy film and palmetto bugs.Â I've washed it out
> > > > with some CRC electronics cleaner, blown it out with the compressor and air chuck and the chassis and boards look
> > > > pretty good now.Â The receiver seems to beworking pretty well and the VFO dial is dead on frequency.
> > > >
> > > > I've lubed the controls andband switches with deoxit gold but I'm not sure what to use for the tuning caps and other lube
> > > > points.Â What's theconsensus on the best grease and where can I get it?Â Next step is to rebuild the RF cage and power
> > > > supply with partsthat are in the mail.Â Can't believe it, but I had to break down and buy a Weller soldering gun. My 15 watt
> > > > pencil iron that I've been using all these years somehow won't heat those chassis fangs to get the cathode resistors off.
> > > >
> > > > ;-)
> > > >
> > > >
> > > > Thanks,
> > > >
> > > >
> > > > JackÂ Â Â KV4JX
> > > >
> > > > [Non-text portions of this message have been removed]
> > > >
> > >
> > >
> > >
> > >
> > > [Non-text portions of this message have been removed]
> > >
> >
>

41052. Solder for recap

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-20 01:20:24 UTC
From: n3kvl
Topic: 41052 Message: 41052

Hi All,

I will eventually recap my 520S. This is going to seem like a dumb question, but I would like to know what solder to use. There are simply too many varieties of the Kester solder for me to make a choice.

I have about $35 bucks in my Paypal account and its dedicated for soldering supplies. I figure I can buy a new 1lb spool, but I am wondering what to buy. I think .032 is the right diameter, most flexible for the uses I will have.

What's the best place to buy a spool?

And, can I do the recap with wick or do I need to buy a desoldering gun? I just bought a HAKKO 201 unit and it rocks :-)

Thanks in Advance
Archie

41053. Re: TS-820 RIT range expansion ?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-20 10:12:04 UTC
From: Kari
Topic: 35493 Message: 41053

If you just need -5 kHz for working DX, you may adjust the VR2 potentiometer CCW on the AF-AVR board. So you do not need even exchance any component. Rit is shifted from the center postion, but if you have the digital display you are able to see the frequncy anyway.

The word of caution from W5RKL is still relevant. In my rig it works, but I can not guarantee every cases. Feel free to try on your own risk, but if not satified, you may always adjust the VR2 back to the original center position and no problem at all.

--- In TS-520_820_530_830@yahoogroups.com, "a_pettit_jr" <a_pettit_jr@...> wrote:
>
> Hi All,
>
> Is it possible to adjust the reg voltage and the 3.9K resistor
> in series with the ? K ohm RIT pot to obtain +- 5 KHz ?
>
> Thanks,
> Alex
> KK4FPQ
>

41054. Re: Solder for recap

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-20 12:45:14 UTC
From: roberteleazer@rocketmail.com
Topic: 41052 Message: 41054

Archie:

You want Federal Specification QQ-S-571 solder, the kind that Radio Shack sells, among other places. And you want very thin, very small diameter solder, such as the .040 I use; thinner is Okay. I recently did not have any thin solder with me and tried to use some old larger diameter stuff; I had forgotten how much trouble it was to use that.

I am recapping a TS-520 right now, and "rolling my own" capacitor packs rather than buying the kits they sell on ebay. I hope to provide pictures later.

There is really not much solder involved in the installation of TS-520 caps. Solder wick should be adequate; I am not even using that, even though I have some. But dental tools are very useful indeed for desoldering operations. They are stainless steel, so the solder will not stick to them, you can use them to pry it away and to make holes in hot solder. Try asking a dentist for old ones but I have seen them for sale at some surplus stores. Some of those little jewelers' screwdriver will also work for that purpose but not quite as well as dental tools.

Good Luck!

Robert
WB5WSV
--- In TS-520_820_530_830@yahoogroups.com, "n3kvl" <n3kvl@...> wrote:
>
> Hi All,
>
> I will eventually recap my 520S. This is going to seem like a dumb question, but I would like to know what solder to use. There are simply too many varieties of the Kester solder for me to make a choice.
>
> I have about $35 bucks in my Paypal account and its dedicated for soldering supplies. I figure I can buy a new 1lb spool, but I am wondering what to buy. I think .032 is the right diameter, most flexible for the uses I will have.
>
> What's the best place to buy a spool?
>
> And, can I do the recap with wick or do I need to buy a desoldering gun? I just bought a HAKKO 201 unit and it rocks :-)
>
> Thanks in Advance
> Archie
>

41055. Re: Solder for recap

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-20 14:01:47 UTC
From: Brian Allen
Topic: 41052 Message: 41055

I've been told by several to leave the caps alone unless they are causing a problem. You could actually cause possible problems doing it. You may be installing a lesser quality part than what your are replacing.

Curious to see what others have to say on this matter. If their is a benefit, I may look into it...

[Non-text portions of this message have been removed]

41056. Re: Rf problem with my external vfo

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-20 14:04:28 UTC
From: Brian Allen
Topic: 41026 Message: 41056

I fixed the problem! I installed ferrite clips on each end of the cable and the problem went away.

[Non-text portions of this message have been removed]

41057. MC-50 disassembly ?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-20 09:17:30 UTC
From: claudio
Topic: 41057 Message: 41057

Hi,
I received my loved TS-520S one week ago from Germany through eBay, perfect conditions and it arrived with its beatiful MC-50 mic.
I was so happy guys, the radio sounded great, unfortunately when I was re-arranging my shack for the new entry the mic falled down to the floor and.....bye bye mc-50 !! I think that the cartridge is broken, so I tried to open the case to remove it but it seems to be impossible, the cartridge is inside the upper cap and the cap cannot be open, I tried all...got very disappointed.
So I ask you if anyone knows how to disassembly this mic and some suggestion for possible cartridge replacements.

Thanks
73s de IT9JCB

41058. Re: [TS-520_820_530_830] MC-50 disassembly ?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-20 15:55:48 UTC
From: Ken Winterling
Topic: 41057 Message: 41058

IT9JCB,

Wrap a cloth around the body of the mic to protect your hand and the mic. Focus a heat gun or hair dryer on the joint between the base of the mic and the top of the body. Rotate the mic and/or heat source around the entire diameter to soften the glue used to secure the pieces.

Every 5 seconds or so wrap a cloth around the mic head to protect your hand and try to unscrew the top. Turn the top counter clockwise while holding the body. It should come loose after a short time. DO NOT use any pliers, etc. or you will damage the head and/or body.

Ken
WA2LBI

On Wed, Feb 20, 2013 at 4:17 AM, claudio <aetna50@...> wrote:

> **
>
>
> Hi,
> I received my loved TS-520S one week ago from Germany through eBay,
> perfect conditions and it arrived with its beatiful MC-50 mic.
> I was so happy guys, the radio sounded great, unfortunately when I was
> re-arranging my shack for the new entry the mic falled down to the floor
> and.....bye bye mc-50 !! I think that the cartridge is broken, so I tried
> to open the case to remove it but it seems to be impossible, the cartridge
> is inside the upper cap and the cap cannot be open, I tried all...got very
> disappointed.
> So I ask you if anyone knows how to disassembly this mic and some
> suggestion for possible cartridge replacements.
>
> Thanks
> 73s de IT9JCB
>
>
>

[Non-text portions of this message have been removed]

41059. Re: Solder for recap

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-20 16:23:54 UTC
From: mydogchillroy
Topic: 41052 Message: 41059

Hi Archie,

For solder, less is better, i.e., thinner is better than thicker. I recently purchased a 1 lb. spool of Kester .031 with 66 core from Craigslist for $20 local. I believe Kester sells smaller spools than 1 lb. Some say you are good with 60/40 core and some say you will have less chance of a cold joint using a higher core, like 63/37. A little more expensive, however, but people really speak highly of the 63/37. I think the .032 is about right.

I've heard similar to what Brian said, too.

As an aside, I recently purchased a Hakko FP-101 (Craigslist) which is the predecessor to the 201. I agree with you, these solder stations are fantastic. I added 3-4 tips including a long conical and a knife. Get a long thin conical for tight board work. A few weeks ago I was able to replace the internal battery and a SMD 22uF cap on the display board of my Kenwood TM-742A using the long thin conical tip.

Welcome to Hakko!

73
Jim

41060. FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-20 16:27:06 UTC
From: n3dg
Topic: 41060 Message: 41060

Kenwood PC-1 Phone Patch provides a connection between the transceiver and a telephone line and is designed to provide high isolation between receiver input and transmitter output. Impedance levels (nominal): Line 600 ohms, Receiver Input 8 ohms, Speaker Output 8 ohms and Microphone 50K ohms. Microphone input and output is 4 pin and measures 6" x 2.25" x 5.75" in clean condition as a Vintage Kenwood Collector's Item or for daily usage, Only $30.

41061. Re: [TS-520_820_530_830] Re: Solder for recap

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-20 14:36:54 UTC
From: Alvin Chipmunk
Topic: 41052 Message: 41061

Hi Robert,

Thanks for the reply. I see a Kester spec QQ-S-571 I can nab on Ebay for $25 free shipping!! What does the spec entail? Is it a MILSPEC?

Why did you elect to do a recap; did you experience problems in operation?

I look at the recap in two ways.

First, its a hobby and I think I would enjoy the simple act of working inside the rig, especially given that I am unlikely to do anything inside my FT897D.

Second, I don't believe preventative maintenance is a bad thing, even with the risks of malfunction involved. I am less concerned with the quality of replacements as I would probably not order "Chinese caps" even if the shipping was free :-)

That brings the question as to what was the source and manufacture of what you are using. Also, I would appreciate it if you could send some pictures.

Archie

From: "roberteleazer@..." <roberteleazer@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, February 20, 2013 7:45 AM
Subject: [TS-520_820_530_830] Re: Solder for recap

Archie:

You want Federal Specification QQ-S-571 solder, the kind that Radio Shack sells, among other places. And you want very thin, very small diameter solder, such as the .040 I use; thinner is Okay. I recently did not have any thin solder with me and tried to use some old larger diameter stuff; I had forgotten how much trouble it was to use that.

I am recapping a TS-520 right now, and "rolling my own" capacitor packs rather than buying the kits they sell on ebay. I hope to provide pictures later.

There is really not much solder involved in the installation of TS-520 caps. Solder wick should be adequate; I am not even using that, even though I have some. But dental tools are very useful indeed for desoldering operations. They are stainless steel, so the solder will not stick to them, you can use them to pry it away and to make holes in hot solder. Try asking a dentist for old ones but I have seen them for sale at some surplus stores. Some of those little jewelers' screwdriver will also work for that purpose but not quite as well as dental tools.

Good Luck!

Robert
WB5WSV
--- In TS-520_820_530_830@yahoogroups.com, "n3kvl" wrote:
>
> Hi All,
>
> I will eventually recap my 520S. This is going to seem like a dumb question, but I would like to know what solder to use. There are simply too many varieties of the Kester solder for me to make a choice.
>
> I have about $35 bucks in my Paypal account and its dedicated for soldering supplies. I figure I can buy a new 1lb spool, but I am wondering what to buy. I think .032 is the right diameter, most flexible for the uses I will have.
>
> What's the best place to buy a spool?
>
> And, can I do the recap with wick or do I need to buy a desoldering gun? I just bought a HAKKO 201 unit and it rocks :-)
>
> Thanks in Advance
> Archie
>

[Non-text portions of this message have been removed]

41062. Weak rx on ts-830 40m only

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-20 11:41:52 UTC
From: Tim
Topic: 41062 Message: 41062

I have a one owner never modified ts 830..I have cleaned the bandswitch
Ruled that out..Performed full alignment went great excellent on all other bands..However on 40m i get good drive with alc during tune up transmit is fine 150 watts out on this band
But on rx it's about 2 s units down from all other bands...Where should i look..Thanks
N4DXX

41063. Re: [TS-520_820_530_830] Re: Solder for recap

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-20 17:27:49 UTC
From: Don
Topic: 41052 Message: 41063

I believe that the new solder has no lead in it.
Does it last as long as the leaded solder? re cold solder joints.
No lead would be a lot safer in the long run and better for the environment.
.

73
Don/Ve2ud

On 20/02/2013 11:23 AM, mydogchillroy wrote:
>
>
>
> Hi Archie,
>
> For solder, less is better, i.e., thinner is better than thicker. I
> recently purchased a 1 lb. spool of Kester .031 with 66 core from
> Craigslist for $20 local. I believe Kester sells smaller spools than 1
> lb. Some say you are good with 60/40 core and some say you will have
> less chance of a cold joint using a higher core, like 63/37. A little
> more expensive, however, but people really speak highly of the 63/37.
> I think the .032 is about right.
>
> I've heard similar to what Brian said, too.
>
> As an aside, I recently purchased a Hakko FP-101 (Craigslist) which is
> the predecessor to the 201. I agree with you, these solder stations
> are fantastic. I added 3-4 tips including a long conical and a knife.
> Get a long thin conical for tight board work. A few weeks ago I was
> able to replace the internal battery and a SMD 22uF cap on the display
> board of my Kenwood TM-742A using the long thin conical tip.
>
> Welcome to Hakko!
>
> 73
> Jim
>
>

[Non-text portions of this message have been removed]

41064. Re: [TS-520_820_530_830] Re: Solder for recap

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-20 17:39:48 UTC
From: Bob Macklin
Topic: 41052 Message: 41064

You can still buy Kestrel tin/lead solder.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Don
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, February 20, 2013 9:27 AM
Subject: Re: [TS-520_820_530_830] Re: Solder for recap

I believe that the new solder has no lead in it.
Does it last as long as the leaded solder? re cold solder joints.
No lead would be a lot safer in the long run and better for the environment.
.

73
Don/Ve2ud

On 20/02/2013 11:23 AM, mydogchillroy wrote:
>
>
>
> Hi Archie,
>
> For solder, less is better, i.e., thinner is better than thicker. I
> recently purchased a 1 lb. spool of Kester .031 with 66 core from
> Craigslist for $20 local. I believe Kester sells smaller spools than 1
> lb. Some say you are good with 60/40 core and some say you will have
> less chance of a cold joint using a higher core, like 63/37. A little
> more expensive, however, but people really speak highly of the 63/37.
> I think the .032 is about right.
>
> I've heard similar to what Brian said, too.
>
> As an aside, I recently purchased a Hakko FP-101 (Craigslist) which is
> the predecessor to the 201. I agree with you, these solder stations
> are fantastic. I added 3-4 tips including a long conical and a knife.
> Get a long thin conical for tight board work. A few weeks ago I was
> able to replace the internal battery and a SMD 22uF cap on the display
> board of my Kenwood TM-742A using the long thin conical tip.
>
> Welcome to Hakko!
>
> 73

> Jim
>
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41065. Re: [TS-520_820_530_830] Solder for recap

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-20 18:58:30 UTC
From: William Houghton
Topic: 41052 Message: 41065

Hi Archie,

I use 0.047 diameter for my general purpose soldering needs including through-hole technologies. The smaller the diameter the more length you need to feed into the joint. It may just be a matter of personal preference. I use much smaller diameter solder for working on surface mount components, often under a microscope.

I often use a combination of solder suckers and solder wick. I use the suckers to get most of the solder up and the wick for the remainder.

A lb of solder should last you a long time. Back in the early 1990's I was on a business trip to Taiwan. I walked into an electronics shop on a Saturday morning and ended up buying a kg (2.2 lbs) spool of solder for about $5US. I still have most of the spool today.

73,

Bill

From: n3kvl <n3kvl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, February 19, 2013 5:25:59 PM
Subject: [TS-520_820_530_830] Solder for recap

Hi All,

I will eventually recap my 520S. This is going to seem like a dumb question, but I would like to know what solder to use. There are simply too many varieties of the Kester solder for me to make a choice.

I have about $35 bucks in my Paypal account and its dedicated for soldering supplies. I figure I can buy a new 1lb spool, but I am wondering what to buy. I think .032 is the right diameter, most flexible for the uses I will have.

What's the best place to buy a spool?

And, can I do the recap with wick or do I need to buy a desoldering gun? I just bought a HAKKO 201 unit and it rocks :-)

Thanks in Advance
Archie

[Non-text portions of this message have been removed]

41066. Re: Best grease for Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-20 18:59:29 UTC
From: w7jpg
Topic: 40991 Message: 41066

Robert,

Sorry to hear that Yahoo ate that message. It would have been very useful to also post in the files section. A couple of years ago, after losing another message, "read dozens", eaten in a similarly mysterious and infuriating manner as yours, I now mostly write my messages in Word and when finished, copy them into the message area of the post. I suppose if I weren't afflicted with finger poo poos, I wouldn't have lost so many. ;-)

Thanks for the ID of CRC "QD". I went to O'Reilly's yesterday and picked up a can. Noticed a surprising variety of CRC products, including their specific "Mass Sensor" cleaner. Hmmmmm.
Also had my local ACE order in some LPS-1. Got another surprise. The price was lower than most internet sources, even here in California where most of the "good" stuff is banned.

Tnx agn es 73,
Chris
W7JPG

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> Chris:
>
> Just wrote you a long detailed explanation of the products I have used. And Yahoo ate it, so it is gone forever. LPS and CRC both make contact cleaners, but for the CRC products use ONLY the "CRC QD Electronic Cleaner" - NOT the one made by CRC for electric motors and such.
>
> LPS-1 is not a bad contact cleaner in it's own right, but it will not evaporate like the electronic spray cleaners do, so use it sparingly.
>
> Good luck!
>
> Robert
> WB5WSV
>

>

41067. Re: [TS-520_820_530_830] Antenna choice question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-20 19:25:31 UTC
From: Tom Pierce
Topic: 41031 Message: 41067

Don, understand what you are saying. I have a TS-570, but my 530 gets most of the use. I also like my Swan 500 and 250C. I just bought an HQ-170 and am in the process of getting a HT-37 to go with it. Boat anchors are alot more fun and the sound quality is so much better. I have 2 wires, 2 copper J pipe antennas up now. I am working on getting up a beam, got the tower and looking for an antenna and rotor. 73 Tom K0THP

From: theron <foureyes779@...m>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, February 19, 2013 4:39 PM
Subject: Re: [TS-520_820_530_830] Antenna choice question

LOL guess I should have snt THIS link instead on building a G5RV.
http://www.amateurradiosupplies.com/category-s/267.htm?Click=2662

I got rid of a lot of my modern gear a few years back, and run mostly
boatanchor transmitters and receivers now for that reason. Wanted to get
away from being an appliance operator. Have learned a lot as well, so it
has been worth it so far.

Don W7DTG

On Tue, Feb 19, 2013 at 2:31 PM, Denise Hargreaves <pioneer6@xplornet.com>wrote:

> **
>
>
> I agree with the "Plug and Play " comment....I wonder if it could be one
> of the ways that maybe we can attract a younger force into ham
> radio....Just the opposite is true for many of us....we enjoy the effort to
> make things work and figure things out....although there are times I have
> to get my daughter or my apprentice to sort out problems I'm having on the
> computer ...LOL
>
> Regards...Wes...VA6DWH
>
>
> On 2013-02-19, at 3:25 PM, theron wrote:
>
> > I have often wondered that myself. The hobby seems to becoming more and
> > more plugNplay every year.
> >
> > Don W7DTG
> >
> > On Tue, Feb 19, 2013 at 2:21 PM, Daedalus jvm@d8alus.net> wrote:
> >

> >> **
>
> >>
> >>
> >> Is there something special about the AD Dipole? A dipole is a dipole.
> Why
> >> would a ham pay a company to cut wire and connect it to a balun? Guess
> I'm
> >> just old-fashioned :)
> >>
> >>
> >> -----Original Message-----
> >> From: TS-520_820_530_830@yahoogroups.com
> >> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of theron
> >> Sent: Tuesday, February 19, 2013 4:48 PM
> >> To: TS-520_820_530_830@yahoogroups.com
> >> Subject: Re: [TS-520_820_530_830] Antenna choice question
> >>
> >> Are the Alpha Delta dipole antennas comparable to the Par EndFed types ?
> >>
> >>
> http://www.amateurradiosupplies.com/alpha-delta-antennas-s/80.htm&Click=2662
> >>
> >> Don W7DTG
> >>
> >> On Tue, Feb 19, 2013 at 1:42 PM, KB1TCD kb1tcd@...> wrote:
> >>
> >>> **
> >>
> >>>
> >>>
> >>> I use a PAR End Fed 6m antenna (obviously not w/the 830S) for both
> voice
> >>> and digital on SSB as well as FM w/excellent results; swr 1:0 across
> the
> >>> band. I have it set up horisontal about 100 ft from the shack and about
> >>> 20 ft up.
> >>> I just got done talking to a friend on 6m using the antenna, Steve,
> >>> KB1TCE, swears by them!
> >>> He has a 6m, a 20m, a 30m, an 80m, a 20/40/80 and a 20/40. Swr is 1:3
> to
> >>> 1:4 and no RF problems in the shack.
> >>> These antennas are usually rated at no more than 200 watts though.
> >>>
> >>> 73 de Jose, KB1TCD
> >>>
> >>>
> >>>
> >>
> >> [Non-text portions of this message have been removed]

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> >> Yahoo! Groups Links
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Yahoo! Groups Links

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41068. Re: [TS-520_820_530_830] Antenna choice question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-20 17:05:54 UTC
From: Mike
Topic: 41031 Message: 41068

I sorry and I mean no disrespect but you don't need a balun, an outdoor grade box with eye bolts, expensive Home Depot or Lowes bare stranded copper wire, and ferrite core(s), just to build a simple and effective coax fed dipole or inverted vee antenna.

A simple coax fed dipole center support and both end insulators can be madefrom small diameter scrap pieces of PVC pipefound at most hardware stores (you have to look for them, they won't jump out at you). The wire can be simple automotive hook up wire found at most automotive stores or in the automotive section of some hardware stores. I have even used zip cord speaker wireor zip cord power cable to make a dipole/inverted vee wire antenna.Most automotive or zip cord power cable stranded wire will work fine at power levels between 300 and 400 watts. If you're going to be a power hog, running 1KW every day of the week and twice on Sunday, whether band conditions warrant the use of an amp or not, you will need a heavier gauge wire :)

Simply use the formula,

468 / <freq in Mhz>

to determine the initial overall lengthof the dipole antenna. You will have to do some physical trimming (adjusting the length equally on both ends) for the antenna to resonate on the band you are using. You don't need an expensive antenna analiyzer or impedance bridge or even "Johnny's super duper wizbang $500 antenna meter with digital read out and USB to computer interface sold on eBay" to trim (tune) the antenna to resonance. All you needis asimple SWR meter, an RF carrier and some of your time to make the end adjustments.

73
Mike

On 2/19/2013 4:49 PM, 3-Cpo wrote:
>
>
> I think it's a matter of what you have on hand, and convenience. I
> bought a Maple Leaf Studios wire antenna with balun on eBay because
> the price I paid as a unit was less than if I went to Home Depot and
> bought 53' of #12 or 14 wire, a plastic outdoor grade box with
> eyebolts, bought the ferrite core online, and then put it all
> together. The first thing I did was modify it, but that's another story.
>
> That's why I like rigs with at least a few tubes in them, like the
> 830s. My 130s IS all solid-state, but I had to buy the SSB narrow
> filter and solder it in myself, and I use it as a portable where tubes

> might be a bit much for a car battery. I think the radios with the
> built-in O'scopes and antenna tuners take the fun out of radio.
>
> John, w3cpo
>
> -----Original Message-----
> From: Denise Hargreaves pioneer6@...
> <mailto:pioneer6%40xplornet.com>>
> To: TS-520_820_530_830 TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>>
> Sent: Tue, Feb 19, 2013 5:32 pm
> Subject: Re: [TS-520_820_530_830] Antenna choice question
>
> I agree with the "Plug and Play " comment....I wonder if it could be
> one of the ways that maybe we can attract a younger force into ham
> radio....Just the opposite is true for many of us....we enjoy the
> effort to make things work and figure things out....although there are
> times I have to get my daughter or my apprentice to sort out problems
> I'm having on the computer ...LOL
>
> Regards...Wes...VA6DWH
>
> On 2013-02-19, at 3:25 PM, theron wrote:
>
> > I have often wondered that myself. The hobby seems to becoming more and
> > more plugNplay every year.
> >
> > Don W7DTG
> >
> > On Tue, Feb 19, 2013 at 2:21 PM, Daedalus jvm@...
> <mailto:jvm%40d8alus.net>> wrote:
> >
> >> **
> >>
> >>
> >> Is there something special about the AD Dipole? A dipole is a
> dipole. Why
> >> would a ham pay a company to cut wire and connect it to a balun?
> Guess I'm
> >> just old-fashioned :)
> >>
> >>
> >> -----Original Message-----
> >> From: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> >> [mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of theron
> >> Sent: Tuesday, February 19, 2013 4:48 PM
> >> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>

> >> Subject: Re: [TS-520_820_530_830] Antenna choice question
> >>
> >> Are the Alpha Delta dipole antennas comparable to the Par EndFed
> types ?
> >>
> >>
> http://www.amateurradiosupplies.com/alpha-delta-antennas-s/80.htm&Click=2662
> >>
> >> Don W7DTG
> >>
> >> On Tue, Feb 19, 2013 at 1:42 PM, KB1TCD kb1tcd@...
> <mailto:kb1tcd%40gmail.com>> wrote:
> >>
> >>> **
> >>
> >>>
> >>>
> >>> I use a PAR End Fed 6m antenna (obviously not w/the 830S) for both
> voice
> >>> and digital on SSB as well as FM w/excellent results; swr 1:0
> across the
> >>> band. I have it set up horisontal about 100 ft from the shack and
> about
> >>> 20 ft up.
> >>> I just got done talking to a friend on 6m using the antenna, Steve,
> >>> KB1TCE, swears by them!
> >>> He has a 6m, a 20m, a 30m, an 80m, a 20/40/80 and a 20/40. Swr is
> 1:3 to
> >>> 1:4 and no RF problems in the shack.
> >>> These antennas are usually rated at no more than 200 watts though.
> >>>
> >>> 73 de Jose, KB1TCD
> >>>
> >>>
> >>>
> >>
> >> [Non-text portions of this message have been removed]
> >>
> >> ------------------------------------
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> >> Yahoo! Groups Links
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> > ------------------------------------
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> > Yahoo! Groups Links
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> [Non-text portions of this message have been removed]
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41069. L41 checks.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-20 20:08:28 UTC
From: jon_g4fut
Topic: 41069 Message: 41069

I have searched for details of the L41 but have not found any responses which answer my query. I have removed the coil from my 530se which suffered an RF hit when its RX was switched on while I transmitted on another radio. I understand that L41 may have shorted. So my question is this. There are 3 lugs on the bottom of the coil and 2 on the top. One lug on the bottom left shorts with the one on the left top (I wish I could show a photo!). The right lug on the bottom shorts with the right lug on the top. Following so far ????.....There is the middle lug on the bottom which doesn't short with anything. Does this coil now require re-winding? Ken K4EAA has very kindly supplied the required wire should it need it. I sincerely hope that Ken's health improves.

41070. Re: Solder for recap

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-20 20:16:32 UTC
From: roberteleazer@rocketmail.com
Topic: 41052 Message: 41070

Archie:

QQ-S-571 solder is just the usual old lead/tin solder with a rosin core. It's a Federal Spec which means it is a Milspec and then some. Modern plumbing solder has a different composition than the older stuff in order to keep lead out of drinking water, and in my experience is a whole lot harder to use than it used to be.

I am doing a recap because I bought a TS-520 on ebay that has clear evidence of past power supply problems. There are smoke stains on the inside of the case, one of the 500V 100 mfd caps was smokey colored and the previous owner had cut most of the wires going to the rectifier board and inserted extra lengths of wire, in an apparent attempt to troubleshoot the problem. Powering it up produced smoke from the rectifier board and one of the resistors on the board is burned to the point of being broken in two. Based on this, I assumed everything but the transformer in the power supply circuits is bad.

I replaced the rectifier board with one I had bought as a spare, replaced the two big electrolytic caps on the board, and decided to replace all of the power supply caps. I replaced all of the resistors on the little HV board that is in front of the transformer as well.

A few years back I bought 15 68uf 500V caps on ebay for something like $19. I figured I would have to replace the caps on a Heathkit HP-23 power supply and that the other caps would be generally useful for boatanchor work, including my TS-520 and TS-820S.

For the 22uf 450V caps I found some 32uf 450V on ebay for about $2.00 each and for the 2200 uf 25V caps I found some 35V ones on ebay. Putting the 68uf caps in parallel will give me 136uf to replace each of the 100uf caps.

The kicker is: I have yet to find a bad cap in the ones I removed. Even the big 100uf 500V caps held 400VDC quite well, and held it for a long time. I still have to remove and test the 22uf caps but so far I cannot say that a shorted cap caused the power supply problem.

I got to the 22uf 450V caps this morning and will have to modify my plans after I saw how little room I have there, but I am using the exact same approach for the 500V and 450V caps. I glued the new caps to a piece of perfboard and then glued that to a ¼ inch thick piece of phenolic (or nylon) cut to the correct size to fit where the old caps are. Then I drilled and tapped holes in the nylon or phenolic to secure it to the chassis, pulled the leads from the caps through and will attach them to some newly installed terminal strips.

So good luck to all of us. Keep'em on the air!

Robert

--- In TS-520_820_530_830@yahoogroups.com, Alvin Chipmunk <n3kvl@...> wrote:
>
> Hi Robert,
>

> Thanks for the reply. Â I see a Kester spec QQ-S-571 I can nab on Ebay for $25 free shipping!! Â What does the spec entail? Â Is it a MILSPEC?
>
> Why did you elect to do a recap; did you experience problems in operation? Â
>
> I look at the recap in two ways.
>
> First, its a hobby and I think I would enjoy the simple act of working inside the rig, especially given that I am unlikely to do anything inside my FT897D.
>
> Second, I don't believe preventative maintenance is a bad thing, even with the risks of malfunction involved. Â I am less concerned with the quality of replacements as I would probably not order "Chinese caps" even if the shipping was free :-)
>
> That brings the question as to what was the source and manufacture of what you are using. Â Also, I would appreciate it if you could send some pictures.
>
> Archie
>
>
> _____
> From: "roberteleazer@..." <roberteleazer@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, February 20, 2013 7:45 AM
> Subject: [TS-520_820_530_830] Re: Solder for recap
>
>
> Â
>
> Archie:
>
> You want Federal Specification QQ-S-571 solder, the kind that Radio Shack sells, among other places. And you want very thin, very small diameter solder, such as the .040 I use; thinner is Okay. I recently did not have any thin solder with me and tried to use some old larger diameter stuff; I had forgotten how much trouble it was to use that.
>
> I am recapping a TS-520 right now, and "rolling my own" capacitor packs rather than buying the kits they sell on ebay. I hope to provide pictures later.
>
> There is really not much solder involved in the installation of TS-520 caps. Solder wick should be adequate; I am not even using that, even though I have some. But dental tools are very useful indeed for desoldering operations. They are stainless steel, so the solder will not stick to them, you can use them to pry it away and to make holes in hot solder. Try asking a dentist for old ones but I have seen them for sale at some surplus stores. Some of those little jewelers' screwdriver will also work for that purpose but not quite as well as dental tools.
>
> Good Luck!
>
> Robert

> WB5WSV
> --- In TS-520_820_530_830@yahoogroups.com, "n3kvl" wrote:
> >
> > Hi All,
> >
> > I will eventually recap my 520S. This is going to seem like a dumb question, but I would like to know what solder to use. There are simply too many varieties of the Kester solder for me to make a choice.
> >
> > I have about $35 bucks in my Paypal account and its dedicated for soldering supplies. I figure I can buy a new 1lb spool, but I am wondering what to buy. I think .032 is the right diameter, most flexible for the uses I will have.
> >
> > What's the best place to buy a spool?
> >
> > And, can I do the recap with wick or do I need to buy a desoldering gun? I just bought a HAKKO 201 unit and it rocks :-)
> >
> > Thanks in Advance
> > Archie
> >
>
>
>
>
> [Non-text portions of this message have been removed]
>

41071. Re: L41 checks.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-20 20:28:10 UTC
From: n6wk_skcc3
Topic: 41069 Message: 41071

The center of the three doesn't go to anything!

I have rewound a few of the L41 Coils.

73,
Gordon
N6WK

--- In TS-520_820_530_830@yahoogroups.com, "jon_g4fut" <jon_g4fut@...> wrote:
>
> I have searched for details of the L41 but have not found any responses which answer my query. I have removed the coil from my 530se which suffered an RF hit when its RX was switched on while I transmitted on another radio. I understand that L41 may have shorted. So my question is this. There are 3 lugs on the bottom of the coil and 2 on the top. One lug on the bottom left shorts with the one on the left top (I wish I could show a photo!). The right lug on the bottom shorts with the right lug on the top. Following so far ????.....There is the middle lug on the bottom which doesn't short with anything. Does this coil now require re-winding? Ken K4EAA has very kindly supplied the required wire should it need it. I sincerely hope that Ken's health improves.
>

41072. Re: Solder for recap

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-20 20:31:21 UTC
From: pwrapsengineer
Topic: 41052 Message: 41072

Use 0.032" 63/37 rosin core solder (tin lead only). DO NOT use lead free solder. Your rig was made with leaded solder (63/37 most likely) so use that. The lead free solder has a higher temperature melt point and is prone to poor fluxing and cold solder joints. Other than a high volume, high production manufacturing enterprise that is now, by law, required to use lead free there is not reason to use anything but tin/lead solder. It just works better.

60/40 is perfectly adequate if that is what you have, but 63/37 is what is called a eutectic alloy and it melts at a slightly lower temperature than 60/40. Not enough to worry about. For this application use only ersin or rosin core flux that is inside the solder wire. Alpha, Kester, and several others good brands are out there and they are all good to use with the rosin type flux. Do not ever use acid core solder on point wired rigs. It will corrode and destroy your rig in a relatively short time. There are certain acid core and acid flux solders (331 fluxes) specifically made for surface mount type work where the water soluble flux can easily be washed away, but this is not one of those cases--keep it out of your hybrid, period.

There are companies that are currently exempt from the need to use lead free solder--those that are in aerospace and military and some telecom applications. Some of them are being forced into this compliance by the EPA sooner rather than later. All consumer and PC related manufacturing is now lead free. It is a mandate that originated in Europe and its intent is to keep lead out of the landfills and ground water. I am not sure how much of a real problem that is, but it's there and we have to live with it in our commercial stuff now, but as hobbyists we should not worry about this one way or the other. Our impact on lead in the environment is inconsequential. I have been involved with electronics for over 50 years, all of that time with tin lead solder and I have melted, in my career as well as in my hobby activities upwards of 30 pounds of tin lead solder with no issues health wise. Wash your hands, don't eat it but don't worry about it. Unless it is eaten or consumed in the water you drink for a long period of time, it is a much overblown concern than say cadmium or chromium or mercury.

Buy good quality electrolytic caps, with proper voltage ratings and rated as high in temperature as you can find. This is typically 105C. Over voltage and over temperature will kill these caps very quickly. Buy good name brand parts, avoid Chinese brand name caps, but Japanese brands are excellent in general. Be careful of your source since counterfeit parts are all over the place. I would be very leery of ebay sourced electrolytics. Digikey is a trusted source.

Have a good time working on your rig.

Larry

--- In TS-520_820_530_830@yahoogroups.com, "n3kvl" <n3kvl@...> wrote:
>
> Hi All,
>

> I will eventually recap my 520S. This is going to seem like a dumb question, but I would like to know what solder to use. There are simply too many varieties of the Kester solder for me to make a choice.
>
> I have about $35 bucks in my Paypal account and its dedicated for soldering supplies. I figure I can buy a new 1lb spool, but I am wondering what to buy. I think .032 is the right diameter, most flexible for the uses I will have.
>
> What's the best place to buy a spool?
>
> And, can I do the recap with wick or do I need to buy a desoldering gun? I just bought a HAKKO 201 unit and it rocks :-)
>
> Thanks in Advance
> Archie
>

41073. Re: L41 checks.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-20 22:11:58 UTC
From: jon_g4fut
Topic: 41069 Message: 41073

Hi Gordon many thanks for the reply. Do that mean that my L41 is OK when only the outside lugs connect?
Reagrds
Jon G4FUT
--- In TS-520_820_530_830@yahoogroups.com, "n6wk_skcc3" <n6wk@...> wrote:
>
> The center of the three doesn't go to anything!
>
> I have rewound a few of the L41 Coils.
>
> 73,
> Gordon
> N6WK
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "jon_g4fut" <jon_g4fut@> wrote:
> >
> > I have searched for details of the L41 but have not found any responses which answer my query. I have removed the coil from my 530se which suffered an RF hit when its RX was switched on while I transmitted on another radio. I understand that L41 may have shorted. So my question is this. There are 3 lugs on the bottom of the coil and 2 on the top. One lug on the bottom left shorts with the one on the left top (I wish I could show a photo!). The right lug on the bottom shorts with the right lug on the top. Following so far ????.....There is the middle lug on the bottom which doesn't short with anything. Does this coil now require re-winding? Ken K4EAA has very kindly supplied the required wire should it need it. I sincerely hope that Ken's health improves.
> >
>

41074. Re: [TS-520_820_530_830] Re: L41 checks.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-20 22:15:26 UTC
From: n6wk@...
Topic: 41069 Message: 41074

Hi Jon,
It certainly does appear that it is to me from what you posted.
What is the problem with the radio? Hard of hearing?

73,
Gordon

On 2/20/2013 2:11 PM, jon_g4fut wrote:
>
>
> Hi Gordon many thanks for the reply. Do that mean that my L41 is OK
> when only the outside lugs connect?
> Reagrds
> Jon G4FUT
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "n6wk_skcc3" wrote:
> >
> > The center of the three doesn't go to anything!
> >
> > I have rewound a few of the L41 Coils.
> >
> > 73,
> > Gordon
> > N6WK
> >
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "jon_g4fut" wrote:
> > >
> > > I have searched for details of the L41 but have not found any
> responses which answer my query. I have removed the coil from my 530se
> which suffered an RF hit when its RX was switched on while I
> transmitted on another radio. I understand that L41 may have shorted.
> So my question is this. There are 3 lugs on the bottom of the coil and
> 2 on the top. One lug on the bottom left shorts with the one on the
> left top (I wish I could show a photo!). The right lug on the bottom
> shorts with the right lug on the top. Following so far ????.....There
> is the middle lug on the bottom which doesn't short with anything.
> Does this coil now require re-winding? Ken K4EAA has very kindly
> supplied the required wire should it need it. I sincerely hope that
> Ken's health improves.
> > >
> >

>
>

41075. RE: [TS-520_820_530_830] Re: L41 checks.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-20 22:18:52 UTC
From: fpath fpath
Topic: 41069 Message: 41075

Maybe check Q1 (3sk73gr) on the RF board.

> To: TS-520_820_530_830@yahoogroups.com
> From: n6wk@...
> Date: Wed, 20 Feb 2013 14:15:26 -0800
> Subject: Re: [TS-520_820_530_830] Re: L41 checks.
>
> Hi Jon,
> It certainly does appear that it is to me from what you posted.
> What is the problem with the radio? Hard of hearing?
>
> 73,
> Gordon
>
>
> On 2/20/2013 2:11 PM, jon_g4fut wrote:
> >
> >
> > Hi Gordon many thanks for the reply. Do that mean that my L41 is OK
> > when only the outside lugs connect?
> > Reagrds
> > Jon G4FUT
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "n6wk_skcc3" wrote:
> > >
> > > The center of the three doesn't go to anything!
> > >
> > > I have rewound a few of the L41 Coils.
> > >
> > > 73,
> > > Gordon
> > > N6WK
> > >
> > >
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "jon_g4fut" wrote:
> > > >
> > > > I have searched for details of the L41 but have not found any
> > responses which answer my query. I have removed the coil from my 530se
> > which suffered an RF hit when its RX was switched on while I
> > transmitted on another radio. I understand that L41 may have shorted.
> > So my question is this. There are 3 lugs on the bottom of the coil and
> > 2 on the top. One lug on the bottom left shorts with the one on the

> > left top (I wish I could show a photo!). The right lug on the bottom
> > shorts with the right lug on the top. Following so far ????.....There
> > is the middle lug on the bottom which doesn't short with anything.
> > Does this coil now require re-winding? Ken K4EAA has very kindly
> > supplied the required wire should it need it. I sincerely hope that
> > Ken's health improves.
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> Yahoo! Groups Links
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[Non-text portions of this message have been removed]

41076. Re: L41 checks.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-20 23:02:47 UTC
From: jon_g4fut
Topic: 41069 Message: 41076

Gordon, that;'s the problem...its went quite deaf when I ran the other transmitter ! :-)
Cheers
Jon
--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Hi Jon,
> It certainly does appear that it is to me from what you posted.
> What is the problem with the radio? Hard of hearing?
>
> 73,
> Gordon
>
>
> On 2/20/2013 2:11 PM, jon_g4fut wrote:
> >
> >
> > Hi Gordon many thanks for the reply. Do that mean that my L41 is OK
> > when only the outside lugs connect?
> > Reagrds
> > Jon G4FUT
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "n6wk_skcc3" wrote:
> > >
> > > The center of the three doesn't go to anything!
> > >
> > > I have rewound a few of the L41 Coils.
> > >
> > > 73,
> > > Gordon
> > > N6WK
> > >
> > >
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "jon_g4fut" wrote:
> > > >
> > > > I have searched for details of the L41 but have not found any
> > responses which answer my query. I have removed the coil from my 530se
> > which suffered an RF hit when its RX was switched on while I
> > transmitted on another radio. I understand that L41 may have shorted.
> > So my question is this. There are 3 lugs on the bottom of the coil and
> > 2 on the top. One lug on the bottom left shorts with the one on the
> > left top (I wish I could show a photo!). The right lug on the bottom
> > shorts with the right lug on the top. Following so far ????.....There

> > is the middle lug on the bottom which doesn't short with anything.
> > Does this coil now require re-winding? Ken K4EAA has very kindly
> > supplied the required wire should it need it. I sincerely hope that
> > Ken's health improves.
> > > >
> > >
> >
> >
>

41077. Re: Solder for recap

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-20 23:25:07 UTC
From: Jody
Topic: 41052 Message: 41077

Go to radio shack for about 8 bucks you can get a spool of 032 60/40 that will last years I have used all through my college classes built an Oscope and a logic probe and wired 50power supplies for class an still reworked all my Rc car esc's and about 30 different battery combos and have barely used half of my spool in the past few years.
HAKKO 888 general work=1.2mm/ SMD fine pencil tip.

>

41078. Re: [TS-520_820_530_830] Re: L41 checks.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-20 23:41:27 UTC
From: n6wk@...
Topic: 41069 Message: 41078

Since L-41 sounds like it is good, I'd check Q1 on the RF board.

73,
Gordon

On 2/20/2013 3:02 PM, jon_g4fut wrote:
>
>
> Gordon, that;'s the problem...its went quite deaf when I ran the other
> transmitter ! :-)
> Cheers
> Jon
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:
> >
> > Hi Jon,
> > It certainly does appear that it is to me from what you posted.
> > What is the problem with the radio? Hard of hearing?
> >
> > 73,
> > Gordon
> >
> >
> > On 2/20/2013 2:11 PM, jon_g4fut wrote:
> > >
> > >
> > > Hi Gordon many thanks for the reply. Do that mean that my L41 is OK
> > > when only the outside lugs connect?
> > > Reagrds
> > > Jon G4FUT
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > , "n6wk_skcc3" wrote:
> > > >
> > > > The center of the three doesn't go to anything!
> > > >
> > > > I have rewound a few of the L41 Coils.
> > > >
> > > > 73,
> > > > Gordon
> > > > N6WK
> > > >
> > > >
> > > >
> > > >

> > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > , "jon_g4fut" wrote:
> > > > >
> > > > > I have searched for details of the L41 but have not found any
> > > responses which answer my query. I have removed the coil from my
> 530se
> > > which suffered an RF hit when its RX was switched on while I
> > > transmitted on another radio. I understand that L41 may have shorted.
> > > So my question is this. There are 3 lugs on the bottom of the coil
> and
> > > 2 on the top. One lug on the bottom left shorts with the one on the
> > > left top (I wish I could show a photo!). The right lug on the bottom
> > > shorts with the right lug on the top. Following so far ????.....There
> > > is the middle lug on the bottom which doesn't short with anything.
> > > Does this coil now require re-winding? Ken K4EAA has very kindly
> > > supplied the required wire should it need it. I sincerely hope that
> > > Ken's health improves.
> > > > >
> > > > >
> > > >
> > > >
> > >
>
>

41079. Re: [TS-520_820_530_830] Antenna choice question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-21 01:42:15 UTC
From: w3cpo@...
Topic: 41031 Message: 41079

Everyone has their own way of doing things.

In a message dated 2/20/2013 2:50:39 P.M. Eastern Standard Time,
w5rkl@... writes:

I sorry and I mean no disrespect but you don't need a balun, an outdoor
grade box with eye bolts, expensive Home Depot or Lowes bare stranded
copper wire, and ferrite core(s), just to build a simple and effective
coax fed dipole or inverted vee antenna.

A simple coax fed dipole center support and both end insulators can be
madefrom small diameter scrap pieces of PVC pipefound at most hardware
stores (you have to look for them, they won't jump out at you). The wire
can be simple automotive hook up wire found at most automotive stores or
in the automotive section of some hardware stores. I have even used zip
cord speaker wireor zip cord power cable to make a dipole/inverted vee
wire antenna.Most automotive or zip cord power cable stranded wire will
work fine at power levels between 300 and 400 watts. If you're going to
be a power hog, running 1KW every day of the week and twice on Sunday,
whether band conditions warrant the use of an amp or not, you will need
a heavier gauge wire :)

Simply use the formula,

468 /

to determine the initial overall lengthof the dipole antenna. You will
have to do some physical trimming (adjusting the length equally on both
ends) for the antenna to resonate on the band you are using. You don't
need an expensive antenna analiyzer or impedance bridge or even
"Johnny's super duper wizbang $500 antenna meter with digital read out
and USB to computer interface sold on eBay" to trim (tune) the antenna
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of your time to make the end adjustments.

73
Mike

On 2/19/2013 4:49 PM, 3-Cpo wrote:
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> I think it's a matter of what you have on hand, and convenience. I
> bought a Maple Leaf Studios wire antenna with balun on eBay because
> the price I paid as a unit was less than if I went to Home Depot and
> bought 53' of #12 or 14 wire, a plastic outdoor grade box with
> eyebolts, bought the ferrite core online, and then put it all
> together. The first thing I did was modify it, but that's another story.

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> 830s. My 130s IS all solid-state, but I had to buy the SSB narrow
> filter and solder it in myself, and I use it as a portable where tubes
> might be a bit much for a car battery. I think the radios with the
> built-in O'scopes and antenna tuners take the fun out of radio.
>
> John, w3cpo
>
> -----Original Message-----
> From: Denise Hargreaves _pioneer6@..._
(mailto:pioneer6@xplornet.com)
> >
> To: TS-520_820_530_830 _TS-520_820_530_830@yahoogroups.com_
(mailto:TS-520_820_530_830@yahoogroups.com)
> >
> Sent: Tue, Feb 19, 2013 5:32 pm
> Subject: Re: [TS-520_820_530_830] Antenna choice question
>
> I agree with the "Plug and Play " comment....I wonder if it could be
> one of the ways that maybe we can attract a younger force into ham
> radio....Just the opposite is true for many of us....we enjoy the
> effort to make things work and figure things out....although there are
> times I have to get my daughter or my apprentice to sort out problems
> I'm having on the computer ...LOL
>
> Regards...Wes...VA6DWH
>
> On 2013-02-19, at 3:25 PM, theron wrote:
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> > I have often wondered that myself. The hobby seems to becoming more and
> > more plugNplay every year.
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> > Don W7DTG
> >
> > On Tue, Feb 19, 2013 at 2:21 PM, Daedalus _jvm@..._
(mailto:jvm@...)
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> >> Is there something special about the AD Dipole? A dipole is a
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> Guess I'm
> >> just old-fashioned :)
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> >>
> >> -----Original Message-----

> >> From: _TS-520_820_530_830@yahoogroups.com_
(mailto:TS-520_820_530_830@yahoogroups.com)
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> >> [mailto:_TS-520_820_530_830@yahoogroups.com_
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> >> To: _TS-520_820_530_830@yahoogroups.com_
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http://www.amateurradiosupplies.com/alpha-delta-antennas-s/80.htm&Click=2662
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> >> Don W7DTG
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> >> On Tue, Feb 19, 2013 at 1:42 PM, KB1TCD _kb1tcd@..._
(mailto:kb1tcd@...)
> > wrote:
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> >>> KB1TCE, swears by them!
> >>> He has a 6m, a 20m, a 30m, an 80m, a 20/40/80 and a 20/40. Swr is
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> >>> These antennas are usually rated at no more than 200 watts though.
> >>>
> >>> 73 de Jose, KB1TCD
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> >>
> >> [Non-text portions of this message have been removed]

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41080. Connecting a Mixer to the TS-830S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-21 03:34:59 UTC
From: Kevin, Natalia, Stacey and Rochelle
Topic: 41080 Message: 41080

Hi Guys,

I have been watching some episodes of Ham Nation.

In one of them there is a section on fitting a mixer to a modern rig.

I want to however fit a mixer to my TS-830.

From my understanding I do not put it in the front plug as this has a pre-amp in there.

So what is the best way to connect the mixer into the rig?

Regards

Kevin, ZL1KFM.

[Non-text portions of this message have been removed]

41081. Re: Solder for recap

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-21 13:43:55 UTC
From: Brian Allen
Topic: 41052 Message: 41081

I wish you luck on your project and hope the transformer has not been damaged! From what I have been told, a bad transformer makes a hybrid a parts radio.

This is what scares me from buying radios on ebay. I don't know how he advertised it. The " I bought it at an estate but know nothing about it" covers them in a case like this.

So far, knock on wood, I have never bought anything bad on ebay and have gotten a very good price. The latest purchase was a vfo 240. Been wanting one a long time but did not want to pay $200. Got it for much less than that!

[Non-text portions of this message have been removed]

41082. re: antenna choice question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-21 18:19:38 UTC
From: Ld Rockne
Topic: 41082 Message: 41082

You don't even have to trim your antenna, thats just unnecessary work.

I simply used the formula in the ARRL Handbook, calculated the length of a 20 meter dipole, fed it with coax and raised it to 25ft. I was going along along working all kinds of stations.

A buddy came by with his latest purchase, a Super Whizbang $500 Antenna Analuzer with Difital Readout and USB to computer interface. (SWAADRUSBCI).
When he hooked his SWAADRUSBCI to my antenna he was quite surprised how flat it was, using just a formula, and no trimming.

Tnx Larry WA7HDZ

From: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, February 21, 2013 1:28 AM
Subject: [TS-520_820_530_830] Digest Number 4109

KENWOOD TS-520_820_530_830 Group
13 New Messages
Re: Antenna choice question by nailcity34
Digest #4109
1a
Re: Antenna choice question by "Mike" w5rkl
1b
2a
L41 checks. by "jon_g4fut" jon_g4fut
2b
Re: L41 checks. by "n6wk_skcc3" n6wk_skcc3
2c
Re: L41 checks. by "jon_g4fut" jon_g4fut
2d
Re: L41 checks. by n6wk_skcc3
2e
Re: L41 checks. by "fpath fpath" fpath02
2f
Re: L41 checks. by "jon_g4fut" jon_g4fut
2g
Re: L41 checks. by n6wk_skcc3
3a
Re: Solder for recap by "roberteleazer@..." roberteleazer@...
3b
Re: Solder for recap by "pwrapsengineer" pwrapsengineer
3c
Re: Solder for recap by "Jody" d_frawg
4

Connecting a Mixer to the TS-830S by "Kevin, Natalia, Stacey and Rochelle" sparcnz
Messages
1a
Re: Antenna choice question
Wed Feb 20, 2013 11:50 am (PST) . Posted by:
"Mike" w5rkl
I sorry and I mean no disrespect but you don't need a balun, an outdoor grade box with eye bolts, expensive Home Depot or Lowes bare stranded copper wire, and ferrite core(s), just to build a simple and effective coax fed dipole or inverted vee antenna.

A simple coax fed dipole center support and both end insulators can be madefrom small diameter scrap pieces of PVC pipefound at most hardware stores (you have to look for them, they won't jump out at you). The wire can be simple automotive hook up wire found at most automotive stores or in the automotive section of some hardware stores. I have even used zip cord speaker wireor zip cord power cable to make a dipole/inverted vee wire antenna.Most automotive or zip cord power cable stranded wire will work fine at power levels between 300 and 400 watts. If you're going to be a power hog, running 1KW every day of the week and twice on Sunday, whether band conditions warrant the use of an amp or not, you will need a heavier gauge wire :)

Simply use the formula,

468 /

to determine the initial overall lengthof the dipole antenna. You will have to do some physical trimming (adjusting the length equally on both ends) for the antenna to resonate on the band you are using. You don't need an expensive antenna analiyzer or impedance bridge or even "Johnny's super duper wizbang $500 antenna meter with digital read out and USB to computer interface sold on eBay" to trim (tune) the antenna to resonance. All you needis asimple SWR meter, an RF carrier and some of your time to make the end adjustments.

73
Mike

On 2/19/2013 4:49 PM, 3-Cpo wrote:
>
>
> I think it's a matter of what you have on hand, and convenience. I
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> eyebolts, bought the ferrite core online, and then put it all
> together. The first thing I did was modify it, but that's another story.
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> That's why I like rigs with at least a few tubes in them, like the
> 830s. My 130s IS all solid-state, but I had to buy the SSB narrow
> filter and solder it in myself, and I use it as a portable where tubes

> might be a bit much for a car battery. I think the radios with the
> built-in O'scopes and antenna tuners take the fun out of radio.
>
> John, w3cpo
>
> -----Original Message-----
> From: Denise Hargreaves mailto:pioneer6%40xplornet.com
> >
> To: TS-520_820_530_ 830 mailto:TS-520_820_530_830%40yahoogroups.com
> >
> Sent: Tue, Feb 19, 2013 5:32 pm
> Subject: Re: [TS-520_820_ 530_830] Antenna choice question
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> I agree with the "Plug and Play " comment....I wonder if it could be
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> > Don W7DTG
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> >> Sent: Tuesday, February 19, 2013 4:48 PM
> >> To: mailto:TS-520_820_530_830%40yahoogroups.com
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> >> Are the Alpha Delta dipole antennas comparable to the Par EndFed
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> http://www.amateurradiosupplies.com/alpha-delta-antennas-s/80.htm&Click=2662
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> > wrote:
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> >>
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Reply to sender . Reply to group . Reply via Web Post . All Messages (17) . Top ^
1b
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nailcity34
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Reply to sender . Reply to group . Reply via Web Post . All Messages (17) . Top ^
2a
L41 checks.
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"jon_g4fut" jon_g4fut
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Reply to sender . Reply to group . Reply via Web Post . All Messages (7) . Top ^
2b
Re: L41 checks.
Wed Feb 20, 2013 12:28 pm (PST) . Posted by:
"n6wk_skcc3" n6wk_skcc3
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--- In mailto:TS-520_820_530_830%40yahoogroups.com, "jon_g4fut&quo t; wrote:
>
> I have searched for details of the L41 but have not found any responses which answer my query. I have removed the coil from my 530se which suffered an RF hit when its RX was switched on while I transmitted on another radio. I understand that L41 may have shorted. So my question is this. There are 3 lugs on the bottom of the coil and 2 on the top. One lug on the bottom left shorts with the one on the left top (I wish I could show a photo!). The right lug on the bottom shorts with the right lug on the top. Following so far ????.....There is the middle lug on the bottom which doesn't short with anything. Does this coil now require re-winding? Ken K4EAA has very kindly supplied the required wire should it need it. I sincerely hope that Ken's health improves.
>

Reply to sender . Reply to group . Reply via Web Post . All Messages (7) . Top ^
2c
Re: L41 checks.
Wed Feb 20, 2013 2:12 pm (PST) . Posted by:
"jon_g4fut" jon_g4fut

Hi Gordon many thanks for the reply. Do that mean that my L41 is OK when only the outside lugs connect?
Reagrds
Jon G4FUT
--- In mailto:TS-520_820_530_830%40yahoogroups.com, "n6wk_skcc3&qu ot; wrote:
>
> The center of the three doesn't go to anything!
>
> I have rewound a few of the L41 Coils.
>
> 73,
> Gordon
> N6WK

>
>
>
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, "jon_g4fut&quo t; wrote:
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> >
>

Reply to sender . Reply to group . Reply via Web Post . All Messages (7) . Top ^
2d
Re: L41 checks.
Wed Feb 20, 2013 2:17 pm (PST) . Posted by:
n6wk_skcc3
Hi Jon,
It certainly does appear that it is to me from what you posted.
What is the problem with the radio? Hard of hearing?

73,
Gordon

On 2/20/2013 2:11 PM, jon_g4fut wrote:
>
>
> Hi Gordon many thanks for the reply. Do that mean that my L41 is OK
> when only the outside lugs connect?
> Reagrds
> Jon G4FUT
> --- In mailto:TS-520_820_530_830%40yahoogroups.com
> , "n6wk_skcc3&qu ot; wrote:
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> > --- In mailto:TS-520_820_530_830%40yahoogroups.com
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> transmitted on another radio. I understand that L41 may have shorted.
> So my question is this. There are 3 lugs on the bottom of the coil and
> 2 on the top. One lug on the bottom left shorts with the one on the
> left top (I wish I could show a photo!). The right lug on the bottom
> shorts with the right lug on the top. Following so far ????.....There
> is the middle lug on the bottom which doesn't short with anything.
> Does this coil now require re-winding? Ken K4EAA has very kindly
> supplied the required wire should it need it. I sincerely hope that
> Ken's health improves.
> > >
> >
>
>

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2e
Re: L41 checks.
Wed Feb 20, 2013 2:18 pm (PST) . Posted by:
"fpath fpath" fpath02

Maybe check Q1 (3sk73gr) on the RF board.

> To: mailto:TS-520_820_530_830%40yahoogroups.com
> From: mailto:n6wk%40n6wk.com
> Date: Wed, 20 Feb 2013 14:15:26 -0800
> Subject: Re: [TS-520_820_ 530_830] Re: L41 checks.
>
> Hi Jon,
> It certainly does appear that it is to me from what you posted.
> What is the problem with the radio? Hard of hearing?
>
> 73,
> Gordon
>
>
> On 2/20/2013 2:11 PM, jon_g4fut wrote:
> >
> >
> > Hi Gordon many thanks for the reply. Do that mean that my L41 is OK
> > when only the outside lugs connect?
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> > Jon G4FUT
> > --- In mailto:TS-520_820_530_830%40yahoogroups.com
> > , "n6wk_skcc3&qu ot; wrote:
> > >

> > > The center of the three doesn't go to anything!
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> > >
> > >
> > >
> > >
> > > --- In mailto:TS-520_820_530_830%40yahoogroups.com
> > , "jon_g4fut&quo t; wrote:
> > > >
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> Yahoo! Groups Links
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[Non-text portions of this message have been removed]

Reply to sender . Reply to group . Reply via Web Post . All Messages (7) . Top ^
2f
Re: L41 checks.
Wed Feb 20, 2013 3:02 pm (PST) . Posted by:
"jon_g4fut" jon_g4fut

Gordon, that;'s the problem...its went quite deaf when I ran the other transmitter ! :-)
Cheers
Jon

--- In mailto:TS-520_820_530_830%40yahoogroups.com, n6wk@... wrote:
>
> Hi Jon,
> It certainly does appear that it is to me from what you posted.
> What is the problem with the radio? Hard of hearing?
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> 73,
> Gordon
>
>
> On 2/20/2013 2:11 PM, jon_g4fut wrote:
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> > Hi Gordon many thanks for the reply. Do that mean that my L41 is OK
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> >

>

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2g
Re: L41 checks.
Wed Feb 20, 2013 3:41 pm (PST) . Posted by:
n6wk_skcc3
Since L-41 sounds like it is good, I'd check Q1 on the RF board.

73,
Gordon

On 2/20/2013 3:02 PM, jon_g4fut wrote:
>
>
> Gordon, that;'s the problem...its went quite deaf when I ran the other
> transmitter ! :-)
> Cheers
> Jon
> --- In mailto:TS-520_820_530_830%40yahoogroups.com
> , n6wk@... wrote:
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> > > >
> > > >

> > > >
> > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com
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> > > , "jon_g4fut&quo t; wrote:
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3a
Re: Solder for recap
Wed Feb 20, 2013 12:18 pm (PST) . Posted by:
"roberteleazer@..." roberteleazer@...
Archie:

QQ-S-571 solder is just the usual old lead/tin solder with a rosin core. It's a Federal Spec which means it is a Milspec and then some. Modern plumbing solder has a different composition than the older stuff in order to keep lead out of drinking water, and in my experience is a whole lot harder to use than it used to be.

I am doing a recap because I bought a TS-520 on ebay that has clear evidence of past power supply problems. There are smoke stains on the inside of the case, one of the 500V 100 mfd caps was smokey colored and the previous owner had cut most of the wires going to the rectifier board and inserted extra lengths of wire, in an apparent attempt to troubleshoot the problem. Powering it up produced smoke from the rectifier board and one of the resistors on the board is burned to the point of being broken in two. Based on this, I assumed everything but the transformer in the power supply circuits is bad.

I replaced the rectifier board with one I had bought as a spare, replaced the two big electrolytic caps on the board, and decided to replace all of the power supply caps. I replaced all of the resistors on the little HV board that is in front of the transformer as well.

A few years back I bought 15 68uf 500V caps on ebay for something like $19. I figured I would have to replace the caps on a Heathkit HP-23 power supply and that the other caps would be generally useful for boatanchor work, including my TS-520 and TS-820S.

For the 22uf 450V caps I found some 32uf 450V on ebay for about $2.00 each and for the 2200 uf 25V caps I found some 35V ones on ebay. Putting the 68uf caps in parallel will give me 136uf to replace each of the 100uf caps.

The kicker is: I have yet to find a bad cap in the ones I removed. Even the big 100uf 500V caps held 400VDC quite well, and held it for a long time. I still have to remove and test the 22uf caps but so far I cannot say that a shorted cap caused the power supply problem.

I got to the 22uf 450V caps this morning and will have to modify my plans after I saw how little room I have there, but I am using the exact same approach for the 500V and 450V caps. I glued the new caps to a piece of perfboard and then glued that to a ¼ inch thick piece of phenolic (or nylon) cut to the correct size to fit where the old caps are. Then I drilled and tapped holes in the nylon or phenolic to secure it to the chassis, pulled the leads from the caps through and will attach them to some newly installed terminal strips.

So good luck to all of us. Keep'em on the air!

Robert

--- In mailto:TS-520_820_530_830%40yahoogroups.com, Alvin Chipmunk wrote:
>
> Hi Robert,
>
> Thanks for the reply. Â I see a Kester spec QQ-S-571 I can nab on Ebay for $25 free shipping!! Â What does the spec entail? Â Is it a MILSPEC?
>
> Why did you elect to do a recap; did you experience problems in operation? Â
>
> I look at the recap in two ways.
>
> First, its a hobby and I think I would enjoy the simple act of working inside the rig, especially given that I am unlikely to do anything inside my FT897D.
>
> Second, I don't believe preventative maintenance is a bad thing, even with the risks of malfunction involved. Â I am less concerned with the quality of replacements as I would probably not order "Chinese caps" even if the shipping was free :-)
>
> That brings the question as to what was the source and manufacture of what you are using. Â Also, I would appreciate it if you could send some pictures.
>
> Archie
>
>
> _____ _____ _____ __
> From: "roberteleazer @..."
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Wednesday, February 20, 2013 7:45 AM
> Subject: [TS-520_820_ 530_830] Re: Solder for recap
>

>
> Â
>
> Archie:
>
> You want Federal Specification QQ-S-571 solder, the kind that Radio Shack sells, among other places. And you want very thin, very small diameter solder, such as the .040 I use; thinner is Okay. I recently did not have any thin solder with me and tried to use some old larger diameter stuff; I had forgotten how much trouble it was to use that.
>
> I am recapping a TS-520 right now, and "rolling my own" capacitor packs rather than buying the kits they sell on ebay. I hope to provide pictures later.
>
> There is really not much solder involved in the installation of TS-520 caps. Solder wick should be adequate; I am not even using that, even though I have some. But dental tools are very useful indeed for desoldering operations. They are stainless steel, so the solder will not stick to them, you can use them to pry it away and to make holes in hot solder. Try asking a dentist for old ones but I have seen them for sale at some surplus stores. Some of those little jewelers' screwdriver will also work for that purpose but not quite as well as dental tools.
>
> Good Luck!
>
> Robert
> WB5WSV
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, "n3kvl" wrote:
> >
> > Hi All,
> >
> > I will eventually recap my 520S. This is going to seem like a dumb question, but I would like to know what solder to use. There are simply too many varieties of the Kester solder for me to make a choice.
> >
> > I have about $35 bucks in my Paypal account and its dedicated for soldering supplies. I figure I can buy a new 1lb spool, but I am wondering what to buy. I think .032 is the right diameter, most flexible for the uses I will have.
> >
> > What's the best place to buy a spool?
> >
> > And, can I do the recap with wick or do I need to buy a desoldering gun? I just bought a HAKKO 201 unit and it rocks :-)
> >
> > Thanks in Advance
> > Archie
> >
>
>
>
>
> [Non-text portions of this message have been removed]

>

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3b
Re: Solder for recap
Wed Feb 20, 2013 12:31 pm (PST) . Posted by:
"pwrapsengineer" pwrapsengineer
Use 0.032" 63/37 rosin core solder (tin lead only). DO NOT use lead free solder. Your rig was made with leaded solder (63/37 most likely) so use that. The lead free solder has a higher temperature melt point and is prone to poor fluxing and cold solder joints. Other than a high volume, high production manufacturing enterprise that is now, by law, required to use lead free there is not reason to use anything but tin/lead solder. It just works better.

60/40 is perfectly adequate if that is what you have, but 63/37 is what is called a eutectic alloy and it melts at a slightly lower temperature than 60/40. Not enough to worry about. For this application use only ersin or rosin core flux that is inside the solder wire. Alpha, Kester, and several others good brands are out there and they are all good to use with the rosin type flux. Do not ever use acid core solder on point wired rigs. It will corrode and destroy your rig in a relatively short time. There are certain acid core and acid flux solders (331 fluxes) specifically made for surface mount type work where the water soluble flux can easily be washed away, but this is not one of those cases--keep it out of your hybrid, period.

There are companies that are currently exempt from the need to use lead free solder--those that are in aerospace and military and some telecom applications. Some of them are being forced into this compliance by the EPA sooner rather than later. All consumer and PC related manufacturing is now lead free. It is a mandate that originated in Europe and its intent is to keep lead out of the landfills and ground water. I am not sure how much of a real problem that is, but it's there and we have to live with it in our commercial stuff now, but as hobbyists we should not worry about this one way or the other. Our impact on lead in the environment is inconsequential. I have been involved with electronics for over 50 years, all of that time with tin lead solder and I have melted, in my career as well as in my hobby activities upwards of 30 pounds of tin lead solder with no issues health wise. Wash your hands, don't eat it but don't worry about it. Unless it is
eaten or consumed in the water you drink for a long period of time, it is a much overblown concern than say cadmium or chromium or mercury.

Buy good quality electrolytic caps, with proper voltage ratings and rated as high in temperature as you can find. This is typically 105C. Over voltage and over temperature will kill these caps very quickly. Buy good name brand parts, avoid Chinese brand name caps, but Japanese brands are excellent in general. Be careful of your source since counterfeit parts are all over the place. I would be very leery of ebay sourced electrolytics. Digikey is a trusted source.

Have a good time working on your rig.

Larry

--- In mailto:TS-520_820_530_830%40yahoogroups.com, "n3kvl" wrote:
>
> Hi All,

>
> I will eventually recap my 520S. This is going to seem like a dumb question, but I would like to know what solder to use. There are simply too many varieties of the Kester solder for me to make a choice.
>
> I have about $35 bucks in my Paypal account and its dedicated for soldering supplies. I figure I can buy a new 1lb spool, but I am wondering what to buy. I think .032 is the right diameter, most flexible for the uses I will have.
>
> What's the best place to buy a spool?
>
> And, can I do the recap with wick or do I need to buy a desoldering gun? I just bought a HAKKO 201 unit and it rocks :-)
>
> Thanks in Advance
> Archie
>

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3c
Re: Solder for recap
Wed Feb 20, 2013 3:35 pm (PST) . Posted by:
"Jody" d_frawg
Go to radio shack for about 8 bucks you can get a spool of 032 60/40 that will last years I have used all through my college classes built an Oscope and a logic probe and wired 50power supplies for class an still reworked all my Rc car esc's and about 30 different battery combos and have barely used half of my spool in the past few years.
HAKKO 888 general work=1.2mm/ SMD fine pencil tip.

>

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4
Connecting a Mixer to the TS-830S
Wed Feb 20, 2013 7:35 pm (PST) . Posted by:
"Kevin, Natalia, Stacey and Rochelle" sparcnz
Hi Guys,

I have been watching some episodes of Ham Nation.

In one of them there is a section on fitting a mixer to a modern rig.

I want to however fit a mixer to my TS-830.

From my understanding I do not put it in the front plug as this has a pre-amp in there.

So what is the best way to connect the mixer into the rig?

Regards

Kevin, ZL1KFM.

[Non-text portions of this message have been removed]

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>
Create New Topic
>
13 New Members
>
We are making changes based on your feedback, Thank you !
Submit Feedback
>
The Yahoo! Groups Product Blog
Check it out!
>

CHANGE SETTINGS
>
TERMS OF USE
>
UNSUBSCRIBE
>

[Non-text portions of this message have been removed]

41083. Antenna question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-21 18:31:47 UTC
From: Ld Rockne
Topic: 41083 Message: 41083

You don't even have to trim your antenna, thats just unnecessary work.
I simply used the formula in the ARRL Handbook, calculated the length of a 20 meter dipole, fed it with coax and raised it to 25ft. I was going along along working all kinds of stations.
A buddy came by with his latest purchase, a Super Whizbang $500 Antenna Analuzer with Difital Readout and USB to computer interface. (SWAADRUSBCI).
When he hooked his SWAADRUSBCI to my antenna he was quite surprised how flat it was, using just a formula, and no trimming.
Tnx Larry WA7HDZ

[Non-text portions of this message have been removed]

41084. Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-21 21:19:40 UTC
From: Cliff White
Topic: 41060 Message: 41084

WARNING!!!! This is a well known scammer!!! Stay well clear of this!

Respectfully,
Cliff White, W5CNW
w5cnw@... <mailto:w5cnw@...>

On 02/20/2013 10:27 AM, n3dg wrote:
> Kenwood PC-1 Phone Patch provides a connection between the transceiver and a telephone line and is designed to provide high isolation between receiver input and transmitter output. Impedance levels (nominal): Line 600 ohms, Receiver Input 8 ohms, Speaker Output 8 ohms and Microphone 50K ohms. Microphone input and output is 4 pin and measures 6" x 2.25" x 5.75" in clean condition as a Vintage Kenwood Collector's Item or for daily usage, Only $30.
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>

[Non-text portions of this message have been removed]

41085. Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-21 22:33:18 UTC
From: Joseph Stiles
Topic: 41060 Message: 41085

DOUBLE WARNING!!!

N3DG IS A SCAMMER AND A RIP OFF! He ripped me off a few months ago with a radio for sale and at the same time was selling the radio to others.
Many of you participated in the previous threads, and already know this "person." Seems to only want forms of payment that can not or are difficult to get back....ie: cashiers check, money order...etc...will not deal with paypal...as they are on to him too! You commit to buy...send check/money...bugs you numerous times asking if youhave sent the money...as he "has many interested people." Gets money...the items suddenly has "issues." Go to the home page of this board and look as messages numbered: 39735, 39737, and 39748 and you can go to QRZ.com and look at the "ham to ham reference" section too. It cost me $75 to get screwed by this person...I am surprised he has the nerve to show back up!!!
Nice catch Cliff!

STAY CLEAR OF N3DG! I KNOW!!!

73 Joe
WB7UQU

From: Cliff White <cn.white@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, February 21, 2013 1:19 PM
Subject: Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

WARNING!!!! This is a well known scammer!!! Stay well clear of this!

Respectfully,
Cliff White, W5CNW
w5cnw@... w5cnw@...>

On 02/20/2013 10:27 AM, n3dg wrote:
> Kenwood PC-1 Phone Patch provides a connection between the transceiver and a telephone line and is designed to provide high isolation between receiver input and transmitter output. Impedance levels (nominal): Line 600 ohms, Receiver Input 8 ohms, Speaker Output 8 ohms and Microphone 50K ohms. Microphone input and output is 4 pin and measures 6" x 2.25" x 5.75" in clean condition as a Vintage Kenwood Collector's Item or for daily usage, Only $30.
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> Yahoo! Groups Links

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[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41086. Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-21 22:43:54 UTC
From: Joseph Stiles
Topic: 41060 Message: 41086

Group,

   For more interesting reading: "google" his call sign   N3DG...got kicked off ebay too for being a rip off

73 Joe
WB7UQU

From: Joseph Stiles <stilesjoseph@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Thursday, February 21, 2013 2:33 PM
Subject: Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

DOUBLE WARNING!!!

   N3DG IS A SCAMMER AND A RIP OFF! He ripped me off a few months ago with a radio for sale and at the same time was selling the radio to others.
   Many of you participated in the previous threads, and already know this "person." Seems to only want forms of payment that can not or are difficult to get back....ie: cashiers check, money order...etc...will not deal with paypal...as they are on to him too! You commit to buy...send check/money...bugs you numerous times asking if youhave sent the money...as he "has many interested people." Gets money...the items suddenly has "issues." Go to the home page of this board and look as messages numbered: 39735, 39737, and 39748 and you can go to QRZ.com and look at the "ham to ham reference" section too. It cost me $75 to get screwed by this person...I am surprised he has the nerve to show back up!!!
   Nice catch Cliff!

              STAY CLEAR OF N3DG! I KNOW!!!

73 Joe
WB7UQU

From: Cliff White cn.white@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, February 21, 2013 1:19 PM
Subject: Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

WARNING!!!! This is a well known scammer!!! Stay well clear of this!

Respectfully,
Cliff White, W5CNW
w5cnw@... w5cnw@...>

On 02/20/2013 10:27 AM, n3dg wrote:
> Kenwood PC-1 Phone Patch provides a connection between the transceiver and a telephone line and is designed to provide high isolation between receiver input and transmitter output. Impedance levels (nominal): Line 600 ohms, Receiver Input 8 ohms, Speaker Output 8 ohms and Microphone 50K ohms. Microphone input and output is 4 pin and measures 6" x 2.25" x 5.75" in clean condition as a Vintage Kenwood Collector's Item or for daily usage, Only $30.
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> Yahoo! Groups Links
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41087. Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-21 22:49:27 UTC
From: Don
Topic: 41060 Message: 41087

Hi
Is this the same person that runs
http://www.eqsl.cc/QSLCard/index.cfm

73
Don/Ve2ud

On 21/02/2013 5:43 PM, Joseph Stiles wrote:
>
> Group,
>
> For more interesting reading: "google" his call sign N3DG...got
> kicked off ebay too for being a rip off
>
>
> 73 Joe
> WB7UQU
>
> _____
> From: Joseph Stiles stilesjoseph@...
> <mailto:stilesjoseph%40yahoo.com>>
> To: "TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>"
> TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>>
> Sent: Thursday, February 21, 2013 2:33 PM
> Subject: Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30
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>
>
> DOUBLE WARNING!!!
>
> N3DG IS A SCAMMER AND A RIP OFF! He ripped me off a few months ago
> with a radio for sale and at the same time was selling the radio to
> others.
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> this "person." Seems to only want forms of payment that can not or are
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> buy...send check/money...bugs you numerous times asking if youhave
> sent the money...as he "has many interested people." Gets money...the
> items suddenly has "issues." Go to the home page of this board and
> look as messages
> numbered: 39735, 39737, and 39748 and you can go to QRZ.com and look

> at the "ham to ham reference" section too. It cost me $75 to get
> screwed by this person...I am surprised he has the nerve to show back
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> Nice catch Cliff!
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> STAY CLEAR OF N3DG! I KNOW!!!
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> 73 Joe
> WB7UQU
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> From: Cliff White cn.white@sunbelt-plb.com
> <mailto:cn.white%40sunbelt-plb.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Thursday, February 21, 2013 1:19 PM
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> w5cnw@... <mailto:w5cnw%40arrl.net> w5cnw@...
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41088. Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-21 23:07:37 UTC
From: Joseph Stiles
Topic: 41060 Message: 41088

Don,

  very possible...but I can not positively say it is the same. N3DG does have something to do with "eqsl"

73 Joe
WB7UQU

From: Don <ve2ud@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, February 21, 2013 2:49 PM
Subject: Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

Hi
Is this the same person that runs
http://www.eqsl.cc/QSLCard/index.cfm

73
Don/Ve2ud

On 21/02/2013 5:43 PM, Joseph Stiles wrote:
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> From: Joseph Stiles stilesjoseph@yahoo.com
> >
> To: "TS-520_820_530_830@yahoogroups.com
> "
> TS-520_820_530_830@yahoogroups.com
> >
> Sent: Thursday, February 21, 2013 2:33 PM
> Subject: Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30
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> 73 Joe
> WB7UQU
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> _____
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> >
> To: TS-520_820_530_830@yahoogroups.com
>
> Sent: Thursday, February 21, 2013 1:19 PM
> Subject: Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30
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41089. Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-21 23:18:52 UTC
From: KB1TCD
Topic: 41060 Message: 41089

Thanks but unfortunately you are a day late:-(

73

Jose KB1TCD

On 2/21/2013 4:19 PM, Cliff White wrote:
> WARNING!!!! This is a well known scammer!!! Stay well clear of this!
>
>
> Respectfully,
> Cliff White, W5CNW
> w5cnw@... <mailto:w5cnw@...>

41090. Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-21 23:53:53 UTC
From: Don
Topic: 41060 Message: 41090

Hi Joe
He sent me a email the other day,that i had QSL cards waiting for me on
that site
When i did sign up there was contacts there that i never worked
before,and of course there was a Palpal upgrade if i wanted it
Never worked RITY ,but there was a card showing that i had done
that,plus a few another bands i did not work.
Trying to cancel it now.

73
Don/Ve2ud

On 21/02/2013 6:07 PM, Joseph Stiles wrote:
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> Don,
>
> very possible...but I can not positively say it is the same. N3DG
> does have something to do with "eqsl"
>
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> 73 Joe
> WB7UQU
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> From: Don ve2ud@... <mailto:ve2ud%40travel-net.com>>
> To: TS-520_820_530_830@yahoogroups.com
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> Sent: Thursday, February 21, 2013 2:49 PM
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> http://www.eqsl.cc/QSLCard/index.cfm
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> 73
> Don/Ve2ud
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> > up!!!
> > Nice catch Cliff!
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> >
> > 73 Joe
> > WB7UQU
> >
> > _____
> > From: Cliff White cn.white@...

> <mailto:cn.white%40sunbelt-plb.com>
> > >
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
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41091. Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-21 22:40:34 UTC
From: John Donnelly
Topic: 41060 Message: 41091

So I have a silly question. If everyone knows that he's a scammer, why hasn't he been kicked out of the user
group by the administrator?

Jack KV4JX

From: Joseph Stiles <stilesjoseph@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Thursday, February 21, 2013 5:33 PM
Subject: Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

DOUBLE WARNING!!!

N3DG IS A SCAMMER AND A RIP OFF! He ripped me off a few months ago with a radio for sale and at the same time was selling the radio to others.
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Nice catch Cliff!

STAY CLEAR OF N3DG! I KNOW!!!

73 Joe
WB7UQU

From: Cliff White cn.white@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, February 21, 2013 1:19 PM
Subject: Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

WARNING!!!! This is a well known scammer!!! Stay well clear of this!

Respectfully,
Cliff White, W5CNW
w5cnw@... w5cnw@...>

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> Yahoo! Groups Links
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41092. RE: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-21 23:58:19 UTC
From: Daedalus
Topic: 41060 Message: 41092

Just like Don, I got the email at the same time for non-existing contacts. Gee, I wonder if I should sign up for the upgraded account? J

Jack

WA2OLZ

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Don
Sent: Thursday, February 21, 2013 6:54 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

Hi Joe
He sent me a email the other day,that i had QSL cards waiting for me on
that site
When i did sign up there was contacts there that i never worked
before,and of course there was a Palpal upgrade if i wanted it
Never worked RITY ,but there was a card showing that i had done
that,plus a few another bands i did not work.
Trying to cancel it now.

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Don/Ve2ud

On 21/02/2013 6:07 PM, Joseph Stiles wrote:
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> very possible...but I can not positively say it is the same. N3DG
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> 73 Joe
> WB7UQU
>
> _____
> From: Don ve2ud@... <mailto:ve2ud%40travel-net.com> >
> To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>
>
> Sent: Thursday, February 21, 2013 2:49 PM
> Subject: Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30
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> Hi
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> 73
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> > _____
> > From: Joseph Stiles stilesjoseph@... <mailto:stilesjoseph%40yahoo.com>
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> > To: "TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>
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41093. RE: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-22 02:07:19 UTC
From: Rob S.
Topic: 41060 Message: 41093

A bit hard for that to happen, he just creates a new email address and rejoins the group… 8-(

Rob VK3BRS

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of John Donnelly
Sent: Friday, 22 February 2013 9:41 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

So I have a silly question. If everyone knows that he's a scammer, why hasn't he been kicked out of the user
group by the administrator?

Jack KV4JX

From: Joseph Stiles stilesjoseph@... <mailto:stilesjoseph%40yahoo.com> >
To: "TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> " TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> >
Sent: Thursday, February 21, 2013 5:33 PM
Subject: Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

DOUBLE WARNING!!!

N3DG IS A SCAMMER AND A RIP OFF! He ripped me off a few months ago with a radio for sale and at the same time was selling the radio to others.
Many of you participated in the previous threads, and already know this "person." Seems to only want forms of payment that can not or are difficult to get back....ie: cashiers check, money order...etc...will not deal with paypal...as they are on to him too! You commit to buy...send check/money...bugs you numerous times asking if youhave
sent the money...as he "has many interested people." Gets money...the items suddenly has "issues." Go to the home page of this board and look as messages
numbered: 39735, 39737, and 39748 and you can go to QRZ.com and look at the "ham to ham reference" section too. It cost me $75 to get screwed by this person...I am surprised he has the nerve to show back up!!!
Nice catch Cliff!

STAY CLEAR OF N3DG! I KNOW!!!

73 Joe
WB7UQU

From: Cliff White cn.white@... <mailto:cn.white%40sunbelt-plb.com> >

To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Thursday, February 21, 2013 1:19 PM
Subject: Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

WARNING!!!! This is a well known scammer!!! Stay well clear of this!

Respectfully,
Cliff White, W5CNW
w5cnw@... <mailto:w5cnw%40arrl.net> w5cnw@... <mailto:w5cnw%40arrl.net> >

On 02/20/2013 10:27 AM, n3dg wrote:
> Kenwood PC-1 Phone Patch provides a connection between the transceiver and a telephone line and is designed to provide high isolation between receiver input and transmitter output. Impedance levels (nominal): Line 600 ohms, Receiver Input 8 ohms, Speaker Output 8 ohms and Microphone 50K ohms. Microphone input and output is 4 pin and measures 6" x 2.25" x 5.75" in clean condition as a Vintage Kenwood Collector's Item or for daily usage, Only $30.
>
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> Yahoo! Groups Links
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[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41094. FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-22 02:13:52 UTC
From: D G
Topic: 41060 Message: 41094

Slander and Libel.

Joe WB7UQU never bought a radio from me, his money was immediately returned after he begged me to buy a radio, and I was smart enough not to want his business.

Two sides to every story, especially with personal matters.

The user group is not a forum for personal, private business, Old Lady Gossip, Slander or Libel.

73 and God Bless.

To: TS-520_820_530_830@yahoogroups.com
From: roberts@...
Date: Fri, 22 Feb 2013 13:07:19 +1100
Subject: RE: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

A bit hard for that to happen, he just creates a new email address and rejoins the group? 8-(

Rob VK3BRS

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of John Donnelly
Sent: Friday, 22 February 2013 9:41 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

So I have a silly question. If everyone knows that he's a scammer, why hasn't he been kicked out of the user
group by the administrator?

Jack KV4JX

From: Joseph Stiles stilesjoseph@... >
To: "TS-520_820_530_830@yahoogroups.com " TS-520_820_530_830@yahoogroups.com >
Sent: Thursday, February 21, 2013 5:33 PM
Subject: Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

DOUBLE WARNING!!!

N3DG IS A SCAMMER AND A RIP OFF! He ripped me off a few months ago with a radio for sale and at the same time was selling the radio to others.
Many of you participated in the previous threads, and already know this "person." Seems to only want forms of payment that can not or are difficult to get back....ie: cashiers check, money order...etc...will not deal with paypal...as they are on to him too! You commit to buy...send check/money...bugs you numerous times asking if youhave

sent the money...as he "has many interested people." Gets money...the items suddenly has "issues." Go to the home page of this board and look as messages
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Nice catch Cliff!

STAY CLEAR OF N3DG! I KNOW!!!

73 Joe
WB7UQU

From: Cliff White cn.white@... >
To: TS-520_820_530_830@...m
Sent: Thursday, February 21, 2013 1:19 PM
Subject: Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

WARNING!!!! This is a well known scammer!!! Stay well clear of this!

Respectfully,
Cliff White, W5CNW
w5cnw@... w5cnw@... >

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> Kenwood PC-1 Phone Patch provides a connection between the transceiver and a telephone line and is designed to provide high isolation between receiver input and transmitter output. Impedance levels (nominal): Line 600 ohms, Receiver Input 8 ohms, Speaker Output 8 ohms and Microphone 50K ohms. Microphone input and output is 4 pin and measures 6" x 2.25" x 5.75" in clean condition as a Vintage Kenwood Collector's Item or for daily usage, Only $30.
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> Yahoo! Groups Links
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[Non-text portions of this message have been removed]

41095. Re: FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-22 02:25:06 UTC
From: n6wk_skcc3
Topic: 41060 Message: 41095

Guys, Take it OFF-LIST Please!

Thank You,

N6WK
List Co-Owner

--- In TS-520_820_530_830@yahoogroups.com, D G <radiodg@...> wrote:
>
>
> Slander and Libel.
>
> Joe WB7UQU never bought a radio from me, his money was immediately returned after he begged me to buy a radio, and I was smart enough not to want his business.
>
> Two sides to every story, especially with personal matters.
>
> The user group is not a forum for personal, private business, Old Lady Gossip, Slander or Libel.
>
> 73 and God Bless.
>
>
>
>
> To: TS-520_820_530_830@yahoogroups.com
> From: roberts@...
> Date: Fri, 22 Feb 2013 13:07:19 +1100
> Subject: RE: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30
>
>
>
>
>
>
>
> A bit hard for that to happen, he just creates a new email address and rejoins the group 8-(
>
> Rob VK3BRS
>
> From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of John Donnelly
> Sent: Friday, 22 February 2013 9:41 AM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30
>
> So I have a silly question. If everyone knows that he's a scammer, why hasn't he been kicked out of the user

> group by the administrator?
>
> Jack KV4JX
>
> _____
> From: Joseph Stiles stilesjoseph@... >
> To: "TS-520_820_530_830@yahoogroups.com " TS-520_820_530_830@yahoogroups.com >
> Sent: Thursday, February 21, 2013 5:33 PM
> Subject: Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30
>
> DOUBLE WARNING!!!
>
> N3DG IS A SCAMMER AND A RIP OFF! He ripped me off a few months ago with a radio for sale and at the same time was selling the radio to others.
> Many of you participated in the previous threads, and already know this "person." Seems to only want forms of payment that can not or are difficult to get back....ie: cashiers check, money order...etc...will not deal with paypal...as they are on to him too! You commit to buy...send check/money...bugs you numerous times asking if youhave
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> numbered: 39735, 39737, and 39748 and you can go to QRZ.com and look at the "ham to ham reference" section too. It cost me $75 to get screwed by this person...I am surprised he has the nerve to show back up!!!
> Nice catch Cliff!
>
> STAY CLEAR OF N3DG! I KNOW!!!
>
> 73 Joe
> WB7UQU
>
> _____
> From: Cliff White cn.white@... >
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, February 21, 2013 1:19 PM
> Subject: Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30
>
> WARNING!!!! This is a well known scammer!!! Stay well clear of this!
>
> Respectfully,
> Cliff White, W5CNW
> w5cnw@... w5cnw@... >
>
> On 02/20/2013 10:27 AM, n3dg wrote:
> > Kenwood PC-1 Phone Patch provides a connection between the transceiver and a telephone line and is designed to provide high isolation between receiver input and transmitter output. Impedance levels (nominal): Line 600 ohms, Receiver Input 8 ohms, Speaker Output 8 ohms and Microphone 50K ohms. Microphone input and output is 4 pin and measures 6" x 2.25" x 5.75" in clean condition as a Vintage Kenwood Collector's Item or for daily usage, Only $30.
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41096. Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-22 04:15:38 UTC
From: Cliff White
Topic: 41060 Message: 41096

Ooouch. Sorry.

On 02/21/2013 05:18 PM, KB1TCD wrote:
> Thanks but unfortunately you are a day late:-(
>
> 73
>
> Jose KB1TCD
>
>
> On 2/21/2013 4:19 PM, Cliff White wrote:
>> WARNING!!!! This is a well known scammer!!! Stay well clear of this!
>>
>>
>> Respectfully,
>> Cliff White, W5CNW
>> w5cnw@... <mailto:w5cnw@...>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
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>

[Non-text portions of this message have been removed]

41097. Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-22 04:23:09 UTC
From: Cliff White
Topic: 41060 Message: 41097

Look what I just got. Exactly 4 minutes after I posted the last message.
Note who it's from too.

-------- Original Message --------
Subject: Electronic QSL cards (eQSLs) are waiting for you
Date: Fri, 22 Feb 2013 04:19:17 +0000 (GMT)
From: mail_forwarding@...
Reply-To: radiodg@...
To: w5cnw@...

Hello Cliff!

You have 6 Electronic QSLs waiting for W5CNW at eQSL.cc

You can pick them up by registering at no cost at www.eQSL.cc

73,
Dennis John Gazak, N3DG

[Non-text portions of this message have been removed]

41098. Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-22 04:44:13 UTC
From: Joseph Stiles
Topic: 41060 Message: 41098

Cliff,

  Gordon has "asked" to take anything to do with this "topic" off list. I can be reached directly via my yahoo email address.

73 Joe
WB7UQU

From: Cliff White <cn.white@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, February 21, 2013 8:23 PM
Subject: Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

Look what I just got. Exactly 4 minutes after I posted the last message.
Note who it's from too.

-------- Original Message --------
Subject: Electronic QSL cards (eQSLs) are waiting for you
Date: Fri, 22 Feb 2013 04:19:17 +0000 (GMT)
From: mail_forwarding@...
Reply-To: radiodg@...
To: w5cnw@...

Hello Cliff!

You have 6 Electronic QSLs waiting for W5CNW at eQSL.cc

You can pick them up by registering at no cost at www.eQSL.cc

73,
Dennis John Gazak, N3DG

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[Non-text portions of this message have been removed]

41099. Re: FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-22 05:10:51 UTC
From: n6wk_skcc3
Topic: 41060 Message: 41099

N3DG has been permanently BANNED from the group. His personal Emails to me and the information I researched on-line led to this decision. Do NOT do business with N3DG.

73,
N6WK
Group Co-Owner

--- In TS-520_820_530_830@yahoogroups.com, Cliff White <cn.white@...> wrote:
>
> Look what I just got. Exactly 4 minutes after I posted the last message.
> Note who it's from too.
>
>
> -------- Original Message --------
> Subject: Electronic QSL cards (eQSLs) are waiting for you
> Date: Fri, 22 Feb 2013 04:19:17 +0000 (GMT)
> From: mail_forwarding@...
> Reply-To: radiodg@...
> To: w5cnw@...
>
>
>
> Hello Cliff!
>
> You have 6 Electronic QSLs waiting for W5CNW at eQSL.cc
>
> You can pick them up by registering at no cost at www.eQSL.cc
>
> 73,
> Dennis John Gazak, N3DG
>
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>
> [Non-text portions of this message have been removed]
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41100. N3DG

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-22 05:30:22 UTC
From: n6wk_skcc3
Topic: 41060 Message: 41100

I have contacted EQSL to inform them of the actions of N3DG. I will await the reply from them. If in fact N3DG is the owner of EQSL, it will be a sad day for Amateur radio, but I will post the reply!
I will not stand for someone to rip off fellow hams !

73 all,
Gordon
N6WK

41101. RE: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-22 06:09:07 UTC
From: Rob S.
Topic: 41060 Message: 41101

But spamming is perfectly acceptable ????

##

-----Original Message-----
From: mail_forwarding@... [mailto:mail_forwarding@...]
Sent: Friday, 22 February 2013 1:06 PM
To: roberts@...
Subject: Electronic QSL cards (eQSLs) are waiting for you

Hello Rob!

You have 6 Electronic QSLs waiting for VK3BRS at eQSL.cc

You can pick them up by registering at no cost at www.eQSL.cc

73,
Dennis John Gazak, N3DG

##

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of D G
Sent: Friday, 22 February 2013 1:14 PM
To: ts-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

Slander and Libel.

Joe WB7UQU never bought a radio from me, his money was immediately returned
after he begged me to buy a radio, and I was smart enough not to want his
business.

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Gossip, Slander or Libel.

73 and God Bless.

To: TS-520_820_530_830@yahoogroups.com
From: roberts@...
Date: Fri, 22 Feb 2013 13:07:19 +1100
Subject: RE: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

A bit hard for that to happen, he just creates a new email address and rejoins the group. 8-(

Rob VK3BRS

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of John Donnelly
Sent: Friday, 22 February 2013 9:41 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

So I have a silly question. If everyone knows that he's a scammer, why hasn't he been kicked out of the user group by the administrator?

Jack KV4JX

From: Joseph Stiles stilesjoseph@... >
To: "TS-520_820_530_830@yahoogroups.com " TS-520_820_530_830@yahoogroups.com >
Sent: Thursday, February 21, 2013 5:33 PM
Subject: Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

DOUBLE WARNING!!!

N3DG IS A SCAMMER AND A RIP OFF! He ripped me off a few months ago with a radio for sale and at the same time was selling the radio to others. Many of you participated in the previous threads, and already know this "person." Seems to only want forms of payment that can not or are difficult to get back....ie: cashiers check, money order...etc...will not deal with paypal...as they are on to him too! You commit to buy...send check/money...bugs you numerous times asking if youhave sent the money...as he "has many interested people." Gets money...the items suddenly has "issues." Go to the home page of this board and look as messages numbered: 39735, 39737, and 39748 and you can go to QRZ.com and look at the "ham to ham reference" section too. It cost me $75 to get screwed by this person...I am surprised he has the nerve to show back up!!!
Nice catch Cliff!

STAY CLEAR OF N3DG! I KNOW!!!

73 Joe
WB7UQU

From: Cliff White cn.white@... >
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, February 21, 2013 1:19 PM
Subject: Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

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Respectfully,
Cliff White, W5CNW

w5cnw@... w5cnw@... >

On 02/20/2013 10:27 AM, n3dg wrote:
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Receiver Input 8 ohms, Speaker Output 8 ohms and Microphone 50K ohms.
Microphone input and output is 4 pin and measures 6" x 2.25" x 5.75" in
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> Yahoo! Groups Links
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Yahoo! Groups Links

41102. RE: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-22 06:11:23 UTC
From: Rob S.
Topic: 41060 Message: 41102

Sorry Group, I read the rest of my email....

Rob.

-----Original Message-----
From: Rob S. [mailto:roberts@...]
Sent: Friday, 22 February 2013 5:09 PM
To: 'TS-520_820_530_830@yahoogroups.com'
Subject: RE: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

But spamming is perfectly acceptable ????

##

-----Original Message-----
From: mail_forwarding@... [mailto:mail_forwarding@...]
Sent: Friday, 22 February 2013 1:06 PM
To: roberts@...
Subject: Electronic QSL cards (eQSLs) are waiting for you

Hello Rob!

You have 6 Electronic QSLs waiting for VK3BRS at eQSL.cc

You can pick them up by registering at no cost at www.eQSL.cc

73,
Dennis John Gazak, N3DG

##

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of D G
Sent: Friday, 22 February 2013 1:14 PM
To: ts-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

Slander and Libel.

Joe WB7UQU never bought a radio from me, his money was immediately returned
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73 and God Bless.

To: TS-520_820_530_830@yahoogroups.com
From: roberts@...
Date: Fri, 22 Feb 2013 13:07:19 +1100
Subject: RE: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

A bit hard for that to happen, he just creates a new email address and rejoins the group. 8-(

Rob VK3BRS

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of John Donnelly
Sent: Friday, 22 February 2013 9:41 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

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From: Joseph Stiles stilesjoseph@... >
To: "TS-520_820_530_830@yahoogroups.com " TS-520_820_530_830@yahoogroups.com >
Sent: Thursday, February 21, 2013 5:33 PM
Subject: Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

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Nice catch Cliff!

STAY CLEAR OF N3DG! I KNOW!!!

73 Joe
WB7UQU

_____
From: Cliff White cn.white@... >
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, February 21, 2013 1:19 PM
Subject: Re: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

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Respectfully,
Cliff White, W5CNW
w5cnw@... w5cnw@... >

On 02/20/2013 10:27 AM, n3dg wrote:
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Receiver Input 8 ohms, Speaker Output 8 ohms and Microphone 50K ohms.
Microphone input and output is 4 pin and measures 6" x 2.25" x 5.75" in
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Only $30.
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> Yahoo! Groups Links
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Yahoo! Groups Links

41103. Don Todd

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-22 09:29:41 UTC
From: Don Todd
Topic: 41103 Message: 41103

http://www.light-ray.eu/llmqimw/5nad2b34vk5pi3vd?xuzgsqv5jdxmbsey

Don Todd

[Non-text portions of this message have been removed]

41104. Re: L41 checks.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-22 10:45:44 UTC
From: jon_g4fut
Topic: 41069 Message: 41104

I'll check those transistors as I am taking the RF board out of the 530s.
Jon G4FUT

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
>
> Maybe check Q1 (3sk73gr) on the RF board.
>
>
> > To: TS-520_820_530_830@yahoogroups.com
> > From: n6wk@...
> > Date: Wed, 20 Feb 2013 14:15:26 -0800
> > Subject: Re: [TS-520_820_530_830] Re: L41 checks.
> >
> > Hi Jon,
> > It certainly does appear that it is to me from what you posted.
> > What is the problem with the radio? Hard of hearing?
> >
> > 73,
> > Gordon
> >
> >
> > On 2/20/2013 2:11 PM, jon_g4fut wrote:
> > >
> > >
> > > Hi Gordon many thanks for the reply. Do that mean that my L41 is OK
> > > when only the outside lugs connect?
> > > Reagrds
> > > Jon G4FUT
> > > --- In TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "n6wk_skcc3" wrote:
> > > >
> > > > The center of the three doesn't go to anything!
> > > >
> > > > I have rewound a few of the L41 Coils.
> > > >
> > > > 73,
> > > > Gordon
> > > > N6WK
> > > >
> > > >
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "jon_g4fut" wrote:

> > > > >
> > > > > I have searched for details of the L41 but have not found any
> > > responses which answer my query. I have removed the coil from my 530se
> > > which suffered an RF hit when its RX was switched on while I
> > > transmitted on another radio. I understand that L41 may have shorted.
> > > So my question is this. There are 3 lugs on the bottom of the coil and
> > > 2 on the top. One lug on the bottom left shorts with the one on the
> > > left top (I wish I could show a photo!). The right lug on the bottom
> > > shorts with the right lug on the top. Following so far ????.....There
> > > is the middle lug on the bottom which doesn't short with anything.
> > > Does this coil now require re-winding? Ken K4EAA has very kindly
> > > supplied the required wire should it need it. I sincerely hope that
> > > Ken's health improves.
> > > > > >
> > > > >
> > > >
> > > >
> > >
> > >
> > >
> > > ------------------------------------
> > >
> > > Yahoo! Groups Links
> > >
> > >
> > >
> >
> >
> > [Non-text portions of this message have been removed]
> >

41105. RE: [TS-520_820_530_830] N3DG

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-22 14:02:22 UTC
From: Bill Kuhn
Topic: 41060 Message: 41105

According to QRZ, his bio indicates he is the smartest multimillionaire cyberwhiz on earth. I gather that he is next in line as Pope.

I guess small-time scamming is just his night job.

If he does actually have anything to do with eQsl (his bio says he is on the 'board'), I'll actively campaign to get the amateur community to cease using it.

73 de NO0OO

Bill Kuhn

Sent from my Windows 8 Phone

-----Original Message-----
From: "n6wk_skcc3" <n6wk@...>
Sent: ☐2/☐21/☐2013 11:30 PM
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Subject: [TS-520_820_530_830] N3DG

I have contacted EQSL to inform them of the actions of N3DG. I will await the reply from them. If in fact N3DG is the owner of EQSL, it will be a sad day for Amateur radio, but I will post the reply!
I will not stand for someone to rip off fellow hams !

73 all,
Gordon
N6WK

[Non-text portions of this message have been removed]

41106. Re: [TS-520_820_530_830] N3DG

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-22 14:05:35 UTC
From: Don
Topic: 41060 Message: 41106

Gordon
I know posts are to be kept to only about the Kenwood hybrids,but if
those posts were not made i would have never known about N3DG
I don't mind any posts that make our fellow hams aware of any radio
ripoffs.
Is there a yahoo group on here just for ham ripoffs
Very sad when a ham rip's off another ham,but there will always be some
bad apples,just like bad Operators who disrespect the hobby.

Don/Ve2ud

On 22/02/2013 12:30 AM, n6wk_skcc3 wrote:
>
> I have contacted EQSL to inform them of the actions of N3DG. I will
> await the reply from them. If in fact N3DG is the owner of EQSL, it
> will be a sad day for Amateur radio, but I will post the reply!
> I will not stand for someone to rip off fellow hams !
>
> 73 all,
> Gordon
> N6WK
>
>

[Non-text portions of this message have been removed]

41107. Re: [TS-520_820_530_830] N3DG

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-22 15:32:48 UTC
From: Mark Gilger
Topic: 41060 Message: 41107

If he still is on eBay, what is his user
name? Everyone should put him in the "Block
Bidder/Buyer List" to prevent him from bidding on
our items. But we need his ebay ID to do that.

Thanks,
Mark

At 09:05 AM 2/22/2013, you wrote:
>
>
>Gordon
>I know posts are to be kept to only about the Kenwood hybrids,but if
>those posts were not made i would have never known about N3DG
>I don't mind any posts that make our fellow hams aware of any radio
>ripoffs.
>Is there a yahoo group on here just for ham ripoffs
>Very sad when a ham rip's off another ham,but there will always be some
>bad apples,just like bad Operators who disrespect the hobby.
>
>Don/Ve2ud
>
>On 22/02/2013 12:30 AM, n6wk_skcc3 wrote:
> >
> > I have contacted EQSL to inform them of the actions of N3DG. I will
> > await the reply from them. If in fact N3DG is the owner of EQSL, it
> > will be a sad day for Amateur radio, but I will post the reply!
> > I will not stand for someone to rip off fellow hams !
> >
> > 73 all,
> > Gordon
> > N6WK
> >
> >
>
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>
>

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41108. Re: [TS-520_820_530_830] N3DG

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-22 15:51:07 UTC
From: Alvin Chipmunk
Topic: 41060 Message: 41108

Hello All,

This N3DG thing needs it own forum or someone needs to heat up a bucket of tar and tear a pillow. Its wrecking my inbox.

Thanks
Archie

From: Mark Gilger <mgilger@brightdsl.net>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, February 22, 2013 10:32 AM
Subject: Re: [TS-520_820_530_830] N3DG

If he still is on eBay, what is his user
name? Everyone should put him in the "Block
Bidder/Buyer List" to prevent him from bidding on
our items. But we need his ebay ID to do that.

Thanks,
Mark

At 09:05 AM 2/22/2013, you wrote:
>
>
>Gordon
>I know posts are to be kept to only about the Kenwood hybrids,but if
>those posts were not made i would have never known about N3DG
>I don't mind any posts that make our fellow hams aware of any radio
>ripoffs.
>Is there a yahoo group on here just for ham ripoffs
>Very sad when a ham rip's off another ham,but there will always be some
>bad apples,just like bad Operators who disrespect the hobby.
>
>Don/Ve2ud
>
>On 22/02/2013 12:30 AM, n6wk_skcc3 wrote:
> >
> > I have contacted EQSL to inform them of the actions of N3DG. I will
> > await the reply from them. If in fact N3DG is the owner of EQSL, it
> > will be a sad day for Amateur radio, but I will post the reply!
> > I will not stand for someone to rip off fellow hams !
> >
> > 73 all,
> > Gordon
> > N6WK

> >
> >
>
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>
>

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[Non-text portions of this message have been removed]

41109. SM220 Jumper

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-22 16:31:21 UTC
From: Rick
Topic: 41109 Message: 41109

To use the pan adaptor on my TS-520 I have to do a little internal modification on the transceiver. It calls for RG174/u (75 ohm) coax to run from the IF to the eight pin accessory plug on the back of the TS-520. Then I need to make a cable from the accessory plug terminating with a RCA plug. It doesn't mention what kind of coax to use for this one. I assume the RG174/u would be used but I'd like to verify that before I go any further. I got my BS-5 used so none of the cabling or components for the modifications came with it. Will someone who has been through this let me know which coax and an optimum length to use for this wire going from the TS-520 to the SM-220/BS-5?

Thanks,
Rick / K5IAR

41110. RE: [TS-520_820_530_830] FOR SALE: KENWOOD PC-1 PHONE PATCH @ $30

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-22 10:00:30 UTC
From: Ed Crain
Topic: 41060 Message: 41110

Do not click on that link!
Malicious code!
ed vk3kuc

41111. Re: [TS-520_820_530_830] N3DG

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-22 20:40:07 UTC
From: 3-Cpo
Topic: 41060 Message: 41111

Watch out for a HAM on eBay who calls himself "Norbyx". He likes to quote a low price for shipping, and then after the auction ends he shakes the buyer down for more money, or if he listed the rig with something like an external VFO and you refused to pay the extra shipping, he says "ok" but then he doesn't ship the accessory. I went against him on eBay and was declared in the right, but by that time the rig had been shipped all the way from a contest shack in Costa Rico (it was supposed to ship out of Florida). eBay's solution was for me to ship it all the way back to Costa Rico. I ended up keeping the radio and giving up on the VFO, a move I regret now.

John

-----Original Message-----
From: Don <ve2ud@...>
To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com>
Sent: Fri, Feb 22, 2013 9:05 am
Subject: Re: [TS-520_820_530_830] N3DG

Gordon
I know posts are to be kept to only about the Kenwood hybrids,but if
those posts were not made i would have never known about N3DG
I don't mind any posts that make our fellow hams aware of any radio
ripoffs.
Is there a yahoo group on here just for ham ripoffs
Very sad when a ham rip's off another ham,but there will always be some
bad apples,just like bad Operators who disrespect the hobby.

Don/Ve2ud

On 22/02/2013 12:30 AM, n6wk_skcc3 wrote:
>
> I have contacted EQSL to inform them of the actions of N3DG. I will
> await the reply from them. If in fact N3DG is the owner of EQSL, it
> will be a sad day for Amateur radio, but I will post the reply!
> I will not stand for someone to rip off fellow hams !
>
> 73 all,
> Gordon
> N6WK
>
>

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41112. Re: [TS-520_820_530_830] N3DG

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-22 22:17:24 UTC
From: Joseph Stiles
Topic: 41060 Message: 41112

John,

  Thanks for your information. If I may suggest that, if you are not already a "member" of QRZ.com join. They have many forums...especially
 the "ham to ham reference." You can post alerts to: scams...rip offs....compliments....this reaches worldwide...not just the 520 through 830 group.

73 Joe
WB7UQU

From: 3-Cpo <w3cpo@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, February 22, 2013 12:40 PM
Subject: Re: [TS-520_820_530_830] N3DG

Watch out for a HAM on eBay who calls himself "Norbyx". He likes to quote a low price for shipping, and then after the auction ends he shakes the buyer down for more money, or if he listed the rig with something like an external VFO and you refused to pay the extra shipping, he says "ok" but then he doesn't ship the accessory. I went against him on eBay and was declared in the right, but by that time the rig had been shipped all the way from a contest shack in Costa Rico (it was supposed to ship out of Florida). eBay's solution was for me to ship it all the way back to Costa Rico. I ended up keeping the radio and giving up on the VFO, a move I regret now.

John

-----Original Message-----
From: Don ve2ud@travel-net.com>
To: TS-520_820_530_830 TS-520_820_530_830@yahoogroups.com>
Sent: Fri, Feb 22, 2013 9:05 am
Subject: Re: [TS-520_820_530_830] N3DG

Gordon
I know posts are to be kept to only about the Kenwood hybrids,but if
those posts were not made i would have never known about N3DG
I don't mind any posts that make our fellow hams aware of any radio
ripoffs.
Is there a yahoo group on here just for ham ripoffs
Very sad when a ham rip's off another ham,but there will always be some
bad apples,just like bad Operators who disrespect the hobby.

Don/Ve2ud

On 22/02/2013 12:30 AM, n6wk_skcc3 wrote:
>
> I have contacted EQSL to inform them of the actions of N3DG. I will

> await the reply from them. If in fact N3DG is the owner of EQSL, it
> will be a sad day for Amateur radio, but I will post the reply!
> I will not stand for someone to rip off fellow hams !
>
> 73 all,
> Gordon
> N6WK
>
>

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41113. Re: [TS-520_820_530_830] N3DG

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-22 22:26:03 UTC
From: Don
Topic: 41060 Message: 41113

Sorry to go on about this,but i want to show you this email i got back
from EQSL as i see no problem with their site and i have decided to stay
with them.
They are looking into this matter.
73
Don/Ve2ud

Reply
The donations, which are not required by the way, are used to keep the
site up and running, along with revenue from advertisers. The site has
been on the go now since 1998 and is run as non profit, most of the time
it runs at a loss because most members don't donate, and it is run that
way because that is the way Dave, N5UP, wants to run it. All of the
volunteers who work at eQSL, including myself, do so for free to help out.
N3DG does some work getting people to advertise on the site, and I think
he probably makes a little money from that. BUT! That is his only
involvement with eQSL.
I have been a little suspicious about him for a while now for various
reasons and have mentioned my suspicious to Dave, that's why I asked you
the question when I saw he was in the referred by field in your profile.
Dave

On 22/02/2013 5:17 PM, Joseph Stiles wrote:
>
> John,
>
> Thanks for your information. If I may suggest that, if you are not
> already a "member" of QRZ.com join. They have many forums...especially
> the "ham to ham reference." You can post alerts to: scams...rip
> offs....compliments....this reaches worldwide...not just the 520
> through 830 group.
>
>
> 73 Joe
> WB7UQU
>
> _____
> From: 3-Cpo w3cpo@... <mailto:w3cpo%40aol.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Friday, February 22, 2013 12:40 PM
> Subject: Re: [TS-520_820_530_830] N3DG
>
>
>

>
> Watch out for a HAM on eBay who calls himself "Norbyx". He likes to
> quote a low price for shipping, and then after the auction ends he
> shakes the buyer down for more money, or if he listed the rig with
> something like an external VFO and you refused to pay the extra
> shipping, he says "ok" but then he doesn't ship the accessory. I went
> against him on eBay and was declared in the right, but by that time
> the rig had been shipped all the way from a contest shack in Costa
> Rico (it was supposed to ship out of Florida). eBay's solution was for
> me to ship it all the way back to Costa Rico. I ended up keeping the
> radio and giving up on the VFO, a move I regret now.
>
> John
>
> -----Original Message-----
> From: Don ve2ud@... <mailto:ve2ud%40travel-net.com>>
> To: TS-520_820_530_830 TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>>
> Sent: Fri, Feb 22, 2013 9:05 am
> Subject: Re: [TS-520_820_530_830] N3DG
>
> Gordon
> I know posts are to be kept to only about the Kenwood hybrids,but if
> those posts were not made i would have never known about N3DG
> I don't mind any posts that make our fellow hams aware of any radio
> ripoffs.
> Is there a yahoo group on here just for ham ripoffs
> Very sad when a ham rip's off another ham,but there will always be some
> bad apples,just like bad Operators who disrespect the hobby.
>
> Don/Ve2ud
>
> On 22/02/2013 12:30 AM, n6wk_skcc3 wrote:
> >
> > I have contacted EQSL to inform them of the actions of N3DG. I will
> > await the reply from them. If in fact N3DG is the owner of EQSL, it
> > will be a sad day for Amateur radio, but I will post the reply!
> > I will not stand for someone to rip off fellow hams !
> >
> > 73 all,
> > Gordon
> > N6WK
> >
> >
>
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> [Non-text portions of this message have been removed]
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41114. Transverters

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-23 03:43:49 UTC
From: Rick
Topic: 41114 Message: 41114

This is probably a dumb question for those of you who are much more in the know than I am, but. is it possible to have the TV-502 and TV-506 connected at the same time on a TS-520? I realize there is only one transverter connection on the TS-520, but I thought maybe there is some kind of adaptor to accommodate both the 6 meter and the 2 meter units.

Thanks for any help or advice you can offer.
Rick / K5IAR

41115. ST 1 for a TR 2400 2m handheld

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-23 18:31:00 UTC
From: Steve
Topic: 41115 Message: 41115

Maybe someone can help or point me in the right direction. I have an ancient TR 2400 2m handheld that I use on a regular basis. I have the ST 1 charging base and power supply. The ST 1 just died (no output) and I'd like to fix it. I haven't been able to find a schematic, so was wondering if anyone had suggestions, etc.

btw, am listening to my TS 830s as I type this...

Thanks in advance.

Steve
K2SCL

41116. Re: [TS-520_820_530_830] Transverters

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-23 19:20:40 UTC
From: W LEWIS
Topic: 41114 Message: 41116

Rick,
I have never used either the TV-502 or TV-506 but had planned to at one time so I had read the associated manuals. My understanding is the TV-502 connects directly to the TS-520 as does the TV-506 when used alone. When both are used the TV-506 plugs into the TV-502 which then plugs into the TS-520. That's all I can tell you. Hope it helps.
Regards,
Butch Lewis
KØPSA

--- On Fri, 2/22/13, Rick <rickb@...> wrote:

From: Rick <rickb@...>
Subject: [TS-520_820_530_830] Transverters
To: TS-520_820_530_830@yahoogroups.com
Date: Friday, February 22, 2013, 9:43 PM

This is probably a dumb question for those of you who are much more in the know than I am, but. is it possible to have the TV-502 and TV-506 connected at the same time on a TS-520? I realize there is only one transverter connection on the TS-520, but I thought maybe there is some kind of adaptor to accommodate both the 6 meter and the 2 meter units.

Thanks for any help or advice you can offer.
Rick / K5IAR

[Non-text portions of this message have been removed]

41117. RE: [TS-520_820_530_830] Transverters

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-23 20:43:05 UTC
From: Rick
Topic: 41114 Message: 41117

Thanks, Butch. I have no documentation on either, so, I□m flying blind. I sure hope you□re right. That sounds like the logical way for them to work.

Rick / K5IAR

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of W LEWIS
Sent: Saturday, February 23, 2013 1:21 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Transverters

Rick,
I have never used either the TV-502 or TV-506 but had planned to at one time so I had read the associated manuals. My understanding is the TV-502 connects directly to the TS-520 as does the TV-506 when used alone. When both are used the TV-506 plugs into the TV-502 which then plugs into the TS-520. That's all I can tell you. Hope it helps.
Regards,
Butch Lewis
KØPSA

--- On Fri, 2/22/13, Rick rickb@... <mailto:rickb%40tx.rr.com> > wrote:

[Non-text portions of this message have been removed]

41118. RE: [TS-520_820_530_830] Transverters

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-23 21:07:14 UTC
From: W LEWIS
Topic: 41114 Message: 41118

Go to Gordon Benjamin's site N6WK.com and you will find the manuals and service manuals for both the TV-502 and the TV-506 plus many others. You'll want to bookmark the site because of the wealth of information.Butch

--- On Sat, 2/23/13, Rick <rickb@...> wrote:

From: Rick <rickb@....com>
Subject: RE: [TS-520_820_530_830] Transverters
To: TS-520_820_530_830@yahoogroups.com
Date: Saturday, February 23, 2013, 2:43 PM

Thanks, Butch. I have no documentation on either, so, I’m flying blind. I

sure hope you’re right. That sounds like the logical way for them to work.

Rick / K5IAR

_____

From: TS-520_820_530_830@yahoogroups.com

[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of W LEWIS

Sent: Saturday, February 23, 2013 1:21 PM

To: TS-520_820_530_830@yahoogroups.com

Subject: Re: [TS-520_820_530_830] Transverters

Rick,

I have never used either the TV-502 or TV-506 but had planned to at one

time so I had read the associated manuals. My understanding is the TV-502

connects directly to the TS-520 as does the TV-506 when used alone. When

both are used the TV-506 plugs into the TV-502 which then plugs into the

TS-520. That's all I can tell you. Hope it helps.

Regards,

Butch Lewis

KØPSA

--- On Fri, 2/22/13, Rick rickb@... >

wrote:

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[Non-text portions of this message have been removed]

41119. Is your TS-830S Internet-ready and SDR-friendly?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-23 21:39:45 UTC
From: Mark L. Hammond
Topic: 41119 Message: 41119

Mine is...at least on receive ;)

https://www.youtube.com/watch?v=9CYhyfpSjAU

73,

--
Mark L. Hammond [N8MH]

41120. TS-520S - No ALC Indication on transmit

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-23 21:08:14 UTC
From: kd8rap
Topic: 41120 Message: 41120

Greetings all. Name is Brendan, and I am a new member here, and just checked in to the net for the first time. My first HF rig was a TS-520 and now I use a TS-520S. I had a bit of trouble getting through the QRM checking into the net because I am on my backup QRP rig until I can get my Kenwood sorted out.

Just wanted to follow up about an intermittent problem I have been having that I mentioned on the net. I was having two problems and solved one but not the other.

Problem 1: The rig would not go back in to receive mode after transmitting. (This problem was solved after replacing relay RL1)

Problem 2: I have an intermittent problem where I have no ALC indication on the meter while I am transmitting, it stays completely still at the bottom of the scale. If I switch bands (say from 40 to 20 meters) I have ALC indication again, but not if I switch back to 40 meters I won't have ALC indication again. It happens on multiple bands intermittently. While this is happening I still have normal output power on my wattmeter, and can still make contacts, just no ALC indication on the meter.

I was hoping replacing the relay would fix both issues but it didn't fix the second.

Does anyone have any ideas on where to start looking? Any specific area or component of the ALC circuit?

Thanks in advance! 73's Brendan KD8RAP

41121. Meter Dead.....Tuning Strange

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-23 22:21:21 UTC
From: n3kvl
Topic: 41121 Message: 41121

Hello All,

Today, the TS-520S is not functioning.

The first symptom is that the RF (receive) meter is dead not movement at all.

Second, when tuning in the bands, it is not possible to tune without distortion of the incoming signal.

So, obviously something happened. I am going to start looking in the manual and trouble shooting I have, but I thought I would check here to see if there are any common recurring things.

Thanks,
Archie

41122. Re: [TS-520_820_530_830] TS-520S - No ALC Indication on transmit

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-24 00:01:08 UTC
From: Jim Lamanteer
Topic: 41120 Message: 41122

BRENDAN WHAT TYPE OF TROUBLE SHOOTING EQUIPMENT DO U HAVE? DO U HAVE A SERVICE MANUAL? ANY TEST EQUIPMENT ?? WILL TRY TO HELP U. JIMMY.

From: kd8rap <kd8rap@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, February 23, 2013 4:08 PM
Subject: [TS-520_820_530_830] TS-520S - No ALC Indication on transmit

Greetings all. Name is Brendan, and I am a new member here, and just checked in to the net for the first time. My first HF rig was a TS-520 and now I use a TS-520S. I had a bit of trouble getting through the QRM checking into the net because I am on my backup QRP rig until I can get my Kenwood sorted out.

Just wanted to follow up about an intermittent problem I have been having that I mentioned on the net. I was having two problems and solved one but not the other.

Problem 1: The rig would not go back in to receive mode after transmitting. (This problem was solved after replacing relay RL1)

Problem 2: I have an intermittent problem where I have no ALC indication on the meter while I am transmitting, it stays completely still at the bottom of the scale. If I switch bands (say from 40 to 20 meters) I have ALC indication again, but not if I switch back to 40 meters I won't have ALC indication again. It happens on multiple bands intermittently. While this is happening I still have normal output power on my wattmeter, and can still make contacts, just no ALC indication on the meter.

I was hoping replacing the relay would fix both issues but it didn't fix the second.

Does anyone have any ideas on where to start looking? Any specific area or component of the ALC circuit?

Thanks in advance! 73's Brendan KD8RAP

[Non-text portions of this message have been removed]

41123. Re: [TS-520_820_530_830] Is your TS-830S Internet-ready and SDR-friendly?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-24 00:36:53 UTC
From: Jan Servaites
Topic: 41119 Message: 41123

Mark,
Thats great. I have a softrock SDR reading my 820's IF spectrum (48khz wide) for over a year now. I use it every night with the 820.
Here's a pic
http://janswerks.com/n8cbx/ts820/820_sdr1.jpg
Jan N8CBX

Mark L. Hammond wrote:

> Mine is...at least on receive ;)
>
> https://www.youtube.com/watch?v=9CYhyfpSjAU
>
> 73,
>
> --
> Mark L. Hammond [N8MH]
>
>

41124. RE: [TS-520_820_530_830] Transverters

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-24 00:54:23 UTC
From: Rick
Topic: 41114 Message: 41124

Excellent! Thanks a million!

Rick

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of W LEWIS
Sent: Saturday, February 23, 2013 3:07 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] Transverters

Go to Gordon Benjamin's site N6WK.com and you will find the manuals and
service manuals for both the TV-502 and the TV-506 plus many others. You'll
want to bookmark the site because of the wealth of information.Butch

--- On Sat, 2/23/13, Rick rickb@... <mailto:rickb%40tx.rr.com> >
wrote:

From: Rick rickb@... <mailto:rickb%40tx.rr.com> >
Subject: RE: [TS-520_820_530_830] Transverters
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Date: Saturday, February 23, 2013, 2:43 PM

Thanks, Butch. I have no documentation on either, so, I□m flying blind. I

sure hope you□re right. That sounds like the logical way for them to work.

Rick / K5IAR

From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>

[mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of W LEWIS

Sent: Saturday, February 23, 2013 1:21 PM

To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>

Subject: Re: [TS-520_820_530_830] Transverters

Rick,

I have never used either the TV-502 or TV-506 but had planned to at one

time so I had read the associated manuals. My understanding is the TV-502 connects directly to the TS-520 as does the TV-506 when used alone. When both are used the TV-506 plugs into the TV-502 which then plugs into the TS-520. That's all I can tell you. Hope it helps.

Regards,

Butch Lewis

KØPSA

--- On Fri, 2/22/13, Rick rickb@... <mailto:rickb%40tx.rr.com> >

wrote:

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41125. T599 Calibrator Issue

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-24 00:54:48 UTC
From: daedalusnj
Topic: 41125 Message: 41125

I recently bought a really sweet set of Kenwood Twins. All is great except something with the calibrator is messed up. When I pace the switch in the CAL position I can hear a relay (?) rapidly clicking on and of for about the seconds, then nothing. I cannot hear anything on the receiver except its own 25KC calibrator signal. Yes, the receiver to transmitter cable is in place. Of course, that means I can't zero beat and get them in sync. I looked in the manuals (operator and service) and can't find anything obvious.

Any ideas would be appreciated.

Jack
WA2OLZ

41126. RE: [TS-520_820_530_830] Transverters

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-24 01:10:18 UTC
From: W LEWIS
Topic: 41114 Message: 41126

Rick,
Were you able to find the information on the transverters?
Butch

--- On Sat, 2/23/13, W LEWIS <nscb56a@...> wrote:

From: W LEWIS <nscb56a@...>
Subject: RE: [TS-520_820_530_830] Transverters
To: TS-520_820_530_830@yahoogroups.com
Date: Saturday, February 23, 2013, 3:07 PM

Go to Gordon Benjamin's site N6WK.com and you will find the manuals and service manuals for both the TV-502 and the TV-506 plus many others. You'll want to bookmark the site because of the wealth of information.Butch

--- On Sat, 2/23/13, Rick rickb@...> wrote:

From: Rick rickb@...>
Subject: RE: [TS-520_820_530_830] Transverters
To: TS-520_820_530_830@yahoogroups.com
Date: Saturday, February 23, 2013, 2:43 PM

Thanks, Butch. I have no documentation on either, so, I’m flying blind. I

sure hope you’re right. That sounds like the logical way for them to work.

Rick / K5IAR

_____

From: TS-520_820_530_830@yahoogroups.com

[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of W LEWIS

Sent: Saturday, February 23, 2013 1:21 PM

To: TS-520_820_530_830@yahoogroups.com

Subject: Re: [TS-520_820_530_830] Transverters

Rick,

I have never used either the TV-502 or TV-506 but had planned to at one

time so I had read the associated manuals. My understanding is the TV-502

connects directly to the TS-520 as does the TV-506 when used alone. When

both are used the TV-506 plugs into the TV-502 which then plugs into the

TS-520. That's all I can tell you. Hope it helps.

Regards,

Butch Lewis

KØPSA

--- On Fri, 2/22/13, Rick rickb@... >

wrote:

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41127. Re: TS-820S & TV-502 Interconnecting cable

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-24 03:20:57 UTC
From: k7mks@...
Topic: 41127 Message: 41127

----- Original Message -----

Need the interconnecting cable or just one male 12-pin connector. My cable only has one connector.

Thank you,

joe k7mks

[Non-text portions of this message have been removed]

41128. Re: [TS-520_820_530_830] Transverters

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-24 03:30:50 UTC
From: pmarkavage@...
Topic: 41114 Message: 41128

Rick:
The stuff is on the way. Probably get it Monday or Tuesday.

Pete, wa2cwa

On Sat, 23 Feb 2013 18:54:23 -0600 "Rick" <rickb@...> writes:
> Excellent! Thanks a million!
>
> Rick

41129. RE: [TS-520_820_530_830] Transverters

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-24 03:42:54 UTC
From: Rick
Topic: 41114 Message: 41129

Thanks a million, Pete! If I make the deal I hope next weekend I'll probably be needing a few more manuals. I'll be sure I pay for them right this time.
HI

Rick / K5IAR

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of pmarkavage@...
Sent: Saturday, February 23, 2013 9:31 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Transverters

Rick:
The stuff is on the way. Probably get it Monday or Tuesday.

Pete, wa2cwa

On Sat, 23 Feb 2013 18:54:23 -0600 "Rick" rickb@...
<mailto:rickb%40tx.rr.com> > writes:
> Excellent! Thanks a million!
>
> Rick

[Non-text portions of this message have been removed]

41130. RE: [TS-520_820_530_830] Transverters

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-24 03:44:01 UTC
From: Rick
Topic: 41114 Message: 41130

Oops! My apologies. I meant to send that last email directly to Pete.

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Rick
Sent: Saturday, February 23, 2013 9:43 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] Transverters

Thanks a million, Pete! If I make the deal I hope next weekend I'll probably
be needing a few more manuals. I'll be sure I pay for them right this time.
HI

Rick / K5IAR

From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
[mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of
pmarkavage@... <mailto:pmarkavage%40juno.com>
Sent: Saturday, February 23, 2013 9:31 PM
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Subject: Re: [TS-520_820_530_830] Transverters

Rick:
The stuff is on the way. Probably get it Monday or Tuesday.

Pete, wa2cwa

On Sat, 23 Feb 2013 18:54:23 -0600 "Rick" rickb@...
<mailto:rickb%40tx.rr.com>
> writes:
> Excellent! Thanks a million!
>
> Rick

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41131. Re: [TS-520_820_530_830] T599 Calibrator Issue

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-24 03:55:55 UTC
From: pmarkavage@...
Topic: 41125 Message: 41131

What position is the VFO Select switch in?

Pete, wa2cwa

On Sun, 24 Feb 2013 00:54:48 -0000 "daedalusnj" <jvm@...> writes:
> I recently bought a really sweet set of Kenwood Twins. All is great
> except something with the calibrator is messed up. When I pace the
> switch in the CAL position I can hear a relay (?) rapidly clicking
> on and of for about the seconds, then nothing. I cannot hear
> anything on the receiver except its own 25KC calibrator signal. Yes,
> the receiver to transmitter cable is in place. Of course, that means
> I can't zero beat and get them in sync. I looked in the manuals
> (operator and service) and can't find anything obvious.
>
> Any ideas would be appreciated.
>
> Jack
> WA2OLZ

41132. ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-24 05:09:22 UTC
From: tfrugia81
Topic: 41132 Message: 41132

Hello all. I'm a new owner of a kenwood hybrid. I absolutely love it.

I searched the group to try and find an answer to my problem. There are many similar posts but not quite what I am experiencing.

If I have a key plugged in and switch to CW, I hear a constant sidetone. If I put the radio in "send" there is no RF output, but I hear the tone. If I press the key, it transmits as it should. The sidetone never stops until I unplug the key.

This is just a standard straight key on a mono plug. I even tried plugin in a plug with nothing attached and it does the same thing. Oddly enough, it randomly will work fine. Today I left the rig turned on in CW mode for about an hour. When I came back the tone was gone, but switching to "tune" and back to CW caused the sidetone to come on and remain on.

Any ideas? I took the case off and the plug is clean and looks brand new.

73

41133. RE: [TS-520_820_530_830] T599 Calibrator Issue

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-24 11:49:43 UTC
From: Daedalus
Topic: 41125 Message: 41133

It is in the RCVR position

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of pmarkavage@...
Sent: Saturday, February 23, 2013 10:56 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] T599 Calibrator Issue

What position is the VFO Select switch in?

Pete, wa2cwa

On Sun, 24 Feb 2013 00:54:48 -0000 "daedalusnj" jvm@...
<mailto:jvm%40d8alus.net> > writes:
> I recently bought a really sweet set of Kenwood Twins. All is great
> except something with the calibrator is messed up. When I pace the
> switch in the CAL position I can hear a relay (?) rapidly clicking
> on and of for about the seconds, then nothing. I cannot hear
> anything on the receiver except its own 25KC calibrator signal. Yes,
> the receiver to transmitter cable is in place. Of course, that means
> I can't zero beat and get them in sync. I looked in the manuals
> (operator and service) and can't find anything obvious.
>
> Any ideas would be appreciated.
>
> Jack
> WA2OLZ

[Non-text portions of this message have been removed]

41134. Re: T599 Calibrator Issue

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-24 13:55:21 UTC
From: popeyebob@...
Topic: 41125 Message: 41134

You don't need to zero beat the pair together. With the connecting cable in place, either the transmitter or the receiver are slaved to the selected VFO. Mine seem to track perfectly. I will test my calibrator today, and see how it act's .I usually use the transmitter as the slave VFO, however the receiver VFO might be a better choice due to less heat drift..

73
NB9G

[Non-text portions of this message have been removed]

41135. RE: [TS-520_820_530_830] Transverters

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-24 02:12:07 UTC
From: Rick
Topic: 41114 Message: 41135

Yes sir when I looked at the manual for the 502 it shows two transverter to transceiver jacks. You plug the 502 into the TS-520 and plug the 506 into the 502. It has all the necessary plugs/jacks and so forth.

Now all I have to do is make the deal for the 506 and find a 502. Hopefully, it won☐t take too long I☐m getting☐ old! HI HI

Thanks again for the help!

Rick

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of W LEWIS
Sent: Saturday, February 23, 2013 7:10 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] Transverters

Rick,
Were you able to find the information on the transverters?
Butch

--- On Sat, 2/23/13, W LEWIS nscb56a@...
<mailto:nscb56a%40prodigy.net> > wrote:

From: W LEWIS nscb56a@... <mailto:nscb56a%40prodigy.net> >
Subject: RE: [TS-520_820_530_830] Transverters
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Date: Saturday, February 23, 2013, 3:07 PM

Go to Gordon Benjamin's site N6WK.com and you will find the manuals and service manuals for both the TV-502 and the TV-506 plus many others. You'll want to bookmark the site because of the wealth of information.Butch

--- On Sat, 2/23/13, Rick rickb@... <mailto:rickb%40tx.rr.com> >
wrote:

From: Rick rickb@... <mailto:rickb%40tx.rr.com> >
Subject: RE: [TS-520_820_530_830] Transverters
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Date: Saturday, February 23, 2013, 2:43 PM

Thanks, Butch. I have no documentation on either, so, I☐m flying blind. I

sure hope you☐re right. That sounds like the logical way for them to work.

Rick / K5IAR

From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>

[mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of W LEWIS

Sent: Saturday, February 23, 2013 1:21 PM

To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>

Subject: Re: [TS-520_820_530_830] Transverters

Rick,

I have never used either the TV-502 or TV-506 but had planned to at one

time so I had read the associated manuals. My understanding is the TV-502

connects directly to the TS-520 as does the TV-506 when used alone. When

both are used the TV-506 plugs into the TV-502 which then plugs into the

TS-520. That's all I can tell you. Hope it helps.

Regards,

Butch Lewis

KØPSA

--- On Fri, 2/22/13, Rick rickb@... <mailto:rickb%40tx.rr.com> >

wrote:

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[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41136. Sunday 20M Net Conditions

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-24 18:40:37 UTC
From: daedalusnj
Topic: 41136 Message: 41136

Checked in through a relay for my first ever net login. Conditions are just terrible on 20M today, unable to hear much of anything. Thanks to Tom, WB0SGA for the assist. Hopefully, propogation will be better in the future.

73
Jack
WA2OLZ
Kenwood 599A Twins

41137. Re: T599 Calibrator Issue

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-24 17:05:25 UTC
From: daedalusnj
Topic: 41125 Message: 41137

SECOND TRY - Yahoo just ate my previous response......

Thanks for the inputs, guys. Long story short, before Yahoo munches on this message too, is it works. It's obvious once you know the answer. When the transmitter is in calibrate and in CW mode it will only be heard on the receiver if the rcvr function switch is set at MONI ! It makes perfect sense. Wish the manual mentioned that but, I guess most ops are sharper than me!

I hope to hear some of you on the 20M net this afternoon.

73
Jack
WA2OLZ

--- In TS-520_820_530_830@yahoogroups.com, "daedalusnj" <jvm@...> wrote:
>
> I recently bought a really sweet set of Kenwood Twins. All is great except something with the calibrator is messed up. When I pace the switch in the CAL position I can hear a relay (?) rapidly clicking on and of for about the seconds, then nothing. I cannot hear anything on the receiver except its own 25KC calibrator signal. Yes, the receiver to transmitter cable is in place. Of course, that means I can't zero beat and get them in sync. I looked in the manuals (operator and service) and can't find anything obvious.
>
> Any ideas would be appreciated.
>
> Jack
> WA2OLZ
>

41138. Re: T599 Calibrator Issue

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-24 16:59:59 UTC
From: daedalusnj
Topic: 41125 Message: 41138

--- In TS-520_820_530_830@yahoogroups.com, "daedalusnj" <jvm@...> wrote:
>
> I recently bought a really sweet set of Kenwood Twins. All is great except something with the calibrator is messed up. When I pace the switch in the CAL position I can hear a relay (?) rapidly clicking on and of for about the seconds, then nothing. I cannot hear anything on the receiver except its own 25KC calibrator signal. Yes, the receiver to transmitter cable is in place. Of course, that means I can't zero beat and get them in sync. I looked in the manuals (operator and service) and can't find anything obvious.
>
> Any ideas would be appreciated.
>
> Jack
> WA2OLZ
>

OK - I now officially qualify as the idiot of the month!

A little thinking would have led me to realize that I would not hear the transmit signal in CAL mode unless the receiver function switch was in the MONI position so the sidetone comes through. It's rather obvious after you know the answer. My only cop out, for what it is worth, is it would be nice if the manual mentioned that step. That's not much of an excuse however!

Thanks for the replies, guys. I'm sure to be back and ask more questions to maintain my Idiot of the Month status :)

PS: Pete - it would be great to get together at some point as I am sure I can learn a lot from you.

I hope to hear some of you on the 20M net this afternoon.

73
Jack
WA2OLZ

41139. KENWOOD HYBRID USER NET (February 24h, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-24 19:20:06 UTC
From: mvgilger
Topic: 41139 Message: 41139

The Saturday's net on 40 meter was run by Jimmy, WB2KNR from Newport, NJ., He had 21 stations checking with good band conditions. There were 7 new stations checking in. Out of those, there was:

8 running TS-520(x)
1 running TS-530(x)
3 running TS-820(x)
3 running TS-830S
1 running a set of 599D Twins

Jimmy was running his TS-830s. The rest were running non hybrids of one model or another.

The Sunday 20 meter net we had 20 stations checking in under poor band conditions. There were 3 new stations checking in today. Out of all the check-ins, there were:

7 running TS-520(x)
0 running TS-530(x)
3 running TS-820(x)
5 running TS-830S
1 running 599A twiins

I was running a non hybrid TS-940. The rest were running non hybrids of one model or another.

We have been having several people checking in regularly with their TS-430, TS-440, and TS-940's, which of course is not a hybrid, although over 30+ years old. Everyone is welcome as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a net control station, please send me an email. Currently it's just myself, WB2KNR and WB0SGA. I would like to get several more. If we do, we can alternate so everyone might be on a 3-4 week rotation. It's a lot of fun and a good way to make sure you station is optimized.

For anyone that has not heard, we have a new web site that WB4HFN is hosting. He currently has a very nice site for Drake, Collins and Heathkit and now Kenwood Hybrids. Good quality manuals plus sale flyers and brochures will be found here, along with user supplied information for all Hybrids.

His URL is:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754 check-ins, Sunday total 563 check-ins

November 2012, Saturday's, net total = 47, Sundays total = 20
December 2012, Saturday's, net total = 74, Sunday's total = 70
January 2013, Saturday's, net total = 93, Sunday's total = 87

February 2013, Saturday's net total = 103, Sundays total = 87. (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

41140. Re: [TS-520_820_530_830] Sunday 20M Net Conditions

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-24 19:28:43 UTC
From: Mark Gilger
Topic: 41136 Message: 41140

Glad the relay was able to hear you. We were on
14.316.50 today to help some of the guys that
have birdies from their TV's right on 14.316.

On 20 meters your off the back of my beam, so
between bad band and back of the beam, I did not
hear you at all. If your around Saturday, you can
check into the 40 meter net at 3:30 eastern on
7.235. East cost stations come in real good into Ohio.

73's,
Mark, WB0IQK

At 01:40 PM 2/24/2013, daedalusnj wrote:
>
>
>Checked in through a relay for my first ever net
>login. Conditions are just terrible on 20M
>today, unable to hear much of anything. Thanks
>to Tom, WB0SGA for the assist. Hopefully,
>propogation will be better in the future.
>
>73
>Jack
>WA2OLZ
>Kenwood 599A Twins
>
>

[Non-text portions of this message have been removed]

41141. Re: [TS-520_820_530_830] Re: T599 Calibrator Issue

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-24 20:16:10 UTC
From: pmarkavage@...
Topic: 41125 Message: 41141

Some further input on hearing the transmitter calibrator. This assumes
you also have the "transceiver" cable (the one with the big Hirose
connectors) attached. Band switch of both receiver and transmitter have
to be on the same band. Plate, Load, and Drive controls should be roughly
peaked for the band you're on or you might not hear the transmitter
calibrator. If the slide switch (Separate/Transceive) on the back is set
to separate, the calibrator on the transmitter will only work if the VFO
Select switch is on NORM or TRCV(Rx).

Pete, wa2cwa

On Sun, 24 Feb 2013 17:05:25 -0000 "daedalusnj" <jvm@...> writes:
> SECOND TRY - Yahoo just ate my previous response......
>
> Thanks for the inputs, guys. Long story short, before Yahoo munches
> on this message too, is it works. It's obvious once you know the
> answer. When the transmitter is in calibrate and in CW mode it will
> only be heard on the receiver if the rcvr function switch is set at
> MONI ! It makes perfect sense. Wish the manual mentioned that but,
> I guess most ops are sharper than me!
>
> I hope to hear some of you on the 20M net this afternoon.
>
> 73
> Jack
> WA2OLZ
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "daedalusnj" <jvm@...>
> wrote:
> >
> > I recently bought a really sweet set of Kenwood Twins. All is
> great except something with the calibrator is messed up. When I pace
> the switch in the CAL position I can hear a relay (?) rapidly
> clicking on and of for about the seconds, then nothing. I cannot
> hear anything on the receiver except its own 25KC calibrator signal.
> Yes, the receiver to transmitter cable is in place. Of course, that
> means I can't zero beat and get them in sync. I looked in the
> manuals (operator and service) and can't find anything obvious.
> >
> > Any ideas would be appreciated.
> >
> > Jack
> > WA2OLZ

41142. RE: [TS-520_820_530_830] Re: T599 Calibrator Issue

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-24 23:01:49 UTC
From: Daedalus
Topic: 41125 Message: 41142

Thanks for all the great info, Pete!

73

Jack

WA2OLZ

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of pmarkavage@...
Sent: Sunday, February 24, 2013 3:16 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: T599 Calibrator Issue

Some further input on hearing the transmitter calibrator. This assumes
you also have the "transceiver" cable (the one with the big Hirose
connectors) attached. Band switch of both receiver and transmitter have
to be on the same band. Plate, Load, and Drive controls should be roughly
peaked for the band you're on or you might not hear the transmitter
calibrator. If the slide switch (Separate/Transceive) on the back is set
to separate, the calibrator on the transmitter will only work if the VFO
Select switch is on NORM or TRCV(Rx).

Pete, wa2cwa

On Sun, 24 Feb 2013 17:05:25 -0000 "daedalusnj" jvm@...
<mailto:jvm%40d8alus.net> > writes:
> SECOND TRY - Yahoo just ate my previous response......
>
> Thanks for the inputs, guys. Long story short, before Yahoo munches
> on this message too, is it works. It's obvious once you know the
> answer. When the transmitter is in calibrate and in CW mode it will
> only be heard on the receiver if the rcvr function switch is set at
> MONI ! It makes perfect sense. Wish the manual mentioned that but,
> I guess most ops are sharper than me!
>
> I hope to hear some of you on the 20M net this afternoon.
>
> 73
> Jack
> WA2OLZ
>
>
> --- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> , "daedalusnj"
> wrote:
> >

> > I recently bought a really sweet set of Kenwood Twins. All is
> great except something with the calibrator is messed up. When I pace
> the switch in the CAL position I can hear a relay (?) rapidly
> clicking on and of for about the seconds, then nothing. I cannot
> hear anything on the receiver except its own 25KC calibrator signal.
> Yes, the receiver to transmitter cable is in place. Of course, that
> means I can't zero beat and get them in sync. I looked in the
> manuals (operator and service) and can't find anything obvious.
> >
> > Any ideas would be appreciated.
> >
> > Jack
> > WA2OLZ

[Non-text portions of this message have been removed]

41143. Re: MC-50 disassembly ?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-25 00:13:39 UTC
From: claudio
Topic: 41057 Message: 41143

Hi Ken,
thanks for the information....ooh my god it seems a very complicated operation ! so they glued the two parts, I wonder why.
Well, but before to try open it I would like to know more about possible replacements of the cartrige, which brand, type etc, any suggestion ?
In the while I bought an home studio mic here (Philips sbc md150 dynamic micro) and mounted it on the MC-50 support. I got very bad results, too low and too bassy audio. May be I'm missing the 600-50K step-up transformer needed to drive my TS-520S..??
I bought one here and payed about 15$, I'm waiting for it.

Thanks and 73s

Claudio
IT9JCB

--- In TS-520_820_530_830@yahoogroups.com, Ken Winterling <wa2lbi@...> wrote:
>
> IT9JCB,
>
> Wrap a cloth around the body of the mic to protect your hand and the mic.
> Focus a heat gun or hair dryer on the joint between the base of the mic
> and the top of the body. Rotate the mic and/or heat source around the
> entire diameter to soften the glue used to secure the pieces.
>
> Every 5 seconds or so wrap a cloth around the mic head to protect your hand
> and try to unscrew the top. Turn the top counter clockwise while holding
> the body. It should come loose after a short time. DO NOT use any pliers,
> etc. or you will damage the head and/or body.
>
> Ken
> WA2LBI
>
>
> On Wed, Feb 20, 2013 at 4:17 AM, claudio <aetna50@...> wrote:
>
> > **
> > >
> > >
> > Hi,
> > I received my loved TS-520S one week ago from Germany through eBay,
> > perfect conditions and it arrived with its beatiful MC-50 mic.
> > I was so happy guys, the radio sounded great, unfortunately when I was
> > re-arranging my shack for the new entry the mic falled down to the floor
> > and.....bye bye mc-50 !! I think that the cartridge is broken, so I tried
> > to open the case to remove it but it seems to be impossible, the cartridge
> > is inside the upper cap and the cap cannot be open, I tried all...got very

> > disappointed.
> > So I ask you if anyone knows how to disassembly this mic and some
> > suggestion for possible cartridge replacements.
> >
> > Thanks
> > 73s de IT9JCB
> >
> >
> >
>
>
> [Non-text portions of this message have been removed]
>

41144. Re: Transverters

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-25 01:09:51 UTC
From: Avguy
Topic: 41114 Message: 41144

Rick,

I have both transverters hooked to my TS520S. They daisy-chain together. The TV502 hooks directly to the TS520 then the TV506 hooks to the TS502. Do not turn both transverters on at the same time the 502 overrules the 506... The other thing to note is the antenna to the TS-520 should be disconnected or routed to a dummy load while using the transverters, since strong RF signals can still get inside the 520 from the HF antenna, and there is the possible leakage of qrm from the 520 to the outside world! If you are planning to do a lot of 6 and 2 meter ops with this set up you might be disappointed in the sensitivity on receive compared with a dedicated modern 6 or 2 meter rig. My FT817nd runs circles around the transverters in the area of sensitivity and selectivity. The transverters only put out about 4 or 5 watts so you will be running QRP as well. They look nice on the bench and are fun to fool with but don't expect contest quality operation.

Ken
AE7PX

--- In TS-520_820_530_830@yahoogroups.com, "Rick" <rickb@...> wrote:
>
> This is probably a dumb question for those of you who are much more in the
> know than I am, but. is it possible to have the TV-502 and TV-506 connected
> at the same time on a TS-520? I realize there is only one transverter
> connection on the TS-520, but I thought maybe there is some kind of adaptor
> to accommodate both the 6 meter and the 2 meter units.
>
> Thanks for any help or advice you can offer.
> Rick / K5IAR
>

41145. Re: [TS-520_820_530_830] Re: MC-50 disassembly ?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-25 01:36:47 UTC
From: Ken Winterling
Topic: 41057 Message: 41145

Claudio,

Dismantling the MC-50 is not difficult and takes only a couple minutes. I have opened several MC-50 and MC-60 mics and it never took much heat or more than a minute or two. Just be careful to keep turning the mic as you apply the heat so you do not concentrate the heat in one place.

I have never had the need to replace the mic element in a MC-50 so I can't offer a personal recommendation. I would get it a part and then determine if a new element is needed. It is possible that a wire broke off and you can repair it.

As for the Philips mic, it is 600 ohms which is not a good match to the TS-520S mic input impedance of 50K ohms. The impedance matching transformer you purchased should help with that,

Ken
WA2LBI

On Sun, Feb 24, 2013 at 7:13 PM, claudio <aetna50@...> wrote:

> **
>
>
>
>
> Hi Ken,
> thanks for the information....ooh my god it seems a very complicated
> operation ! so they glued the two parts, I wonder why.
> Well, but before to try open it I would like to know more about possible
> replacements of the cartrige, which brand, type etc, any suggestion ?
> In the while I bought an home studio mic here (Philips sbc md150 dynamic
> micro) and mounted it on the MC-50 support. I got very bad results, too low
> and too bassy audio. May be I'm missing the 600-50K step-up transformer
> needed to drive my TS-520S..??
> I bought one here and payed about 15$, I'm waiting for it.
>
> Thanks and 73s
>
> Claudio
> IT9JCB
>
> --- In TS-520_820_530_830@yahoogroups.com, Ken Winterling wrote:
> >
> > IT9JCB,
> >

> > Wrap a cloth around the body of the mic to protect your hand and the mic.
> > Focus a heat gun or hair dryer on the joint between the base of the mic
> > and the top of the body. Rotate the mic and/or heat source around the
> > entire diameter to soften the glue used to secure the pieces.
> >
> > Every 5 seconds or so wrap a cloth around the mic head to protect your
> hand
> > and try to unscrew the top. Turn the top counter clockwise while holding
> > the body. It should come loose after a short time. DO NOT use any pliers,
> > etc. or you will damage the head and/or body.
> >
> > Ken
> > WA2LBI
> >
> >
> > On Wed, Feb 20, 2013 at 4:17 AM, claudio wrote:
> >
> > > **
> > >
> > >
> > > Hi,
> > > I received my loved TS-520S one week ago from Germany through eBay,
> > > perfect conditions and it arrived with its beatiful MC-50 mic.
> > > I was so happy guys, the radio sounded great, unfortunately when I was
> > > re-arranging my shack for the new entry the mic falled down to the
> floor
> > > and.....bye bye mc-50 !! I think that the cartridge is broken, so I
> tried
> > > to open the case to remove it but it seems to be impossible, the
> cartridge
> > > is inside the upper cap and the cap cannot be open, I tried all...got
> very
> > > disappointed.
> > > So I ask you if anyone knows how to disassembly this mic and some
> > > suggestion for possible cartridge replacements.
> > >
> > > Thanks
> > > 73s de IT9JCB
> > >
>

[Non-text portions of this message have been removed]

41146. RE: [TS-520_820_530_830] Re: Transverters

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-25 01:53:41 UTC
From: Rick
Topic: 41114 Message: 41146

Thanks for the info, Ken. I will use the transverters from time to time, but I understand they would not compete with a dedicated rig or even a little more modern multi-band rig. Thanks for the tips on how to hook them up and on what not to do. I would very likely have made the mistake of turning them both on at the same time. My goal is to assemble a totally complete TS-520 station. I lack the transverters (I think I have found them both) and the amplifier. Unless I find a techie special or one that has been fried I doubt I'll be getting the amp anytime soon. Too much money for an old timer on a fixed income.

Thanks Again.

Rick / K5IAR

_____

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Avguy
Sent: Sunday, February 24, 2013 7:10 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Transverters

Rick,

I have both transverters hooked to my TS520S. They daisy-chain together. The TV502 hooks directly to the TS520 then the TV506 hooks to the TS502. Do not turn both transverters on at the same time the 502 overrules the 506... The other thing to note is the antenna to the TS-520 should be disconnected or routed to a dummy load while using the transverters, since strong RF signals can still get inside the 520 from the HF antenna, and there is the possible leakage of qrm from the 520 to the outside world! If you are planning to do a lot of 6 and 2 meter ops with this set up you might be disappointed in the sensitivity on receive compared with a dedicated modern 6 or 2 meter rig. My FT817nd runs circles around the transverters in the area of sensitivity and selectivity. The transverters only put out about 4 or 5 watts so you will be running QRP as well. They look nice on the bench and are fun to fool with but don't expect contest quality operation.

Ken
AE7PX

--- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> , "Rick" wrote:
>
> This is probably a dumb question for those of you who are much more in the
> know than I am, but. is it possible to have the TV-502 and TV-506
connected

> at the same time on a TS-520? I realize there is only one transverter
> connection on the TS-520, but I thought maybe there is some kind of
adaptor
> to accommodate both the 6 meter and the 2 meter units.
>
> Thanks for any help or advice you can offer.
> Rick / K5IAR
>

[Non-text portions of this message have been removed]

41147. POINTER for TS-830S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-25 02:23:35 UTC
From: KA4AQM
Topic: 41147 Message: 41147

Greetings from a desperate TS-830S owner. While removing all the knobs from my faceplate last night I got heavy handed and cracked in half the POINTER which sits behind the PLATE knob on my TS-830s....does anyone have one I can get ASAP/

Thanks in advance.
Randy
KA4AQM
Chesapeake VA

[Non-text portions of this message have been removed]

41148. Re: [TS-520_820_530_830] POINTER for TS-830S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-25 02:28:52 UTC
From: Cliff White
Topic: 41147 Message: 41148

Have you tried gluing it back together? I haven't done exactly that, but
it might be worth a try.

Respectfully,
Cliff White, W5CNW
w5cnw@... <mailto:w5cnw@...>
On 02/24/2013 08:23 PM, KA4AQM wrote:
> Greetings from a desperate TS-830S owner. While removing all the knobs from my faceplate last night I got heavy handed and cracked in half the POINTER which sits behind the PLATE knob on my TS-830s....does anyone have one I can get ASAP/
>
> Thanks in advance.
> Randy
> KA4AQM
> Chesapeake VA
>
> [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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[Non-text portions of this message have been removed]

41149. Re: L41 checks.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-25 02:22:56 UTC
From: davidb
Topic: 41069 Message: 41149

I've been struggling with having to replace L41 since the TS530se I have was missing L41. I think I've found a core (it's a Toko 10K series 27uH inductor). What I found out is that the three pin side is the secondary with a tap (middle pin) and the two pin side is the primary -- that's standard for the Toko and similar parts. BUT for L41 the pin arrangement is different each of the pins on the two pin side is connected to the matching pin on the three pin side. I can't remember which end is primary and which is secondary, but it's easy to figure out from the board layout.

Ken Kemski put me onto a note about rewinding these cores. It can be done but it's delicate work.

I'm still struggling with my replacement; I think that Q1 may be dead also but I have limited time and equipment so the work goes slowly. Any advice from anybody's experience would be greatly appreciated.

dave
K2LYV

--- In TS-520_820_530_830@yahoogroups.com, "jon_g4fut" <jon_g4fut@...> wrote:
>
> I have searched for details of the L41 but have not found any responses which answer my query. I have removed the coil from my 530se which suffered an RF hit when its RX was switched on while I transmitted on another radio. I understand that L41 may have shorted. So my question is this. There are 3 lugs on the bottom of the coil and 2 on the top. One lug on the bottom left shorts with the one on the left top (I wish I could show a photo!). The right lug on the bottom shorts with the right lug on the top. Following so far ????.....There is the middle lug on the bottom which doesn't short with anything. Does this coil now require re-winding? Ken K4EAA has very kindly supplied the required wire should it need it. I sincerely hope that Ken's health improves.
>

41150. Re: [TS-520_820_530_830] POINTER for TS-830S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-25 02:40:31 UTC
From: KA4AQM
Topic: 41147 Message: 41150

I have superglue it, but b/c there is some outward tension on it, it needs to be replaced....really looking for a replacement...tnx.
Randy
----- Original Message -----
From: Cliff White
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, February 24, 2013 9:28 PM
Subject: Re: [TS-520_820_530_830] POINTER for TS-830S

Have you tried gluing it back together? I haven't done exactly that, but
it might be worth a try.

Respectfully,
Cliff White, W5CNW
w5cnw@... w5cnw@...>
On 02/24/2013 08:23 PM, KA4AQM wrote:
> Greetings from a desperate TS-830S owner. While removing all the knobs from my faceplate last night I got heavy handed and cracked in half the POINTER which sits behind the PLATE knob on my TS-830s....does anyone have one I can get ASAP/
>
> Thanks in advance.
> Randy
> KA4AQM
> Chesapeake VA
>
> [Non-text portions of this message have been removed]
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[Non-text portions of this message have been removed]

41151. Re: [TS-520_820_530_830] ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-25 02:52:23 UTC
From: Alan Riley
Topic: 41132 Message: 41151

My TS-820S had the exact same problem when I bought it. I found the problem to be a broken contact on connector FIX3-11 not making connection to the pin on the pcb.

73,
Alan, KD5R

From: tfrugia81
Sent: Saturday, February 23, 2013 11:09 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] ts520se sidetone question

Hello all. I'm a new owner of a kenwood hybrid. I absolutely love it.

I searched the group to try and find an answer to my problem. There are many similar posts but not quite what I am experiencing.

If I have a key plugged in and switch to CW, I hear a constant sidetone. If I put the radio in "send" there is no RF output, but I hear the tone. If I press the key, it transmits as it should. The sidetone never stops until I unplug the key.

This is just a standard straight key on a mono plug. I even tried plugin in a plug with nothing attached and it does the same thing. Oddly enough, it randomly will work fine. Today I left the rig turned on in CW mode for about an hour. When I came back the tone was gone, but switching to "tune" and back to CW caused the sidetone to come on and remain on.

Any ideas? I took the case off and the plug is clean and looks brand new.

73

[Non-text portions of this message have been removed]

41152. Re: [TS-520_820_530_830] Re: L41 checks.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-25 03:14:25 UTC
From: Denise Hargreaves
Topic: 41069 Message: 41152

Dave....I just (Today) rewound the "L-8 " coil in my deaf TS-820....I have not got it back together yet but....the coil work was something I had to do....they just are not available anymore.....Ken's Hybrid website gave me the pictorial boost I needed to do such fiddly work...It took me a couple of tries (I broke the fine wire the first time.....I took a deep breath and set my rewind station up a little better so I could move around the tiny coil without snagging something....biggest problem I had was removing enough of the coating on the magnet wire to get some sort of solder joint to the leg of the coil....I managed.....I checked to see if there was continuity from leg to leg and not to the other set of legs (Primary / secondary)...it checked out OK....I think anyone who is familiar with "fly" tying would do great at this....although the mono filament for fishing lures is tougher than the #42 magnet wire needed for this work....Good luck....

Regards....Wes....VA6DWH

On 2013-02-24, at 7:22 PM, davidb wrote:

> I've been struggling with having to replace L41 since the TS530se I have was missing L41. I think I've found a core (it's a Toko 10K series 27uH inductor). What I found out is that the three pin side is the secondary with a tap (middle pin) and the two pin side is the primary -- that's standard for the Toko and similar parts. BUT for L41 the pin arrangement is different each of the pins on the two pin side is connected to the matching pin on the three pin side. I can't remember which end is primary and which is secondary, but it's easy to figure out from the board layout.
>
> Ken Kemski put me onto a note about rewinding these cores. It can be done but it's delicate work.
>
> I'm still struggling with my replacement; I think that Q1 may be dead also but I have limited time and equipment so the work goes slowly. Any advice from anybody's experience would be greatly appreciated.
>
> dave
> K2LYV
>
> --- In TS-520_820_530_830@yahoogroups.com, "jon_g4fut" wrote:
> >
> > I have searched for details of the L41 but have not found any responses which answer my query. I have removed the coil from my 530se which suffered an RF hit when its RX was switched on while I transmitted on another radio. I understand that L41 may have shorted. So my question is this. There are 3 lugs on the bottom of the coil and 2 on the top. One lug on the bottom left shorts with the one on the left top (I wish I could show a photo!). The right lug on the bottom shorts with the right lug on the top. Following so far ????.....There is the middle lug on the bottom which doesn't short with anything. Does this coil now require re-winding? Ken K4EAA has very kindly supplied the required wire should it need it. I sincerely hope that Ken's health improves.
> >

>
>

[Non-text portions of this message have been removed]

41153. Re: [TS-520_820_530_830] ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-25 03:07:13 UTC
From: Tyler Frugia
Topic: 41132 Message: 41153

Hi Alan,

Thanks for the email. Pardon my ignorance, but where would I find
FIX3-11?

I appreciate any help!

73,

Tyler
k7fru

On Sun, Feb 24, 2013 at 6:52 PM, Alan Riley <arr44@...> wrote:

> **
>
>
> My TS-820S had the exact same problem when I bought it. I found the
> problem to be a broken
> contact on connector FIX3-11 not making connection to the pin on the pcb.
>
> 73,
> Alan, KD5R
>
> From: tfrugia81
> Sent: Saturday, February 23, 2013 11:09 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] ts520se sidetone question
>
>
>
> Hello all. I'm a new owner of a kenwood hybrid. I absolutely love it.
>
> I searched the group to try and find an answer to my problem. There are
> many similar posts but not quite what I am experiencing.
>
> If I have a key plugged in and switch to CW, I hear a constant sidetone.
> If I put the radio in "send" there is no RF output, but I hear the tone. If
> I press the key, it transmits as it should. The sidetone never stops until
> I unplug the key.
>
> This is just a standard straight key on a mono plug. I even tried plugin
> in a plug with nothing attached and it does the same thing. Oddly enough,
> it randomly will work fine. Today I left the rig turned on in CW mode for
> about an hour. When I came back the tone was gone, but switching to "tune"
> and back to CW caused the sidetone to come on and remain on.
>

> Any ideas? I took the case off and the plug is clean and looks brand new.
>
> 73
>
> [Non-text portions of this message have been removed]
>
>
>

[Non-text portions of this message have been removed]

41154. Re: [TS-520_820_530_830] ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-25 05:46:58 UTC
From: Alan Riley
Topic: 41132 Message: 41154

Tyler, your TS-520SE won't have a FIX3-11, that is just the place I located the problem in my TS-820S. Sorry, I should have pointed that out.

Your problem, however appears to be the same as mine was – loss of cutoff voltage to the sidetone oscillator. The sidetone oscillator runs when the key is closed but it is cut off by a negative voltage applied when the key is open.

In the TS-520SE, the sidetone oscillator is Q6 on the AF Unit (X49-008-01). The "KEY" terminal on that board should have a negative voltage of about -65 vdc in the key-up condition (it should be the same as the open-circuit voltage across your key contacts). Check there to see if the negative voltage is present. I don't know whether the TS-520SE uses a wire-wrap connection at that point or not but if it does, then I suspect you will find it to be the problem. If it is a bad wire-wrap connection, clean it good and solder it.

If you don't have the manuals for it, you can download them from Gordon's website as I just did (thanks, Gordon!).

Let us know what you find.

73,
Alan, KD5R

From: Tyler Frugia
Sent: Sunday, February 24, 2013 9:07 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] ts520se sidetone question

Hi Alan,

Thanks for the email. Pardon my ignorance, but where would I find FIX3-11?

I appreciate any help!

73,

Tyler
k7fru

On Sun, Feb 24, 2013 at 6:52 PM, Alan Riley mailto:arr44%40suddenlink.net> wrote:

> **
>
>
> My TS-820S had the exact same problem when I bought it. I found the
> problem to be a broken
> contact on connector FIX3-11 not making connection to the pin on the pcb.

>
> 73,
> Alan, KD5R
>
> From: tfrugia81
> Sent: Saturday, February 23, 2013 11:09 PM
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Subject: [TS-520_820_530_830] ts520se sidetone question
>
>
> Hello all. I'm a new owner of a kenwood hybrid. I absolutely love it.
>
> I searched the group to try and find an answer to my problem. There are
> many similar posts but not quite what I am experiencing.
>
> If I have a key plugged in and switch to CW, I hear a constant sidetone.
> If I put the radio in "send" there is no RF output, but I hear the tone. If
> I press the key, it transmits as it should. The sidetone never stops until
> I unplug the key.
>
> This is just a standard straight key on a mono plug. I even tried plugin
> in a plug with nothing attached and it does the same thing. Oddly enough,
> it randomly will work fine. Today I left the rig turned on in CW mode for
> about an hour. When I came back the tone was gone, but switching to "tune"
> and back to CW caused the sidetone to come on and remain on.
>
> Any ideas? I took the case off and the plug is clean and looks brand new.
>
> 73
>
> [Non-text portions of this message have been removed]
>
>
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41155. Re: MC-50 disassembly ?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-25 04:55:17 UTC
From: MountainMike
Topic: 41057 Message: 41155

Claudio,

Since the original message from you does not show up in the archived messages, I will answer using Ken's response.

I had a similar issue - opening up a TS-50 mic to fix the Push-To-Talk (PTT) switch. I Googled/BINGed the question and I thought I bookmarked the page, but can't find it, so here is what I have in my memory.

1.) A CLEAN cloth towel to work on and catch the pieces in your work space.
2.) Place aluminum foil over the sound-catching / open portion of the mic to protect the pick-up element from the heat.
3.) Use a heat gun to heat the area between the aluminum foil covered area and the main mic body. Use GLOVED hands to occasionally grasp the two "halves" of the mic and turn them to see if they are loosened up yet.
4.) continue to apply heat from the heat gun to the area separating the two mic halves until you can unscrew them.
5.) When the two halves are separated, carefully remove the parts, noting how they go back together!

I found a "photo bucket" website of the process, but where is the explanation?
PHOTOS: < http://s261.beta.photobucket.com/user/ai4wm/library/Cleaning%20Kenwood%20MC-50%20Microphone >

If I find the verbal explanation - better than mine - I will repost.

73,
Mike, wb6csh

--- In TS-520_820_530_830@yahoogroups.com, "claudio" <aetna50@...> wrote:
>
>
>
> Hi Ken,
> thanks for the information....ooh my god it seems a very complicated operation ! so they glued the two parts, I wonder why.
> Well, but before to try open it I would like to know more about possible replacements of the cartrige, which brand, type etc, any suggestion ?
> In the while I bought an home studio mic here (Philips sbc md150 dynamic micro) and mounted it on the MC-50 support. I got very bad results, too low and too bassy audio. May be I'm missing the 600-50K step-up transformer needed to drive my TS-520S..??
> I bought one here and payed about 15$, I'm waiting for it.
>
> Thanks and 73s
>
> Claudio
> IT9JCB

>
>
> --- In TS-520_820_530_830@yahoogroups.com, Ken Winterling <wa2lbi@> wrote:
> >
> > IT9JCB,
> >
> > Wrap a cloth around the body of the mic to protect your hand and the mic.
> > Focus a heat gun or hair dryer on the joint between the base of the mic
> > and the top of the body. Rotate the mic and/or heat source around the
> > entire diameter to soften the glue used to secure the pieces.
> >
> > Every 5 seconds or so wrap a cloth around the mic head to protect your hand
> > and try to unscrew the top. Turn the top counter clockwise while holding
> > the body. It should come loose after a short time. DO NOT use any pliers,
> > etc. or you will damage the head and/or body.
> >
> > Ken
> > WA2LBI
> >
> >
> > On Wed, Feb 20, 2013 at 4:17 AM, claudio <aetna50@> wrote:
> >
> > > **
> > >
> > >
> > > Hi,
> > > I received my loved TS-520S one week ago from Germany through eBay,
> > > perfect conditions and it arrived with its beatiful MC-50 mic.
> > > I was so happy guys, the radio sounded great, unfortunately when I was
> > > re-arranging my shack for the new entry the mic falled down to the floor
> > > and.....bye bye mc-50 !! I think that the cartridge is broken, so I tried
> > > to open the case to remove it but it seems to be impossible, the cartridge
> > > is inside the upper cap and the cap cannot be open, I tried all...got very
> > > disappointed.
> > > So I ask you if anyone knows how to disassembly this mic and some
> > > suggestion for possible cartridge replacements.
> > >
> > > Thanks
> > > 73s de IT9JCB
> > >
> > >
> > >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

41156. Re: MC-50 disassembly ?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-25 11:35:17 UTC
From: claudio
Topic: 41057 Message: 41156

Hi Ken,
thank you for encouraging me, I will try do it after finding a cartridge replacement. I'm looking here to some cartridges in the net, there are someones which are used for studio mics, also the famous HC4/5 are available as but at high cost (!!). I'm sure that the transformer will improve a lot, having more level after the step-up (I expect about +15dB of boost in level) I could use a passive bass tone control as that used in the guitars pickup to correct the bass response.
All this for our loved TS-520S rig !!

73s
Claudio

--- In TS-520_820_530_830@yahoogroups.com, Ken Winterling <wa2lbi@...> wrote:
>
> Claudio,
>
> Dismantling the MC-50 is not difficult and takes only a couple minutes. I
> have opened several MC-50 and MC-60 mics and it never took much heat or
> more than a minute or two. Just be careful to keep turning the mic as you
> apply the heat so you do not concentrate the heat in one place.
>
> I have never had the need to replace the mic element in a MC-50 so I can't
> offer a personal recommendation. I would get it a part and then determine
> if a new element is needed. It is possible that a wire broke off and you
> can repair it.
>
> As for the Philips mic, it is 600 ohms which is not a good match to the
> TS-520S mic input impedance of 50K ohms. The impedance matching
> transformer you purchased should help with that,
>
> Ken
> WA2LBI
>
>
> On Sun, Feb 24, 2013 at 7:13 PM, claudio <aetna50@...> wrote:
>
> > **
> > >
> > >
> > >
> > >
> > Hi Ken,
> > thanks for the information....ooh my god it seems a very complicated
> > operation ! so they glued the two parts, I wonder why.
> > Well, but before to try open it I would like to know more about possible

> > replacements of the cartrige, which brand, type etc, any suggestion ?
> > In the while I bought an home studio mic here (Philips sbc md150 dynamic
> > micro) and mounted it on the MC-50 support. I got very bad results, too low
> > and too bassy audio. May be I'm missing the 600-50K step-up transformer
> > needed to drive my TS-520S..??
> > I bought one here and payed about 15$, I'm waiting for it.
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> >
> > Claudio
> > IT9JCB
> >
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> > >
> > > IT9JCB,
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> > > Wrap a cloth around the body of the mic to protect your hand and the mic.
> > > Focus a heat gun or hair dryer on the joint between the base of the mic
> > > and the top of the body. Rotate the mic and/or heat source around the
> > > entire diameter to soften the glue used to secure the pieces.
> > >
> > > Every 5 seconds or so wrap a cloth around the mic head to protect your
> > hand
> > > and try to unscrew the top. Turn the top counter clockwise while holding
> > > the body. It should come loose after a short time. DO NOT use any pliers,
> > > etc. or you will damage the head and/or body.
> > >
> > > Ken
> > > WA2LBI
> > >
> > >
> > > On Wed, Feb 20, 2013 at 4:17 AM, claudio wrote:
> > >
> > > > **
> > > >
> > > >
> > > > Hi,
> > > > I received my loved TS-520S one week ago from Germany through eBay,
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> > > > and.....bye bye mc-50 !! I think that the cartridge is broken, so I
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> > > > is inside the upper cap and the cap cannot be open, I tried all...got
> > very
> > > > disappointed.
> > > > So I ask you if anyone knows how to disassembly this mic and some

> > > > suggestion for possible cartridge replacements.
> > > >
> > > > Thanks
> > > > 73s de IT9JCB
> > > >
> >
>
>
> [Non-text portions of this message have been removed]
>

41157. Need a Shipping Box

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-25 16:03:17 UTC
From: Joe
Topic: 41157 Message: 41157

I need an original Kenwood TS-950 shipping box. (And all the packing for said radio!) Anyone have one they might be willing to part with?

Please respond to me, off-group, at Narcisilus@...

Many thanks!!

Joe Wolfe - WA6RKN
Reno, Nevada

41158. Re: L41 checks.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-25 16:04:49 UTC
From: David Birnbaum
Topic: 41069 Message: 41158

Thanks Wes. I've rewound the coils and agree it's a job for a steady hand and a good magnifier.

My problem is that I had to substitule a different coil and I'm not sure if it's the same material as the original L41. Either that or if someone could tell me the inductance of the primary and/or secondary of a good L41.

dave
K2LYV

[Non-text portions of this message have been removed]

41159. DG-1 display repaired. Was missing 1 digit.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-25 18:41:43 UTC
From: kd0fds
Topic: 41159 Message: 41159

Here is a quick write-up to help others in case they find the first digit to the left of the decimal point not displaying correctly.

Almost 2 years of missing the first whole number on my tech special TS-820s. About 10 different attempts to fix and I finally have the digital display working!

Machine: TS-820S
Problem: Digit to the left of decimal place missing on digital display most of the time.

Bandswitch: wwv, 1.8, 3.5, 7, 14 = digit to the left of the decimal point missing. WWV and 14 show the "1" but not the "5" or "4."

Bandswitch: 21 = display shows "29" instead of "21."

Bandswitch: 28, 28.5, 29, 29.5 = display works correctly.

Cleaning external connectors = no change.
Cleaning internal connectors = sometimes works correctly for a few minutes.

Adding wire to all but the blind through holes = sometimes works correctly for a few minutes.

Actual problem: Corroded trace afforded partial connection.

In my case I think the trace was between IC 9 and IC10 on the back (no parts) of the counter board. I scraped the trace off the board almost by accident with my fingernail. Re-tested the board and it didn
't work any worse so I knew I was on the right trace -er track.

Repair:

The gap was way to big to bridge with a blob of solder. I removed the repair attempt #1 blob. I used a strand of .0040" wire to bridge the gap. I used a standard 35watt soldering iron. One side at a time, then cut off the extra wire. Not real proud of my workmanship on this one, but not bad for a hack with a big iron and aging eyes.

Image uploaded to photos.

41160. Source for TS-520 tubes and parts.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-25 22:56:40 UTC
From: Peter
Topic: 41160 Message: 41160

Hi to all. A while back I ordered some precision resistors and a 12BY7 driver tube from a source recommended here. I can't find the name of this source and don't remember the name. It was a ham who specializes in this stuff. I need some additional parts. Can anyone help me out?
Thanks & 73,
Pete Carr WW3O

41161. RE: [TS-520_820_530_830] Source for TS-520 tubes and parts.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-25 23:36:07 UTC
From: fpath fpath
Topic: 41160 Message: 41161

Try Ken K4EAA

To: TS-520_820_530_830@yahoogroups.com
From: wb3bqo@yahoo.com
Date: Mon, 25 Feb 2013 22:56:40 +0000
Subject: [TS-520_820_530_830] Source for TS-520 tubes and parts.

Hi to all. A while back I ordered some precision resistors and a 12BY7 driver tube from a source recommended here. I can't find the name of this source and don't remember the name. It was a ham who specializes in this stuff. I need some additional parts. Can anyone help me out?
Thanks & 73,
Pete Carr WW3O

[Non-text portions of this message have been removed]

41162. Re: [TS-520_820_530_830] Source for TS-520 tubes and parts.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-25 23:31:30 UTC
From: John Donnelly
Topic: 41160 Message: 41162

It was probably Ken at K4EAA.com. He has a lot of the missing pieces for the old TS series radios and also does restoration
work. I just ordered the caps and resistors for a 520 that's now back on the air after 25 years. You can also get some good deals
on ebay. There are some folks there that sell all three of the vacuum tubes, a matched pair of 6146Bs and the 12BY7 driver for
around $60.

Jack Donnelly KV4JX
Ball Ground Video Productions
308 Calusa Place

Ball Ground, GA 30107
Phone 678-592-9974
www.ballgroundvideo.com

From: Peter <wb3bqo@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, February 25, 2013 5:56 PM
Subject: [TS-520_820_530_830] Source for TS-520 tubes and parts.

Hi to all. A while back I ordered some precision resistors and a 12BY7 driver tube from a source recommended here. I can't find the name of this source and don't remember the name. It was a ham who specializes in this stuff. I need some additional parts. Can anyone help me out?
Thanks & 73,
Pete Carr WW3O

[Non-text portions of this message have been removed]

41163. Re: [TS-520_820_530_830] Re: Transverters

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-25 23:57:02 UTC
From: John Davidson
Topic: 41114 Message: 41163

I picked up a new TV506 for my TS520 and was very disappointed in it's receiver lack of sensitivity. I hald other older tube (nuvistor) converters and an SX101a receiver that heard all the weaker signals from 100 + miles away and the 506 only heard locals on the same antenna.

From: Rick <rickb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, February 24, 2013 8:53 PM
Subject: RE: [TS-520_820_530_830] Re: Transverters

Thanks for the info, Ken. I will use the transverters from time to time, but I understand they would not compete with a dedicated rig or even a little more modern multi-band rig. Thanks for the tips on how to hook them up and on what not to do. I would very likely have made the mistake of turning them both on at the same time. My goal is to assemble a totally complete TS-520 station. I lack the transverters (I think I have found them both) and the amplifier. Unless I find a techie special or one that has been fried I doubt I'll be getting the amp anytime soon. Too much money for an old timer on a fixed income.

Thanks Again.

Rick / K5IAR

From: mailto:TS-520_820_530_830%40yahoogroups.com [mailto:mailto:TS-520_820_530_830%40yahoogroups.com] On Behalf Of Avguy
Sent: Sunday, February 24, 2013 7:10 PM
To: mailto:TS-520_820_530_830%40yahoogroups.com
Subject: [TS-520_820_530_830] Re: Transverters

Rick,

I have both transverters hooked to my TS520S. They daisy-chain together. The TV502 hooks directly to the TS520 then the TV506 hooks to the TS502. Do not turn both transverters on at the same time the 502 overrules the 506... The other thing to note is the antenna to the TS-520 should be disconnected or routed to a dummy load while using the transverters, since strong RF signals can still get inside the 520 from the HF antenna, and there is the possible leakage of qrm from the 520 to the outside world! If you are planning to do a lot of 6 and 2 meter ops with this set up you might be disappointed in the sensitivity on receive compared with a dedicated modern 6 or 2 meter rig. My FT817nd runs circles around the transverters in the area of sensitivity and selectivity. The transverters only put out about 4 or 5 watts so you will be running QRP as well. They look nice on the bench and are fun to fool with

but don't expect contest quality operation.

Ken
AE7PX

--- In mailto:TS-520_820_530_830%40yahoogroups.com
, "Rick" wrote:
>
> This is probably a dumb question for those of you who are much more in the
> know than I am, but. is it possible to have the TV-502 and TV-506
connected
> at the same time on a TS-520? I realize there is only one transverter
> connection on the TS-520, but I thought maybe there is some kind of
adaptor
> to accommodate both the 6 meter and the 2 meter units.
>
> Thanks for any help or advice you can offer.
> Rick / K5IAR
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41164. Dipole

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-26 01:08:24 UTC
From: Noodle10536
Topic: 41031 Message: 41164

When I was a new ham some Elmer buddies convinced me to put up a wire dipole antenna. I used a ladder loc from WA1FFl, some 16 ga 450 ohm ladder line and about 130' of #12 THHN wire from Home Deeps. I used one clothes line pulley, dacron rope, good insulators and some sash weights. I do not like heights, so I paid some local tree workers to put it up in trees in my yard. One end is about 50' off the ground and the other is about 35' although the antenna is level, ground is sloped. I bought a 4:1 balun kit from Palomar Engineers and got it all hooked up. It worked very well with my Drake TR-4C and then became my favorite with my TS-530. I am no expert and have limited experience, but this was very easy to build, install and tunes easily. I would never be without one!

Best of luck, Peter.

41165. Re: MC-50 disassembly ?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-26 00:31:39 UTC
From: claudio
Topic: 41057 Message: 41165

Mike,
I've seen the photos, I think I'll get crazy doing this kind of "dirty" job ! But I will do it, or may be better to say I'll try to do it, I don't like this kind of jobs, I wonder why they glued the parts. may be to force you to buy a new one, instead of reparing it.
Anyway thanks for directions and useful suggestions.

73s
IT9JCB

--- In TS-520_820_530_830@yahoogroups.com, "MountainMike" <wb6csh7@...> wrote:
>
> Claudio,
>
> Since the original message from you does not show up in the archived messages, I will answer using Ken's response.
>
> I had a similar issue - opening up a TS-50 mic to fix the Push-To-Talk (PTT) switch. I Googled/BINGed the question and I thought I bookmarked the page, but can't find it, so here is what I have in my memory.
>
> 1.) A CLEAN cloth towel to work on and catch the pieces in your work space.
> 2.) Place aluminum foil over the sound-catching / open portion of the mic to protect the pick-up element from the heat.
> 3.) Use a heat gun to heat the area between the aluminum foil covered area and the main mic body. Use GLOVED hands to occasionally grasp the two "halves" of the mic and turn them to see if they are loosened up yet.
> 4.) continue to apply heat from the heat gun to the area separating the two mic halves until you can unscrew them.
> 5.) When the two halves are separated, carefully remove the parts, noting how they go back together!
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> I found a "photo bucket" website of the process, but where is the explanation?
> PHOTOS: < http://s261.beta.photobucket.com/user/ai4wm/library/Cleaning%20Kenwood%20MC-50%20Microphone >
>
> If I find the verbal explanation - better than mine - I will repost.
>
> 73,
> Mike, wb6csh
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "claudio" <aetna50@> wrote:
> >
> >
> >

> > Hi Ken,
> > thanks for the information....ooh my god it seems a very complicated operation ! so they glued the two parts, I wonder why.
> > Well, but before to try open it I would like to know more about possible replacements of the cartrige, which brand, type etc, any suggestion ?
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> > I bought one here and payed about 15$, I'm waiting for it.
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> >
> > Claudio
> > IT9JCB
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Ken Winterling <wa2lbi@> wrote:
> > >
> > > IT9JCB,
> > >
> > > Wrap a cloth around the body of the mic to protect your hand and the mic.
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> > > Every 5 seconds or so wrap a cloth around the mic head to protect your hand
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> > > etc. or you will damage the head and/or body.
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> > > WA2LBI
> > >
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> > > On Wed, Feb 20, 2013 at 4:17 AM, claudio <aetna50@> wrote:
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> > > >
> > > >
> > >
> > >
> > > [Non-text portions of this message have been removed]
> > >
> >
>

41166. Re: [TS-520_820_530_830] Source for TS-520 tubes and parts.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-26 02:16:39 UTC
From: pmarkavage@...
Topic: 41160 Message: 41166

For some of your hybrid parts, you might want to check here too:
http://www.hybridrestore.com/parts/

Pete, wa2cwa

> _____
> From: Peter <wb3bqo@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, February 25, 2013 5:56 PM
> Subject: [TS-520_820_530_830] Source for TS-520 tubes and parts.
>
>
>
> Hi to all. A while back I ordered some precision resistors and a
> 12BY7 driver tube from a source recommended here. I can't find the
> name of this source and don't remember the name. It was a ham who
> specializes in this stuff. I need some additional parts. Can anyone
> help me out?
> Thanks & 73,
> Pete Carr WW3O

41167. Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-26 02:20:36 UTC
From: tfrugia81
Topic: 41132 Message: 41167

Got it, thank you for the clarification.

I measured voltage at the KEY terminal on the AF board, and it indeed has -63ish volts DC with the key open. All of the connections on the AF board look ok to my naked eye. I traced the ones that I could easily follow and they seemed ok (using a meter to test continuity).

I am very much new to these radios (and radio repair in general). Is there anything else I should be looking for? I appreciate your help!

73

--- In TS-520_820_530_830@yahoogroups.com, "Alan Riley" <arr44@...> wrote:
>
> Tyler, your TS-520SE wonâ□□t have a FIX3-11, that is just the place I located
> the problem in my TS-820S. Sorry, I should have pointed that out.
>
> Your problem, however appears to be the same as mine was â□" loss of cutoff
> voltage to the sidetone oscillator. The sidetone oscillator runs when the key
> is closed but it is cut off by a negative voltage applied when the key is open.
>
> In the TS-520SE, the sidetone oscillator is Q6 on the AF Unit (X49-008-01).
> The â□□KEYâ□□ terminal on that board should have a negative voltage of about
> -65 vdc in the key-up condition (it should be the same as the open-circuit
> voltage across your key contacts). Check there to see if the negative voltage
> is present. I donâ□□t know whether the TS-520SE uses a wire-wrap connection
> at that point or not but if it does, then I suspect you will find it to be the
> problem. If it is a bad wire-wrap connection, clean it good and solder it.
>
> If you donâ□□t have the manuals for it, you can download them from Gordonâ□□s
> website as I just did (thanks, Gordon!).
>
> Let us know what you find.
>
> 73,
> Alan, KD5R
>
>
>
> From: Tyler Frugia
> Sent: Sunday, February 24, 2013 9:07 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [TS-520_820_530_830] ts520se sidetone question
>
>
> Hi Alan,

>
> Thanks for the email. Pardon my ignorance, but where would I find
> FIX3-11?
>
> I appreciate any help!
>
> 73,
>
> Tyler
> k7fru
>
> On Sun, Feb 24, 2013 at 6:52 PM, Alan Riley mailto:arr44%40suddenlink.net> wrote:
>
> > **
> >
> >
> > My TS-820S had the exact same problem when I bought it. I found the
> > problem to be a broken
> > contact on connector FIX3-11 not making connection to the pin on the pcb.
> >
> > 73,
> > Alan, KD5R
> >
> > From: tfrugia81
> > Sent: Saturday, February 23, 2013 11:09 PM
> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > Subject: [TS-520_820_530_830] ts520se sidetone question
> >
> >
> > Hello all. I'm a new owner of a kenwood hybrid. I absolutely love it.
> >
> > I searched the group to try and find an answer to my problem. There are
> > many similar posts but not quite what I am experiencing.
> >
> > If I have a key plugged in and switch to CW, I hear a constant sidetone.
> > If I put the radio in "send" there is no RF output, but I hear the tone. If
> > I press the key, it transmits as it should. The sidetone never stops until
> > I unplug the key.
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> > in a plug with nothing attached and it does the same thing. Oddly enough,
> > it randomly will work fine. Today I left the rig turned on in CW mode for
> > about an hour. When I came back the tone was gone, but switching to "tune"
> > and back to CW caused the sidetone to come on and remain on.
> >
> > Any ideas? I took the case off and the plug is clean and looks brand new.
> >
> > 73
> >

> > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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41168. Re: [TS-520_820_530_830] Source for TS-520 tubes and parts.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-26 03:02:55 UTC
From: Mike
Topic: 41160 Message: 41168

http://www.vacuumtubes.net/

is another source for good tubes. I buy all my vacuum tubes from this website and I've never received a bad tube yet.

73
Mike

On 2/25/2013 4:56 PM, Peter wrote:
>
> Hi to all. A while back I ordered some precision resistors and a 12BY7
> driver tube from a source recommended here. I can't find the name of
> this source and don't remember the name. It was a ham who specializes
> in this stuff. I need some additional parts. Can anyone help me out?
> Thanks & 73,
> Pete Carr WW3O
>
>

[Non-text portions of this message have been removed]

41169. Re: [TS-520_820_530_830] Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-26 07:17:28 UTC
From: Alan Riley
Topic: 41132 Message: 41169

Ok, good. The purpose of this –63 vdc is to inhibit the sidetone oscillator when your key contacts are open. It does this by reverse biasing diode D3, thus turning it off and interrupting the feedback path necessary for Q6 to oscillate.

It appears that your –63 volts is either not reaching the diode or else the diode is shorted. A positive voltage of about +100 vdc enters the AF board at the “STB” terminal. This +100v and the voltage at the “KEY” terminal (-63v key up, 0v key down) are combined through resistors R35 and R36 such that D3 is forward biased when your key contacts are closed but when the key contacts open, the –63v “overpowers” the positive voltage, killing the oscillator.

One other possibility would be for the R35 and/or R36 values to have changed such that the negative voltage is not quite able to overcome the positive voltage.

Measure the voltage at the anode of D3 under key up and key down conditions. Also, if you are using an analog meter or a digital meter with a diode test function, measure resistance both directions across D3 (be sure there is no voltage present on the diode when you do this).

Let us know what you find.

73,
Alan, KD5R

From: tfrugia81
Sent: Monday, February 25, 2013 8:20 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: ts520se sidetone question

Got it, thank you for the clarification.

I measured voltage at the KEY terminal on the AF board, and it indeed has -63ish volts DC with the key open. All of the connections on the AF board look ok to my naked eye. I traced the ones that I could easily follow and they seemed ok (using a meter to test continuity).

I am very much new to these radios (and radio repair in general). Is there anything else I should be looking for? I appreciate your help!

73

--- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley" wrote:
>
> Tyler, your TS-520SE wonâ□□t have a FIX3-11, that is just the place I located
> the problem in my TS-820S. Sorry, I should have pointed that out.
>

> Your problem, however appears to be the same as mine was â□" loss of cutoff
> voltage to the sidetone oscillator. The sidetone oscillator runs when the key
> is closed but it is cut off by a negative voltage applied when the key is open.
>
> In the TS-520SE, the sidetone oscillator is Q6 on the AF Unit (X49-008-01).
> The â□□KEYâ□□ terminal on that board should have a negative voltage of about
> -65 vdc in the key-up condition (it should be the same as the open-circuit
> voltage across your key contacts). Check there to see if the negative voltage
> is present. I donâ□□t know whether the TS-520SE uses a wire-wrap connection
> at that point or not but if it does, then I suspect you will find it to be the
> problem. If it is a bad wire-wrap connection, clean it good and solder it.
>
> If you donâ□□t have the manuals for it, you can download them from Gordonâ□□s
> website as I just did (thanks, Gordon!).
>
> Let us know what you find.
>
> 73,
> Alan, KD5R
>
>
>
> From: Tyler Frugia
> Sent: Sunday, February 24, 2013 9:07 PM
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Subject: Re: [TS-520_820_530_830] ts520se sidetone question
>
>
> Hi Alan,
>
> Thanks for the email. Pardon my ignorance, but where would I find
> FIX3-11?
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> I appreciate any help!
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> 73,
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> > Alan, KD5R
> >
> > From: tfrugia81
> > Sent: Saturday, February 23, 2013 11:09 PM
> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > Subject: [TS-520_820_530_830] ts520se sidetone question
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> > If I put the radio in "send" there is no RF output, but I hear the tone. If
> > I press the key, it transmits as it should. The sidetone never stops until
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> > This is just a standard straight key on a mono plug. I even tried plugin
> > in a plug with nothing attached and it does the same thing. Oddly enough,
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> > Any ideas? I took the case off and the plug is clean and looks brand new.
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41170. Re: [TS-520_820_530_830] Source for TS-520 tubes and parts.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-26 15:51:47 UTC
From: Peter Carr
Topic: 41160 Message: 41170

Hi and thanks for the link. That's the guy I dealt with before. He has some really good stuff.
Thanks again.
73.
Pete WW3O

From: fpath fpath <fpath@...>
To: ts-520_820_530_830@yahoogroups.com
Sent: Monday, February 25, 2013 6:36 PM
Subject: RE: [TS-520_820_530_830] Source for TS-520 tubes and parts.

Try Ken K4EAA

To: TS-520_820_530_830@yahoogroups.com
From: wb3bqo@...
Date: Mon, 25 Feb 2013 22:56:40 +0000
Subject: [TS-520_820_530_830] Source for TS-520 tubes and parts.

Hi to all. A while back I ordered some precision resistors and a 12BY7 driver tube from a source recommended here. I can't find the name of this source and don't remember the name. It was a ham who specializes in this stuff. I need some additional parts. Can anyone help me out?
Thanks & 73,
Pete Carr WW3O

[Non-text portions of this message have been removed]

Yahoo! Groups Links

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41171. Re: [TS-520_820_530_830] Dipole

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-26 16:35:22 UTC
From: Bob
Topic: 41031 Message: 41171

Great antenna experience. Always like those 'tried'n proven' antenna methods that just seem to work. Question: How well does it work on 10m? Does it tune real sharp on your tuner? I have a G5RV and it's real touchy to tune up on 10m. (My 520 is still happy tho)

Bob, KD5MHQ

--- On Mon, 2/25/13, Noodle10536 <pureenduro@...> wrote:

When I was a new ham some Elmer buddies convinced me to put up a wire dipole antenna. I used a ladder loc from WA1FFl, some 16 ga 450 ohm ladder line and about 130' of #12 THHN wire from Home Deeps. I used one clothes line pulley, dacron rope, good insulators and some sash weights. I do not like heights, so I paid some local tree workers to put it up in trees in my yard. One end is about 50' off the ground and the other is about 35' although the antenna is level, ground is sloped. I bought a 4:1 balun kit from Palomar Engineers and got it all hooked up. It worked very well with my Drake TR-4C and then became my favorite with my TS-530. I am no expert and have limited experience, but this was very easy to build, install and tunes easily. I would never be without one!

Best of luck, Peter.

41172. Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-26 18:42:58 UTC
From: tfrugia81
Topic: 41132 Message: 41172

Thanks again for the help. I will test this tonight.

Here is an issue I'm having as well, could this be related? I would think not, but thought I'd send it anyway - http://www.youtube.com/watch?v=AAWdikZZt58

--- In TS-520_820_530_830@yahoogroups.com, "Alan Riley" <arr44@...> wrote:
>
> Ok, good. The purpose of this â□"63 vdc is to inhibit the sidetone oscillator
> when your key contacts are open. It does this by reverse biasing diode D3,
> thus turning it off and interrupting the feedback path necessary for Q6 to
> oscillate.
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> It appears that your â□"63 volts is either not reaching the diode or else the
> diode is shorted. A positive voltage of about +100 vdc enters the AF board
> at the â□□STBâ□□ terminal. This +100v and the voltage at the â□□KEYâ□□ terminal
> (-63v key up, 0v key down) are combined through resistors R35 and R36
> such that D3 is forward biased when your key contacts are closed but
> when the key contacts open, the â□"63v â□□overpowersâ□□ the positive voltage,
> killing the oscillator.
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> One other possibility would be for the R35 and/or R36 values to have changed
> such that the negative voltage is not quite able to overcome the positive voltage.
>
> Measure the voltage at the anode of D3 under key up and key down conditions.
> Also, if you are using an analog meter or a digital meter with a diode test
> function, measure resistance both directions across D3 (be sure there is
> no voltage present on the diode when you do this).
>
> Let us know what you find.
>
> 73,
> Alan, KD5R
>
>
> From: tfrugia81
> Sent: Monday, February 25, 2013 8:20 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: ts520se sidetone question
>
>
> Got it, thank you for the clarification.
>
> I measured voltage at the KEY terminal on the AF board, and it indeed has -63ish volts DC with the key open. All of the connections on the AF board look ok to my naked eye. I traced the ones that I could easily follow and they seemed

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> I am very much new to these radios (and radio repair in general). Is there anything else I should be looking for? I appreciate your help!
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> 73
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley" wrote:
> >
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> > the problem in my TS-820S. Sorry, I should have pointed that out.
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> >
> > From: Tyler Frugia
> > Sent: Sunday, February 24, 2013 9:07 PM
> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > Subject: Re: [TS-520_820_530_830] ts520se sidetone question
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> > Hi Alan,
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> > I appreciate any help!
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> > > From: tfrugia81
> > > Sent: Saturday, February 23, 2013 11:09 PM
> > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > Subject: [TS-520_820_530_830] ts520se sidetone question
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41173. Coax

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-26 20:37:53 UTC
From: Rick
Topic: 41173 Message: 41173

I am looking for five (5) feet of miniature RG-174 (50 ohm) and five (5) feet of miniature RG-179 (75 ohm) coax. There are plenty of retailers that sell it, but they sell it in rolls of 25' to 1000' or in pre-assembled jumpers that do not fit my needs. I'll be more than happy to pay a fair price. Or if anyone knows of a business or individual that sells it by the foot I would sure appreciate their name and email address.

Thanks and 73,
Rick / K5IAR

41174. Re: [TS-520_820_530_830] Coax

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-26 20:41:59 UTC
From: William Houghton
Topic: 41173 Message: 41174

Rick,

Try these guys:
http://www.halted.com/

On their website they list stuff in rolls but I know that they sell a lot of different types of wire and cables by the foot at their retail store here in Silicon Valley. They should be willing to cut you some by the foot if they have it and ship it to you.

73, Bill

From: Rick <rickb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, February 26, 2013 12:38:03 PM
Subject: [TS-520_820_530_830] Coax

I am looking for five (5) feet of miniature RG-174 (50 ohm) and five (5) feet of miniature RG-179 (75 ohm) coax. There are plenty of retailers that sell it, but they sell it in rolls of 25' to 1000' or in pre-assembled jumpers that do not fit my needs. I'll be more than happy to pay a fair price. Or if anyone knows of a business or individual that sells it by the foot I would sure appreciate their name and email address.

Thanks and 73,
Rick / K5IAR

[Non-text portions of this message have been removed]

41175. Re: [TS-520_820_530_830] Coax

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-26 20:46:48 UTC
From: pmarkavage@...
Topic: 41173 Message: 41175

Rick:
Give Joel a call at RF Connection. Great guy, sells the stuff by the foot; probably would sell it by the inch if you asked nice.
http://www.therfc.com/coax.htm

Pete, wa2cwa

On Tue, 26 Feb 2013 14:37:53 -0600 "Rick" <rickb@...> writes:
> I am looking for five (5) feet of miniature RG-174 (50 ohm) and five
> (5)
> feet of miniature RG-179 (75 ohm) coax. There are plenty of
> retailers that
> sell it, but they sell it in rolls of 25' to 1000' or in
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> fair
> price. Or if anyone knows of a business or individual that sells it
> by the
> foot I would sure appreciate their name and email address.
>
> Thanks and 73,
> Rick / K5IAR

41176. Re: Coax

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-26 20:48:30 UTC
From: Jody
Topic: 41173 Message: 41176

--- In TS-520_820_530_830@yahoogroups.com, "Rick" <rickb@...> wrote:
>
> I am looking for five (5) feet of miniature RG-174 (50 ohm) and five (5)
> feet of miniature RG-179 (75 ohm) coax. There are plenty of retailers that
> sell it, but they sell it in rolls of 25' to 1000' or in pre-assembled
> jumpers that do not fit my needs. I'll be more than happy to pay a fair
> price. Or if anyone knows of a business or individual that sells it by the
> foot I would sure appreciate their name and email address.
>
> Thanks and 73,
> Rick / K5IAR
>
I chopped up an old GPS cablethat I had.

41177. Re: Coax

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-26 21:34:13 UTC
From: Jody
Topic: 41173 Message: 41177

--- In TS-520_820_530_830@yahoogroups.com, "Rick" <rickb@...> wrote:
>
> I am looking for five (5) feet of miniature RG-174 (50 ohm) and five (5)
> feet of miniature RG-179 (75 ohm) coax. There are plenty of retailers that
> sell it, but they sell it in rolls of 25' to 1000' or in pre-assembled
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> Thanks and 73,
> Rick / K5IAR
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I chopped up an old GPS cablethat I had.

41178. Re: TS-520S - No ALC Indication on transmit

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-26 20:34:58 UTC
From: kd8rap
Topic: 41120 Message: 41178

I have the manual and some basic test equipment (multimeter, oscilloscope, rf probe, signal generator, and a few other things)

-KD8RAP

--- In TS-520_820_530_830@yahoogroups.com, Jim Lamanteer <jimlamanteer@...> wrote:
>
> BRENDANÂ Â WHAT TYPE OF TROUBLE SHOOTING EQUIPMENT DO U HAVE? DO U HAVE A SERVICE MANUAL? ANY TEST EQUIPMENT ?? WILL TRY TO HELP U. JIMMY.
>
>
>
> _____
> From: kd8rap <kd8rap@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Saturday, February 23, 2013 4:08 PM
> Subject: [TS-520_820_530_830] TS-520S - No ALC Indication on transmit
>
>
> Â
>
> Greetings all. Name is Brendan, and I am a new member here, and just checked in to the net for the first time. My first HF rig was a TS-520 and now I use a TS-520S. I had a bit of trouble getting through the QRM checking into the net because I am on my backup QRP rig until I can get my Kenwood sorted out.
>
> Just wanted to follow up about an intermittent problem I have been having that I mentioned on the net. I was having two problems and solved one but not the other.
>
> Problem 1: The rig would not go back in to receive mode after transmitting. (This problem was solved after replacing relay RL1)
>
> Problem 2: I have an intermittent problem where I have no ALC indication on the meter while I am transmitting, it stays completely still at the bottom of the scale. If I switch bands (say from 40 to 20 meters) I have ALC indication again, but not if I switch back to 40 meters I won't have ALC indication again. It happens on multiple bands intermittently. While this is happening I still have normal output power on my wattmeter, and can still make contacts, just no ALC indication on the meter.
>
> I was hoping replacing the relay would fix both issues but it didn't fix the second.
>
> Does anyone have any ideas on where to start looking? Any specific area or component of the ALC circuit?
>
> Thanks in advance! 73's Brendan KD8RAP

>
>
>
>
> [Non-text portions of this message have been removed]
>

41179. Re: [TS-520_820_530_830] Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-26 22:14:44 UTC
From: Alan Riley
Topic: 41132 Message: 41179

Well, the video tells me you may have a bad TR relay causing the intermittent loss of receive audio. You can check for this by turning on the internal 25 kHz calibrator. If it is the TR relay, the signal from the internal calibrator will still be at it’s normal level even though the received signal off of the antenna has dropped out. Connect a microphone and key it briefly a few times and see if the signal from the antenna returns. In addition, exercise the external receive antenna switch on the rear of the rig since the receive signal path goes through it too.

On the constant sidetone issue, look closely at all soldered connections in the sidetone circuit and especially any wire-wrap connections. You should be able to track down the problem there with your voltmeter. Also, make sure the board mounting screws are tight.

73,
Alan, KD5R

From: tfrugia81
Sent: Tuesday, February 26, 2013 12:42 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: ts520se sidetone question

Thanks again for the help. I will test this tonight.

Here is an issue I'm having as well, could this be related? I would think not, but thought I'd send it anyway - http://www.youtube.com/watch?v=AAWdikZZt58

--- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley" wrote:
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> Ok, good. The purpose of this â□"63 vdc is to inhibit the sidetone oscillator
> when your key contacts are open. It does this by reverse biasing diode D3,
> thus turning it off and interrupting the feedback path necessary for Q6 to
> oscillate.
>
> It appears that your â□"63 volts is either not reaching the diode or else the
> diode is shorted. A positive voltage of about +100 vdc enters the AF board
> at the â□□STBâ□□ terminal. This +100v and the voltage at the â□□KEYâ□□ terminal
> (-63v key up, 0v key down) are combined through resistors R35 and R36
> such that D3 is forward biased when your key contacts are closed but
> when the key contacts open, the â□"63v â□□overpowersâ□□ the positive voltage,
> killing the oscillator.
>
> One other possibility would be for the R35 and/or R36 values to have changed
> such that the negative voltage is not quite able to overcome the positive voltage.
>
> Measure the voltage at the anode of D3 under key up and key down conditions.

> Also, if you are using an analog meter or a digital meter with a diode test
> function, measure resistance both directions across D3 (be sure there is
> no voltage present on the diode when you do this).
>
> Let us know what you find.
>
> 73,
> Alan, KD5R
>
>
> From: tfrugia81
> Sent: Monday, February 25, 2013 8:20 PM
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Subject: [TS-520_820_530_830] Re: ts520se sidetone question
>
>
> Got it, thank you for the clarification.
>
> I measured voltage at the KEY terminal on the AF board, and it indeed has -63ish volts DC with the key open. All of the connections on the AF board look ok to my naked eye. I traced the ones that I could easily follow and they seemed ok (using a meter to test continuity).
>
> I am very much new to these radios (and radio repair in general). Is there anything else I should be looking for? I appreciate your help!
>
> 73
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley" wrote:
> >
> > Tyler, your TS-520SE wonÃ¢Â□Â□t have a FIX3-11, that is just the place I located
> > the problem in my TS-820S. Sorry, I should have pointed that out.
> >
> > Your problem, however appears to be the same as mine was Ã¢Â□" loss of cutoff
> > voltage to the sidetone oscillator. The sidetone oscillator runs when the key
> > is closed but it is cut off by a negative voltage applied when the key is open.
> >
> > In the TS-520SE, the sidetone oscillator is Q6 on the AF Unit (X49-008-01).
> > The Ã¢Â□Â□KEYÃ¢Â□Â□ terminal on that board should have a negative voltage of about
> > -65 vdc in the key-up condition (it should be the same as the open-circuit
> > voltage across your key contacts). Check there to see if the negative voltage
> > is present. I donÃ¢Â□Â□t know whether the TS-520SE uses a wire-wrap connection
> > at that point or not but if it does, then I suspect you will find it to be the
> > problem. If it is a bad wire-wrap connection, clean it good and solder it.
> >
> > If you donÃ¢Â□Â□t have the manuals for it, you can download them from GordonÃ¢Â□Â□s
> > website as I just did (thanks, Gordon!).
> >
> > Let us know what you find.
> >

> > 73,
> > Alan, KD5R
> >
> >
> >
> > From: Tyler Frugia
> > Sent: Sunday, February 24, 2013 9:07 PM
> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > Subject: Re: [TS-520_820_530_830] ts520se sidetone question
> >
> >
> > Hi Alan,
> >
> > Thanks for the email. Pardon my ignorance, but where would I find
> > FIX3-11?
> >
> > I appreciate any help!
> >
> > 73,
> >
> > Tyler
> > k7fru
> >
> > On Sun, Feb 24, 2013 at 6:52 PM, Alan Riley mailto:arr44%40suddenlink.net> wrote:
> >
> > > **
> > >
> > >
> > > My TS-820S had the exact same problem when I bought it. I found the
> > > problem to be a broken
> > > contact on connector FIX3-11 not making connection to the pin on the pcb.
> > >
> > > 73,
> > > Alan, KD5R
> > >
> > > From: tfrugia81
> > > Sent: Saturday, February 23, 2013 11:09 PM
> > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > Subject: [TS-520_820_530_830] ts520se sidetone question
> > >
> > >
> > > Hello all. I'm a new owner of a kenwood hybrid. I absolutely love it.
> > >
> > > I searched the group to try and find an answer to my problem. There are
> > > many similar posts but not quite what I am experiencing.
> > >
> > > If I have a key plugged in and switch to CW, I hear a constant sidetone.
> > > If I put the radio in "send" there is no RF output, but I hear the tone. If
> > > I press the key, it transmits as it should. The sidetone never stops until

> > > I unplug the key.
> > >
> > > This is just a standard straight key on a mono plug. I even tried plugin
> > > in a plug with nothing attached and it does the same thing. Oddly enough,
> > > it randomly will work fine. Today I left the rig turned on in CW mode for
> > > about an hour. When I came back the tone was gone, but switching to "tune"
> > > and back to CW caused the sidetone to come on and remain on.
> > >
> > > Any ideas? I took the case off and the plug is clean and looks brand new.
> > >
> > > 73
> > >
> > > [Non-text portions of this message have been removed]
> > >
> > >
> > >
> >
> > [Non-text portions of this message have been removed]
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41180. RE: [TS-520_820_530_830] Re: Coax

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-27 14:19:16 UTC
From: Rick
Topic: 41173 Message: 41180

Thanks so much for all the replies and help. I am now I'll be able to find both of them easily.

This is a great list!

73,

Rick / K5IAR

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Jody
Sent: Tuesday, February 26, 2013 3:34 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Coax

--- In TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> , "Rick" wrote:
>
> I am looking for five (5) feet of miniature RG-174 (50 ohm) and five (5) feet of miniature RG-179 (75 ohm) coax. There are plenty of retailers that sell it, but they sell it in rolls of 25' to 1000' or in pre-assembled jumpers that do not fit my needs. I'll be more than happy to pay a fair price. Or if anyone knows of a business or individual that sells it by the foot I would sure appreciate their name and email address.
>
> Thanks and 73,
> Rick / K5IAR
>
I chopped up an old GPS cablethat I had.

[Non-text portions of this message have been removed]

41181. Re: Dipole

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-27 16:44:59 UTC
From: scott10k
Topic: 41031 Message: 41181

Hi Bob,
In my experience any dipole cut for the center of the band you want to work, fed with 50 ohm coax, and up as high as you can get works very well and is not difficult to tune. You can configure the dipole as flat, an inverted vee, or a sloper depending on your location and available trees. If possible I like a vee because it is less susceptible to winds snapping the ends. For 10 meters probably just a flat configuration would work very well.
73s, Scott, N6CIC

--- In TS-520_820_530_830@yahoogroups.com, Bob <bob4analog@...> wrote:
>
> Great antenna experience. Always like those 'tried'n proven' antenna methods that just seem to work. Question: How well does it work on 10m? Does it tune real sharp on your tuner? I have a G5RV and it's real touchy to tune up on 10m. (My 520 is still happy tho)
>
> Bob, KD5MHQ
>
> --- On Mon, 2/25/13, Noodle10536 <pureenduro@...> wrote:
>
> When I was a new ham some Elmer buddies convinced me to put up a wire dipole antenna. I used a ladder loc from WA1FFl, some 16 ga 450 ohm ladder line and about 130' of #12 THHN wire from Home Deeps. I used one clothes line pulley, dacron rope, good insulators and some sash weights. I do not like heights, so I paid some local tree workers to put it up in trees in my yard. One end is about 50' off the ground and the other is about 35' although the antenna is level, ground is sloped. I bought a 4:1 balun kit from Palomar Engineers and got it all hooked up. It worked very well with my Drake TR-4C and then became my favorite with my TS-530. I am no expert and have limited experience, but this was very easy to build, install and tunes easily. I would never be without one!
>
> Best of luck, Peter.
>

41182. Re: [TS-520_820_530_830] Re: Dipole

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-27 19:34:23 UTC
From: Mike
Topic: 41031 Message: 41182

You can tune the dipole quite easily by simply using the formula to get the initial end to end length then adjusting the overall length at both ends for the lowest SWR at the center of the band. The formula is:

468 / freq in Mhz

Allow some excessive wire, 2 to 3 feet, on the ends. Simply wrap the excess wire along the end wire on both ends. Do not cut the excess wire until you have the lowest SWR at the center of the band. You actually do not have to cut the excess wire just leave it wrapped along the ends. The wrapped excess wire will NOT cause any problems nor will it affect the SWR and performance of the antenna.

I used this method to build and tune a 40 meter inverted vee 25 feet at the center over a pine tree limb. The SWR at the center of the band is 1.2:1 and 1.6:1 at the top and bottom of the band. I work into Europe, South America, South Pacific, and Asia with only 90 watts from a Heathkit SB-100 or Drake B and C Line. The average signal report is 589 on CW.

73
Mike

On 2/27/2013 10:44 AM, scott10k wrote:
>
> Hi Bob,
> In my experience any dipole cut for the center of the band you want to
> work, fed with 50 ohm coax, and up as high as you can get works very
> well and is not difficult to tune. You can configure the dipole as
> flat, an inverted vee, or a sloper depending on your location and
> available trees. If possible I like a vee because it is less
> susceptible to winds snapping the ends. For 10 meters probably just a
> flat configuration would work very well.
> 73s, Scott, N6CIC
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Bob wrote:
> >
> > Great antenna experience. Always like those 'tried'n proven' antenna
> methods that just seem to work. Question: How well does it work on
> 10m? Does it tune real sharp on your tuner? I have a G5RV and it's
> real touchy to tune up on 10m. (My 520 is still happy tho)
> >
> > Bob, KD5MHQ
> >
> > --- On Mon, 2/25/13, Noodle10536 wrote:

> >
> > When I was a new ham some Elmer buddies convinced me to put up a
> wire dipole antenna. I used a ladder loc from WA1FFl, some 16 ga 450
> ohm ladder line and about 130' of #12 THHN wire from Home Deeps. I
> used one clothes line pulley, dacron rope, good insulators and some
> sash weights. I do not like heights, so I paid some local tree workers
> to put it up in trees in my yard. One end is about 50' off the ground
> and the other is about 35' although the antenna is level, ground is
> sloped. I bought a 4:1 balun kit from Palomar Engineers and got it all
> hooked up. It worked very well with my Drake TR-4C and then became my
> favorite with my TS-530. I am no expert and have limited experience,
> but this was very easy to build, install and tunes easily. I would
> never be without one!
> >
> > Best of luck, Peter.
> >
>
>

[Non-text portions of this message have been removed]

41183. Re: Weak rx on ts-830 40m only

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-27 21:41:05 UTC
From: Tim
Topic: 41062 Message: 41183

--- In TS-520_820_530_830@yahoogroups.com, "Tim" <htjude@...> wrote:
>
> I have a one owner never modified ts 830..I have cleaned the bandswitch
> Ruled that out..Performed full alignment went great excellent on all other bands..However on 40m i get good drive with alc during tune up transmit is fine 150 watts out on this band But on rx it's about 2 s units down from all other bands...Where should i look..Thanks N4DXX
>
Any Help Thanks

41186. TS-520 VFO instability

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-28 04:27:09 UTC
From: tcbrian
Topic: 41186 Message: 41186

Hi All,

I'm new to the group and recently acquired a TS-520 at an estate sale and started cleaning it up to get it on the air.

It was sitting for awhile and came from a heavy smoking environment but outside cleaned up real nice. Transmitter fired up and am getting over 100W out on all bands - getting great audio and signal reports and everything seems to be working fine ..... except the VFO.

It had some dead spots and signals would drop in certain portions of the dial - Same places on each band.

After reading a lot of the threads here and asking some questions on the Kenwood net - I opened the cover, removed the side door from the VFO, and shot/sprayed some Deoxit in on both ends of the capacitor shaft.

I worked the tuning knob back and forth several times and this seemed to work a little, but still some signals (and xtal calibrator) along the low end of the dial dropped out.

So, a few days later I reopened and gave it another couple shots of Deoxit.

Now - the signals along the dial are fine and nothing is dropping out - However it looks as though I've created another problem.......the VFO is very sensitive and touchy now. I can move the rig, tap the case or bump the desk and the frequency wobbles/changes a bit.

It wasn't this unstable after the first shots of Deoxit - but now it's real touchy.

I'm inclined to remove the entire VFO unit to open it up and clean.

I'm looking for advice before I do that. Any suggestions where to start?

Thanks!

Brian N8TC

41187. Re: [TS-520_820_530_830] TS-520 VFO instability

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-28 05:10:31 UTC
From: Joseph Stiles
Topic: 41186 Message: 41187

Brian,

Welcome aboard.

It is not necessary to actually DEOXIT both ends of the air variable cap in the VFO..usually just the rear. DEOXIT is part solvent...so you may have blasted some crud where it should not be. It also has a "stay behind" lube...which I think is a mineral oil base. I recommend recleaning the VFO. Get some "canned air," aka "air duster." It's available at office/computer/electronic stores...I think the 'olWALMART has some too.
Spray some DEOXIT on the rear wiper...turn it through its travel numerous times...and blow off with the "canned air"...spray another small amount..rotate through travel numerous times...let dry...while inspecting the front of the air variable where the bearings are...might as well lube them while you have it open. Check for other possible contaminates...leave side door off...check for proper operation before putting it all back together. I have had an 820 VFO act erratic...after "cleaning" as I did not blow off/out the junk...and after re-cleaning and blowing it outit worked fine. I would also inspect the immediate area around the VFO...you may have accidentally knocked something loose. Having to remove the VFO is a real pain!

73 Joe
WB7UQU

From: tcbrian <n8tc@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, February 27, 2013 8:27 PM
Subject: [TS-520_820_530_830] TS-520 VFO instability

Hi All,

I'm new to the group and recently acquired a TS-520 at an estate sale and started cleaning it up to get it on the air.

It was sitting for awhile and came from a heavy smoking environment but outside cleaned up real nice. Transmitter fired up and am getting over 100W out on all bands - getting great audio and signal reports and everything seems to be working fine ..... except the VFO.

It had some dead spots and signals would drop in certain portions of the dial - Same places on each band.

After reading a lot of the threads here and asking some questions on the Kenwood net - I opened the cover, removed the side door from the VFO, and shot/sprayed some Deoxit in on both ends of the capacitor shaft.

I worked the tuning knob back and forth several times and this seemed to work a little, but still some signals (and xtal calibrator) along the low end of the dial dropped out.

So, a few days later I reopened and gave it another couple shots of Deoxit.

Now - the signals along the dial are fine and nothing is dropping out - However it looks as though I've created another problem.....the VFO is very sensitive and touchy now. I can move the rig, tap the case or bump the desk and the frequency wobbles/changes a bit.

It wasn't this unstable after the first shots of Deoxit - but now it's real touchy.

I'm inclined to remove the entire VFO unit to open it up and clean.

I'm looking for advice before I do that. Any suggestions where to start?

Thanks!

Brian N8TC

[Non-text portions of this message have been removed]

41188. Re: TS-520 VFO instability

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-28 14:20:07 UTC
From: roberteleazer@rocketmail.com
Topic: 41186 Message: 41188

Brian:

VFO dropouts are a very common problem.

I recommend you take the VFO out of the transceiver (there is an Internet tutorial on how to do this), remove the VFO outer case, clean the tuning cap with a cleaner such as CRC QD electrical contact cleaner, and lube just the pivot points and shaft wiper with a small amount of LPS-1.

Good luck!

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "tcbrian" <n8tc@...> wrote:
>
> Hi All,
>
> I'm new to the group and recently acquired a TS-520 at an estate sale and started cleaning it up to get it on the air.
>
> It was sitting for awhile and came from a heavy smoking environment but outside cleaned up real nice. Transmitter fired up and am getting over 100W out on all bands - getting great audio and signal reports and everything seems to be working fine ..... except the VFO.
>
> It had some dead spots and signals would drop in certain portions of the dial - Same places on each band.
>
> After reading a lot of the threads here and asking some questions on the Kenwood net - I opened the cover, removed the side door from the VFO, and shot/sprayed some Deoxit in on both ends of the capacitor shaft.
>
> I worked the tuning knob back and forth several times and this seemed to work a little, but still some signals (and xtal calibrator) along the low end of the dial dropped out.
>
> So, a few days later I reopened and gave it another couple shots of Deoxit.
>
> Now - the signals along the dial are fine and nothing is dropping out - However it looks as though I've created another problem.......the VFO is very sensitive and touchy now. I can move the rig, tap the case or bump the desk and the frequency wobbles/changes a bit.
>
> It wasn't this unstable after the first shots of Deoxit - but now it's real touchy.
>
> I'm inclined to remove the entire VFO unit to open it up and clean.
>

> I'm looking for advice before I do that. Any suggestions where to start?
>
> Thanks!
>
> Brian N8TC
>

41189. Kenwood TS-520 Transmits, but no recieve.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-28 16:25:56 UTC
From: w_cavendish
Topic: 41189 Message: 41189

Hey guys,

I just picked up a TS-520 to add to my shack and it seems that this radio has an issue. I am not sure if this was due to shipping or a preexisting condition, but the radio seems completely deaf. It does transmit, though I never gave it full power.

What would cause the lack of RX? The analog meter does not move, and I hear nothing from the speaker but a little crackle when I change bands. Same with headphones.

I have tried moving the function switch to the 25khz cal position and running the VFO through the band I do not hear the tone or see any needle deflection.

Any ideas?

73's
KF5NOL
Brian

41190. Re: Is your TS-830S Internet-ready and SDR-friendly?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-28 17:28:32 UTC
From: w7jpg
Topic: 41119 Message: 41190

Hi Mark,
Thanks for the SDR/830S demos. Checked both of yours and it's pretty neat to see the mix of technologies at work. Wonder how small a SDR radio will get? The FUNcube Dongle Pro+ is almost as amazing as the TS-830S!!
73
Chris
W7JPG

--- In TS-520_820_530_830@yahoogroups.com, "Mark L. Hammond" <marklhammond@...> wrote:
>
> Mine is...at least on receive ;)
>
> https://www.youtube.com/watch?v=9CYhyfpSjAU
>
> 73,
>
> --
> Mark L. Hammond [N8MH]
>

41191. Part number questions

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-28 20:19:40 UTC
From: Tim
Topic: 41191 Message: 41191

I am in need of a couple of 3sk73's However i have on hand some 3sk51's From what i see they are close but will they work?Very Close on old data sheets..

41192. Re: [TS-520_820_530_830] Kenwood TS-520 Transmits, but no recieve.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-28 20:50:27 UTC
From: W LEWIS
Topic: 41189 Message: 41192

Is the jumpered plug installed in the External VFO socket?

--- On Thu, 2/28/13, w_cavendish <w_cavendish@...> wrote:

From: w_cavendish <w_cavendish@...>
Subject: [TS-520_820_530_830] Kenwood TS-520 Transmits, but no recieve.
To: TS-520_820_530_830@yahoogroups.com
Date: Thursday, February 28, 2013, 10:25 AM

Hey guys,

I just picked up a TS-520 to add to my shack and it seems that this radio has an issue. I am not sure if this was due to shipping or a preexisting condition, but the radio seems completely deaf. It does transmit, though I never gave it full power.

What would cause the lack of RX? The analog meter does not move, and I hear nothing from the speaker but a little crackle when I change bands. Same with headphones.

I have tried moving the function switch to the 25khz cal position and running the VFO through the band I do not hear the tone or see any needle deflection.

Any ideas?

73's
KF5NOL
Brian

[Non-text portions of this message have been removed]

41193. Re: Kenwood TS-520 Transmits, but no recieve.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-28 21:06:15 UTC
From: w_cavendish
Topic: 41189 Message: 41193

Yes it is. The radio also came with a DG-5 display and the frequency it shows matches where I have the bandswitch and VFO, so I'm pretty sure that is working. Also, the radio will transmit, I don't think it will do that without the VFO plug in back.

Any other ideas?

Thanks
KF5NOL
Brian

A
--- In TS-520_820_530_830@yahoogroups.com, W LEWIS <nscb56a@...> wrote:
>
> Is the jumpered plug installed in the External VFO socket?
>
> --- On Thu, 2/28/13, w_cavendish <w_cavendish@...> wrote:
>
>
> From: w_cavendish <w_cavendish@...>
> Subject: [TS-520_820_530_830] Kenwood TS-520 Transmits, but no recieve.
> To: TS-520_820_530_830@yahoogroups.com
> Date: Thursday, February 28, 2013, 10:25 AM
>
>
>
> Â
>
>
>
> Hey guys,
>
> I just picked up a TS-520 to add to my shack and it seems that this radio has an issue. I am not sure if this was due to shipping or a preexisting condition, but the radio seems completely deaf. It does transmit, though I never gave it full power.
>
> What would cause the lack of RX? The analog meter does not move, and I hear nothing from the speaker but a little crackle when I change bands. Same with headphones.
>
> I have tried moving the function switch to the 25khz cal position and running the VFO through the band I do not hear the tone or see any needle deflection.
>
> Any ideas?
>
> 73's
> KF5NOL
> Brian

>
>
>
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

41194. Re: [TS-520_820_530_830] Re: TS-520S - No ALC Indication on transmit

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-01 00:05:01 UTC
From: Jim Lamanteer
Topic: 41120 Message: 41194

BRENDAN DID U REPLACE BOTH RELAYS? WHEN U REPLACED THE RL-1 DID U REPLACE THE RL-2 AS WELL DID U REPLACE THEM WITH NEW OR USED RELAYS? WHAT DOES YOUR S-METER DO IN RX? IS THAT WHEN ITS INTEREMENT? WHAT DOES YOUR S-METER DO WITH THE MARKER SIGNAL TURNED ON? DID U CLEAN ANY OF THE SWITCHES WITH DEOXIDENT? AT LEAST DO SO EXPECIALY THE PANEL METER SLECTOR SWITCH AND THE BAND SWITCH. IF YOUR METER IS GOOD IN RX THEN 1ST TRY REPLACING RL-2. IF REPLACING RL-2 MAKES NO DIFFERENCE THEN THE NEXT THING U COULD TRY WOULD BE TO CLEAN VR-1 AND VR-2 ON THE I.F. BOARD WITH SOME FADER LUBE DEOXIDENT. MARK THE LOCATION OF THEM WITH MAGIC MARKER OR SOMETHING SO U CAN RESET THEM BACK TO THE SAME SPOT AND AFTER U USE THE DEOXIDENT WORK THEM BACK AND FORTH A FEW TIMES. ANOTHER THING TO TRY IS TO MEASURE THE VOLTAGE AT THE SM TERMINAL ON THE I.F. BOARD WHEN S-METER SHOWS FULL ALC READING YOU SHOULD HAVE ABOUT .4 TO .5 VDC AT THAT TERMINAL. ONE HANDY PICE OF
EQUIPMENT U SHOULD HAVE IS A GOOD VTVM AND R.F. PROBE AND ALSO A MILI VOLT METER OR GOOD SCOPE AND A SIGNAL GEN IF U ARE GOING TO WORK ON THE HYBRIDS U NEED AT LEAST THIS ALONG WITH THE SERVICE MANUAL. HOPE THIS HELPS U. LET ME KNOW HOW U MAKE OUT. JIMMY.

From: kd8rap <kd8rap@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, February 26, 2013 3:34 PM
Subject: [TS-520_820_530_830] Re: TS-520S - No ALC Indication on transmit

I have the manual and some basic test equipment (multimeter, oscilloscope, rf probe, signal generator, and a few other things)

-KD8RAP

--- In mailto:TS-520_820_530_830%40yahoogroups.com, Jim Lamanteer wrote:
>
> BRENDANÂ Â WHAT TYPE OF TROUBLE SHOOTING EQUIPMENT DO U HAVE? DO U HAVE A SERVICE MANUAL? ANY TEST EQUIPMENT ?? WILL TRY TO HELP U. JIMMY.
>
>
>
> ---
> From: kd8rap
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Saturday, February 23, 2013 4:08 PM
> Subject: [TS-520_820_530_830] TS-520S - No ALC Indication on transmit
>
>
> Â
>
> Greetings all. Name is Brendan, and I am a new member here, and just checked in to the net for the first time. My first HF rig was a TS-520 and now I use a TS-520S. I had a bit of trouble getting through the QRM checking into the net because I am on my backup QRP rig until I can get my Kenwood sorted out.

>
> Just wanted to follow up about an intermittent problem I have been having that I mentioned on the net. I was having two problems and solved one but not the other.
>
> Problem 1: The rig would not go back in to receive mode after transmitting. (This problem was solved after replacing relay RL1)
>
> Problem 2: I have an intermittent problem where I have no ALC indication on the meter while I am transmitting, it stays completely still at the bottom of the scale. If I switch bands (say from 40 to 20 meters) I have ALC indication again, but not if I switch back to 40 meters I won't have ALC indication again. It happens on multiple bands intermittently. While this is happening I still have normal output power on my wattmeter, and can still make contacts, just no ALC indication on the meter.
>
> I was hoping replacing the relay would fix both issues but it didn't fix the second.
>
> Does anyone have any ideas on where to start looking? Any specific area or component of the ALC circuit?
>
> Thanks in advance! 73's Brendan KD8RAP
>
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

41195. Re: [TS-520_820_530_830] Kenwood TS-520 Transmits, but no recieve.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-01 00:14:44 UTC
From: Jim Lamanteer
Topic: 41189 Message: 41195

BRIAN DO U HAVE THE 9 PIN CONNECTOR INSERTED INTO THE SOCKET IN THE BACK OF THE RIG WITH PINS 8AND 9 SHORTED? IF NOT U CAN USE A PICE OF WIRE INTO THE HOLES IF U DONT HAVE A 9 PIN VFO PUUG WITH THE RIG. IF U HAVE DONE THAT THEN TRY SOME DEOXIDENT ON ALL THE POTS AND SWITCHES AND THEN BLOW THEM OFF WITH SOME CANNED AIR. HOPE THIS HELPS. JIMMY

From: w_cavendish <w_cavendish@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, February 28, 2013 11:25 AM
Subject: [TS-520_820_530_830] Kenwood TS-520 Transmits, but no recieve.

Hey guys,

I just picked up a TS-520 to add to my shack and it seems that this radio has an issue. I am not sure if this was due to shipping or a preexisting condition, but the radio seems completely deaf. It does transmit, though I never gave it full power.

What would cause the lack of RX? The analog meter does not move, and I hear nothing from the speaker but a little crackle when I change bands. Same with headphones.

I have tried moving the function switch to the 25khz cal position and running the VFO through the band I do not hear the tone or see any needle deflection.

Any ideas?

73's
KF5NOL
Brian

[Non-text portions of this message have been removed]

41196. Re: TS-520 VFO instability

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-01 01:53:25 UTC
From: tcbrian
Topic: 41186 Message: 41196

Thanks Joe,

Appreciate the fast response and suggestions.

Tried this - and dried out the VFO a bit - it did have some residue left behind - but still had some wobbling on the VFO.

Ended up pulling VFO out of the rig, and pulling off the can to get at the wiper better to clean it up and lube the bearings - Works great now!

Thanks again.

73,

Brian N8TC

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Brian,
>
> Welcome aboard.
>
> Â It is not necessary to actually DEOXIT both ends of the air variable cap in the VFO..usually just the rear. DEOXIT is part solvent...so you may have blasted
> some crud where it should not be. It also has a "stay behind" lube...which I think is a mineral oil base. I recommend recleaning the VFO. Get some "canned air,"Â akaÂ "air duster." It's available at office/computer/electronic stores...I think the 'olWALMARTÂ has some too.
> Spray some DEOXIT on the rear wiper...turn it through its travel numerous times...and blow off with the "canned air"...spray another small amount..rotate through
> travel numerous times...let dry...while inspecting the front of the air variable where the bearings are...might as well lube them while you have it open. Check for other possible
> contaminates...leave side door off...check for proper operation before putting it all back together. I have had an 820 VFO act erratic...after "cleaning" as I did not blow off/out the junk...and after re-cleaning and blowing it outit worked fine. I would also inspect the immediate area around the VFO...you may have accidentally knocked something loose.
> Having to remove the VFO is a real pain!
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____

> From: tcbrian <n8tc@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, February 27, 2013 8:27 PM
> Subject: [TS-520_820_530_830] TS-520 VFO instability
>
>
> Â
> Hi All,
>
> I'm new to the group and recently acquired a TS-520 at an estate sale and started cleaning it up to get it on the air.
>
> It was sitting for awhile and came from a heavy smoking environment but outside cleaned up real nice. Transmitter fired up and am getting over 100W out on all bands - getting great audio and signal reports and everything seems to be working fine ..... except the VFO.
>
> It had some dead spots and signals would drop in certain portions of the dial - Same places on each band.
>
> After reading a lot of the threads here and asking some questions on the Kenwood net - I opened the cover, removed the side door from the VFO, and shot/sprayed some Deoxit in on both ends of the capacitor shaft.
>
> I worked the tuning knob back and forth several times and this seemed to work a little, but still some signals (and xtal calibrator) along the low end of the dial dropped out.
>
> So, a few days later I reopened and gave it another couple shots of Deoxit.
>
> Now - the signals along the dial are fine and nothing is dropping out - However it looks as though I've created another problem.......the VFO is very sensitive and touchy now. I can move the rig, tap the case or bump the desk and the frequency wobbles/changes a bit.
>
> It wasn't this unstable after the first shots of Deoxit - but now it's real touchy.
>
> I'm inclined to remove the entire VFO unit to open it up and clean.
>
> I'm looking for advice before I do that. Any suggestions where to start?
>
> Thanks!
>
> Brian N8TC
>
>
>
>
> [Non-text portions of this message have been removed]
>

41197. Re: TS-520 VFO instability

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-01 01:55:46 UTC
From: tcbrian
Topic: 41186 Message: 41197

Thanks Robert for the suggestions.

Ended up pulling VFO out of the rig, and pulling off the can to get at the wiper better to clean it up, dry it out, and lube the bearings.

Shaft Wiper seemed to be the main culprit.

Just got it back together and it works great now!

Thanks!

Brian N8TC

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> Brian:
>
> VFO dropouts are a very common problem.
>
> I recommend you take the VFO out of the transceiver (there is an Internet tutorial on how to do this), remove the VFO outer case, clean the tuning cap with a cleaner such as CRC QD electrical contact cleaner, and lube just the pivot points and shaft wiper with a small amount of LPS-1.
>
> Good luck!
>
> Robert
> WB5WSV
>
> --- In TS-520_820_530_830@yahoogroups.com, "tcbrian" <n8tc@> wrote:
> >
> > Hi All,
> >
> > I'm new to the group and recently acquired a TS-520 at an estate sale and started cleaning it up to get it on the air.
> >
> > It was sitting for awhile and came from a heavy smoking environment but outside cleaned up real nice. Transmitter fired up and am getting over 100W out on all bands - getting great audio and signal reports and everything seems to be working fine ..... except the VFO.
> >
> > It had some dead spots and signals would drop in certain portions of the dial - Same places on each band.
> >
> > After reading a lot of the threads here and asking some questions on the Kenwood net - I opened the cover, removed the side door from the VFO, and shot/sprayed some Deoxit in on

both ends of the capacitor shaft.
> >
> > I worked the tuning knob back and forth several times and this seemed to work a little, but still some signals (and xtal calibrator) along the low end of the dial dropped out.
> >
> > So, a few days later I reopened and gave it another couple shots of Deoxit.
> >
> > Now - the signals along the dial are fine and nothing is dropping out - However it looks as though I've created another problem.....the VFO is very sensitive and touchy now. I can move the rig, tap the case or bump the desk and the frequency wobbles/changes a bit.
> >
> > It wasn't this unstable after the first shots of Deoxit - but now it's real touchy.
> >
> > I'm inclined to remove the entire VFO unit to open it up and clean.
> >
> > I'm looking for advice before I do that. Any suggestions where to start?
> >
> > Thanks!
> >
> > Brian N8TC
> >
>

41198. Re: [TS-520_820_530_830] Re: Kenwood TS-520 Transmits, but no recieve.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-02-28 21:13:29 UTC
From: John Donnelly
Topic: 41189 Message: 41198

Try working the JJY/WWV switch to clean the contacts. It will kill your receive if it's not making contact.

Jack Donnelly KV4JX
Ball Ground Video Productions
308 Calusa Place

Ball Ground, GA 30107
Phone 678-592-9974
www.ballgroundvideo.com

From: w_cavendish <w_cavendish@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, February 28, 2013 4:06 PM
Subject: [TS-520_820_530_830] Re: Kenwood TS-520 Transmits, but no recieve.

Yes it is. The radio also came with a DG-5 display and the frequency it shows matches where I have the bandswitch and VFO, so I'm pretty sure that is working. Also, the radio will transmit, I don't think it will do that without the VFO plug in back.

Any other ideas?

Thanks
KF5NOL
Brian

A
--- In TS-520_820_530_830@yahoogroups.com, W LEWIS wrote:
>
> Is the jumpered plug installed in the External VFO socket?
>
> --- On Thu, 2/28/13, w_cavendish wrote:
>
>
> From: w_cavendish
> Subject: [TS-520_820_530_830] Kenwood TS-520 Transmits, but no recieve.
> To: TS-520_820_530_830@yahoogroups.com
> Date: Thursday, February 28, 2013, 10:25 AM
>
>
>
> Â
>
>

>
> Hey guys,
>
> I just picked up a TS-520 to add to my shack and it seems that this radio has an issue. I am not sure if this was due to shipping or a preexisting condition, but the radio seems completely deaf. It does transmit, though I never gave it full power.
>
> What would cause the lack of RX? The analog meter does not move, and I hear nothing from the speaker but a little crackle when I change bands. Same with headphones.
>
> I have tried moving the function switch to the 25khz cal position and running the VFO through the band I do not hear the tone or see any needle deflection.
>
> Any ideas?
>
> 73's
> KF5NOL
> Brian
>
>
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>
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>
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

41199. Re: Kenwood TS-520 Transmits, but no recieve. (It's really a TS-520S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-01 02:39:42 UTC
From: w_cavendish
Topic: 41189 Message: 41199

I tried that and discovered something I can't believe I missed. This is a 520s not a 520. Just to try it, I did work the RF attenuation switch a few times. Still nothing.

I did try swapping the antenna relay with one from my 820s, but that did not help. This was more me testing the 820's relay than believing it would work. Oh well.

Thanks for the effort, any other ideas?

KF5NOL
Brian

--- In TS-520_820_530_830@yahoogroups.com, John Donnelly <jack@...> wrote:
>
> Try working the JJY/WWV switch to clean the contacts.Â It will kill your receive if it's not making contact.
>
>
> Â
>
> Jack DonnellyÂ Â Â Â Â Â Â Â KV4JX
> Ball Ground Video Productions
> 308 Calusa Place
>
> Ball Ground, GA 30107
> Phone 678-592-9974
> www.ballgroundvideo.com
>
>
>

41200. Transverter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-01 02:52:12 UTC
From: Rick
Topic: 41200 Message: 41200

It seems I am always looking for one more part or piece to complete my TS-520 station.

I need a TV-2/6 jumper cable to connect the 506 to the 502. I would settle for the two 12 pin transverter plugs. I'm sure I can locate an appropriate cable to use.

I am also looking for a non working TL-922 that I can repair a little at a time.

Thanks,

Rick / K5IAR

[Non-text portions of this message have been removed]

41201. Re: [TS-520_820_530_830] Re: TS-520 VFO instability

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-01 05:12:32 UTC
From: Joseph Stiles
Topic: 41186 Message: 41201

Brian,

  Glad I could help a bit...sorry that you had to pull the VFO...but hey...it works!

73 Joe
WB7UQU

From: tcbrian <n8tc@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, February 28, 2013 5:53 PM
Subject: [TS-520_820_530_830] Re: TS-520 VFO instability

Thanks Joe,

Appreciate the fast response and suggestions.

Tried this - and dried out the VFO a bit - it did have some residue left behind - but still had some wobbling on the VFO.

Ended up pulling VFO out of the rig, and pulling off the can to get at the wiper better to clean it up and lube the bearings - Works great now!

Thanks again.

73,

Brian N8TC

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles wrote:
>
> Brian,
>
> Welcome aboard.
>
> Â It is not necessary to actually DEOXIT both ends of the air variable cap in the VFO..usually just the rear. DEOXIT is part solvent...so you may have blasted
> some crud where it should not be. It also has a "stay behind" lube...which I think is a mineral oil base. I recommend recleaning the VFO. Get some "canned air,"Â akaÂ "air duster." It's available at office/computer/electronic stores...I think the 'olWALMARTÂ has some too.
> Spray some DEOXIT on the rear wiper...turn it through its travel numerous times...and blow off with the "canned air"...spray another small amount..rotate through
> travel numerous times...let dry...while inspecting the front of the air variable where the bearings are...might as well lube them while you have it open. Check for other possible
> contaminates...leave side door off...check for proper operation before putting it all back together. I have had an 820 VFO act erratic...after "cleaning" as I did not blow off/out the junk...and after re-cleaning and blowing it outit worked fine. I would also

inspect the immediate area around the VFO...you may have accidentally knocked something loose.
> Having to remove the VFO is a real pain!
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: tcbrian
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, February 27, 2013 8:27 PM
> Subject: [TS-520_820_530_830] TS-520 VFO instability
>
>
> Â
> Hi All,
>
> I'm new to the group and recently acquired a TS-520 at an estate sale and started cleaning it up to get it on the air.
>
> It was sitting for awhile and came from a heavy smoking environment but outside cleaned up real nice. Transmitter fired up and am getting over 100W out on all bands - getting great audio and signal reports and everything seems to be working fine ..... except the VFO.
>
> It had some dead spots and signals would drop in certain portions of the dial - Same places on each band.
>
> After reading a lot of the threads here and asking some questions on the Kenwood net - I opened the cover, removed the side door from the VFO, and shot/sprayed some Deoxit in on both ends of the capacitor shaft.
>
> I worked the tuning knob back and forth several times and this seemed to work a little, but still some signals (and xtal calibrator) along the low end of the dial dropped out.
>
> So, a few days later I reopened and gave it another couple shots of Deoxit.
>
> Now - the signals along the dial are fine and nothing is dropping out - However it looks as though I've created another problem.......the VFO is very sensitive and touchy now. I can move the rig, tap the case or bump the desk and the frequency wobbles/changes a bit.
>
> It wasn't this unstable after the first shots of Deoxit - but now it's real touchy.
>
> I'm inclined to remove the entire VFO unit to open it up and clean.
>
> I'm looking for advice before I do that. Any suggestions where to start?
>

> Thanks!
>
> Brian N8TC
>
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

41202. Re: [TS-520_820_530_830] Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-01 05:53:21 UTC
From: Alan Riley
Topic: 41132 Message: 41202

Tyler, what is the latest on your TS-520SE repair?

Alan, KD5R

[Non-text portions of this message have been removed]

41203. Re: Kenwood TS-520 Transmits, but no recieve. (It's really a TS-520S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-01 14:10:32 UTC
From: roberteleazer@rocketmail.com
Topic: 41189 Message: 41203

Well, I think a key point is that you hear nothing from the speaker at all except a crackle when changing bands.

This may sound dumb, but have you tried using a headset? I have two radios that have nothing coming from the speaker but work fine if you plug in headphones.

And a trick I like to use for troubleshooting is to open the case, and tune in another receiver to the IF frequency of the radio you are working on. If the sections before the audio amp are working you will hear the TS-520S received signals in the other receiver.

So tune in at 3395 KHZ and see how that works.

Good Luck!

Robert

--- In TS-520_820_530_830@yahoogroups.com, "w_cavendish" <w_cavendish@...> wrote:
>
>
> I tried that and discovered something I can't believe I missed. This is a 520s not a 520. Just to try it, I did work the RF attenuation switch a few times. Still nothing.
>
> I did try swapping the antenna relay with one from my 820s, but that did not help. This was more me testing the 820's relay than believing it would work. Oh well.
>
>
> Thanks for the effort, any other ideas?
>
> KF5NOL
> Brian
>
> --- In TS-520_820_530_830@yahoogroups.com, John Donnelly <jack@> wrote:
> >
> > Try working the JJY/WWV switch to clean the contacts.Â It will kill your receive if it's not making contact.
> >
> >
> > Â
> >
> > Jack DonnellyÂ Â Â Â Â Â Â Â KV4JX
> > Ball Ground Video Productions
> > 308 Calusa Place
> >
> > Ball Ground, GA 30107
> > Phone 678-592-9974
> > www.ballgroundvideo.com

> >
> >
> >
>

41204. Re: Kenwood TS-520 Transmits, but no recieve. (It's really a TS-520S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-01 14:35:23 UTC
From: w_cavendish
Topic: 41189 Message: 41204

I did try it with headphones and I still hear no audio. I also do not see any movement on the analog meter, this makes me think this is not just an audio issue. The meter does behave normally in TX, and it does move if I turn down the RF gain.

I have an 820s and an 830s I have used in the past, so while I am no expert, I am pretty sure I have the controls set correctly.

That is a good idea to try and listen to the IF, I'll work on trying that this weekend.

Thanks and 73's

Brian
KF5NOL

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> Well, I think a key point is that you hear nothing from the speaker at all except a crackle when changing bands.
>
> This may sound dumb, but have you tried using a headset? I have two radios that have nothing coming from the speaker but work fine if you plug in headphones.
>
> And a trick I like to use for troubleshooting is to open the case, and tune in another receiver to the IF frequency of the radio you are working on. If the sections before the audio amp are working you will hear the TS-520S received signals in the other receiver.
>
> So tune in at 3395 KHZ and see how that works.
>
> Good Luck!
>
> Robert
>
> --- In TS-520_820_530_830@yahoogroups.com, "w_cavendish" <w_cavendish@> wrote:
> >
> >
> > I tried that and discovered something I can't believe I missed. This is a 520s not a 520. Just to try it, I did work the RF attenuation switch a few times. Still nothing.
> >
> > I did try swapping the antenna relay with one from my 820s, but that did not help. This was more me testing the 820's relay than believing it would work. Oh well.
> >
> >
> > Thanks for the effort, any other ideas?
> >
> > KF5NOL
> > Brian

> >
> > --- In TS-520_820_530_830@yahoogroups.com, John Donnelly <jack@> wrote:
> > >
> > > Try working the JJY/WWV switch to clean the contacts.Â It will kill your receive if it's not making contact.
> > >
> > >
> > > Â
> > >
> > > Jack DonnellyÂ Â Â Â Â Â Â KV4JX
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> > > Ball Ground, GA 30107
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> > >
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>

41205. TS-830S Rectifier Board voltages

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-01 16:53:16 UTC
From: ronaldburnor@sbcglobal.net
Topic: 41205 Message: 41205

Hi Guys and thanks for the time and effort that is spent to help us hybrid users. I have a ts-830s and would like to know what the voltages on the rectifier board should measure. Is there documentation on this somewhere? Thanks and 73's Ron KD0KPM

41206. IF tap for SM 220

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-01 14:01:42 UTC
From: n3kvl
Topic: 41206 Message: 41206

Hi All,

Wondering if anyone has a picture of their IF tap for the SM-220 in a TS-520S.

I am about to do it for my SM-220.

I don't know if I have any of the three post terminal things to add into it. I have larger ones and quite a bunch of them out of a Hammond organ I scavenged. I could offer a trade to anyone also with a pile of parts.

I'll probably use a chassis RCA on the rig since I prefer not to go out the connector pictured in the manual.

Thanks,
Archie (N3KVL)

41207. RE: TS820S now not receiving

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-01 17:01:21 UTC
From: Prof. Arnaldo Coro Antich
Topic: 41207 Message: 41207

Dear amigos:
This morning I opened up the rig and started to carefully disconnect the myriad of multipoint
connectors and spray the pins with a good quality spray.
Started by opening the top part, and after finishing that area, I ran a test and the rig
was with audio, receiving , but with the same problem with the VCO not locking PLL.
Then I proceeded to remove the bottom cover and extracted the relay, cleaned it
and sprayed the contacts. Also proceeded to carefully disconnect each of the multipoint
connectors , spray the pins and put them back in place.
Apparently something went terribly wrong , and now the rig is not working at all.
The meter in the receive mode went at first to the end of the scale... then after
fiddling with several of those connectors, it settled down to a lower point in the scale.
I do not have a printed circuit diagram, and it is very difficult to follow the wiring
by looking at the small computer screen here.
Any suggestions about how to try to isolate the fault will be much appreciated.
It seems like the VFO variable capacitor has a very unstable ground contact spring , so the VFO must be taken apart, something that seems to be quite a taske. The frequency counter is stuck on a set of numbers and only one digit, the last one seems to move.
As the possibility of obtaining a replacement transceiver locally are NIHL, all
efforts to bring this radio back to working conditions are going to be attempted.
I do not have an oscilloscope , and also no frequency counter. Only instruments
are a digital multimeter, a signal generator and an RF detector probe.
Maybe some of the list participants has developed ways to isolate defects on the
TS820 that may help to revive this rig that is of great value during the hurricane
season.
73 and DX
Arnie Coro
CO2KK

41208. Re: [TS-520_820_530_830] RE: TS820S now not receiving

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-01 17:25:10 UTC
From: Joe
Topic: 41207 Message: 41208

Absolutely a dumb question, but have to ask (As I have done it myself..!!)

Did you remember to reinstall the VFO shorting plug in the back???

Joe - WA6RKN

----- Original Message -----
From: "Prof. Arnaldo Coro Antich" <coro@...>
Subject: [TS-520_820_530_830] RE: TS820S now not receiving

> Dear amigos:
> This morning I opened up the rig and started to carefully disconnect the
> myriad of multipoint
> connectors and spray the pins with a good quality spray.
> Started by opening the top part, and after finishing that area, I ran a
> test and the rig
> was with audio, receiving , but with the same problem with the VCO not
> locking PLL.
> Then I proceeded to remove the bottom cover and extracted the relay,
> cleaned it
> and sprayed the contacts. Also proceeded to carefully disconnect each of
> the multipoint
> connectors , spray the pins and put them back in place.
> Apparently something went terribly wrong , and now the rig is not
> working at all.
> The meter in the receive mode went at first to the end of the scale...
> then after
> fiddling with several of those connectors, it settled down to a lower
> point in the scale.
> I do not have a printed circuit diagram, and it is very difficult to
> follow the wiring
> by looking at the small computer screen here.
> Any suggestions about how to try to isolate the fault will be much
> appreciated.
> It seems like the VFO variable capacitor has a very unstable ground
> contact
> spring , so the VFO must be taken apart, something that seems to be quite
> a taske. The frequency counter is stuck on a set of numbers and only one
> digit, the last one seems to move.
> As the possibility of obtaining a replacement transceiver locally are
> NIHL, all
> efforts to bring this radio back to working conditions are going to be
> attempted.
> I do not have an oscilloscope , and also no frequency counter. Only
> instruments
> are a digital multimeter, a signal generator and an RF detector probe.

> Maybe some of the list participants has developed ways to isolate
> defects on the
> TS820 that may help to revive this rig that is of great value during the
> hurricane
> season.

41209. Re: [TS-520_820_530_830] TS-830S Rectifier Board voltages

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-01 17:25:44 UTC
From: Joseph Stiles
Topic: 41205 Message: 41209

Ron,

Most of the voltages are printed right on the rectifier board itself...or, look at pg 11 of the service manual. I suggest that you power off rig...and unplug it.

Using a bright light and maybe some magnification...identify the locations that you want to test....some areas are a bit crowded...I have found that making
an enlarged drawing...with post/terminals marked...take measurements and place on your drawing for further/future reference.

  Be very careful poking around here...there is potential for +900VDC in this area...which can/will make you and SK!

73 Joe
WB7UQU

From: "ronaldburnor@sbcglobal.net" <ronaldburnor@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, March 1, 2013 8:53 AM
Subject: [TS-520_820_530_830] TS-830S Rectifier Board voltages

Hi Guys and thanks for the time and effort that is spent to help us hybrid users. I have a ts-830s and would like to know what the voltages on the rectifier board should measure. Is there documentation on this somewhere? Thanks and 73's Ron KD0KPM

[Non-text portions of this message have been removed]

41210. Re: [TS-520_820_530_830] Transverter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-01 21:07:49 UTC
From: Chris Robinson
Topic: 41200 Message: 41210

I would be happy with the TV 506/ 502. I had been looking for a couple for
a while, then I didnt have the cash when they did come around.

On Thu, Feb 28, 2013 at 6:52 PM, Rick <rickb@...> wrote:

> **
>
>
> It seems I am always looking for one more part or piece to complete my
> TS-520 station.
>
> I need a TV-2/6 jumper cable to connect the 506 to the 502. I would settle
> for the two 12 pin transverter plugs. I'm sure I can locate an appropriate
> cable to use.
>
> I am also looking for a non working TL-922 that I can repair a little at a
> time.
>
> Thanks,
>
> Rick / K5IAR
>
> [Non-text portions of this message have been removed]
>
>
>

--
Making life hell for others since 1973

Mr.C.Robinson
73 DE KF6NFW

[Non-text portions of this message have been removed]

41211. Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-01 22:34:07 UTC
From: tfrugia81
Topic: 41132 Message: 41211

I'm not sure why my reply to this didn't show last night, but for the record the KEY terminal was loose. Soldering it back together solved the sidetone issue. Thanks Alan!

Regarding the loss of receive audio. When it happens if I tune to the 25 kHz calibrator I do not hear the tone. When the receive finally comes back I DO hear the tone, but while it's dropped out I do not hear it. I can still hear other stations in SSB, but I have to turn the volume up all of the way and even then it's barely audible.

I also tried keying the microphone several times. I can hear the relays clicking but I do not get any RF output while this is happening. Once the receive comes back everything works normal again. I also tried cycling the receive antenna switch. It has something wedged in to keep it "up" all of the time. I will take that out and see if toggling the switch makes a difference.

Oddly, once the radio has been on for a while this issue doesn't seem to happen at all. But it's really frustrating sometimes!

Thanks again for your help,

Tyler
k7fru

--- In TS-520_820_530_830@yahoogroups.com, "Alan Riley" <arr44@...> wrote:
>
> Well, the video tells me you may have a bad TR relay causing the intermittent
> loss of receive audio. You can check for this by turning on the internal 25 kHz
> calibrator. If it is the TR relay, the signal from the internal calibrator will still
> be at itâ□□s normal level even though the received signal off of the antenna has
> dropped out. Connect a microphone and key it briefly a few times and see if
> the signal from the antenna returns. In addition, exercise the external receive
> antenna switch on the rear of the rig since the receive signal path goes through
> it too.
>
> On the constant sidetone issue, look closely at all soldered connections in
> the sidetone circuit and especially any wire-wrap connections. You should
> be able to track down the problem there with your voltmeter. Also, make
> sure the board mounting screws are tight.
>
> 73,
> Alan, KD5R
>
>
>
> From: tfrugia81
> Sent: Tuesday, February 26, 2013 12:42 PM
> To: TS-520_820_530_830@yahoogroups.com

> Subject: [TS-520_820_530_830] Re: ts520se sidetone question
>
>
> Thanks again for the help. I will test this tonight.
>
> Here is an issue I'm having as well, could this be related? I would think not, but thought I'd send it anyway - http://www.youtube.com/watch?v=AAWdikZZt58
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley" wrote:
> >
> > Ok, good. The purpose of this Ã¢Â□"63 vdc is to inhibit the sidetone oscillator
> > when your key contacts are open. It does this by reverse biasing diode D3,
> > thus turning it off and interrupting the feedback path necessary for Q6 to
> > oscillate.
> >
> > It appears that your Ã¢Â□"63 volts is either not reaching the diode or else the
> > diode is shorted. A positive voltage of about +100 vdc enters the AF board
> > at the Ã¢Â□Â□STBÃ¢Â□Â□ terminal. This +100v and the voltage at the Ã¢Â□Â□KEYÃ¢Â□Â□ terminal
> > (-63v key up, 0v key down) are combined through resistors R35 and R36
> > such that D3 is forward biased when your key contacts are closed but
> > when the key contacts open, the Ã¢Â□"63v Ã¢Â□Â□overpowersÃ¢Â□Â□ the positive voltage,
> > killing the oscillator.
> >
> > One other possibility would be for the R35 and/or R36 values to have changed
> > such that the negative voltage is not quite able to overcome the positive voltage.
> >
> > Measure the voltage at the anode of D3 under key up and key down conditions.
> > Also, if you are using an analog meter or a digital meter with a diode test
> > function, measure resistance both directions across D3 (be sure there is
> > no voltage present on the diode when you do this).
> >
> > Let us know what you find.
> >
> > 73,
> > Alan, KD5R
> >
> >
> > From: tfrugia81
> > Sent: Monday, February 25, 2013 8:20 PM
> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > Subject: [TS-520_820_530_830] Re: ts520se sidetone question
> >
> >
> > Got it, thank you for the clarification.
> >
> > I measured voltage at the KEY terminal on the AF board, and it indeed has -63ish volts DC with the key open. All of the connections on the AF board look ok to my naked eye. I traced the ones that I could easily follow and they seemed ok (using a meter to test continuity).
> >

> > I am very much new to these radios (and radio repair in general). Is there anything else I should be looking for? I appreciate your help!
> >
> > 73
> >
> > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley" wrote:
> > >
> > > Tyler, your TS-520SE wonÃ□Â¢Ã□Â□Ã□Â□t have a FIX3-11, that is just the place I located
> > > the problem in my TS-820S. Sorry, I should have pointed that out.
> > >
> > > Your problem, however appears to be the same as mine was Ã□Â¢Ã□Â□" loss of cutoff
> > > voltage to the sidetone oscillator. The sidetone oscillator runs when the key
> > > is closed but it is cut off by a negative voltage applied when the key is open.
> > >
> > > In the TS-520SE, the sidetone oscillator is Q6 on the AF Unit (X49-008-01).
> > > The Ã□Â¢Ã□Â□Ã□Â□KEYÃ□Â¢Ã□Â□Ã□Â□ terminal on that board should have a negative voltage of about
> > > -65 vdc in the key-up condition (it should be the same as the open-circuit
> > > voltage across your key contacts). Check there to see if the negative voltage
> > > is present. I donÃ□Â¢Ã□Â□Ã□Â□t know whether the TS-520SE uses a wire-wrap connection
> > > at that point or not but if it does, then I suspect you will find it to be the
> > > problem. If it is a bad wire-wrap connection, clean it good and solder it.
> > >
> > > If you donÃ□Â¢Ã□Â□Ã□Â□t have the manuals for it, you can download them from GordonÃ□Â¢Ã□Â□Ã□Â□s
> > > website as I just did (thanks, Gordon!).
> > >
> > > Let us know what you find.
> > >
> > > 73,
> > > Alan, KD5R
> > >
> > >
> > >
> > > From: Tyler Frugia
> > > Sent: Sunday, February 24, 2013 9:07 PM
> > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > Subject: Re: [TS-520_820_530_830] ts520se sidetone question
> > >
> > >
> > > Hi Alan,
> > >
> > > Thanks for the email. Pardon my ignorance, but where would I find
> > > FIX3-11?
> > >
> > > I appreciate any help!
> > >
> > > 73,
> > >

> > > Tyler
> > > k7fru
> > >
> > > On Sun, Feb 24, 2013 at 6:52 PM, Alan Riley mailto:arr44%40suddenlink.net> wrote:
> > >
> > > > **
> > > >
> > > >
> > > > My TS-820S had the exact same problem when I bought it. I found the
> > > > problem to be a broken
> > > > contact on connector FIX3-11 not making connection to the pin on the pcb.
> > > >
> > > > 73,
> > > > Alan, KD5R
> > > >
> > > > From: tfrugia81
> > > > Sent: Saturday, February 23, 2013 11:09 PM
> > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > > Subject: [TS-520_820_530_830] ts520se sidetone question
> > > >
> > > >
> > > > Hello all. I'm a new owner of a kenwood hybrid. I absolutely love it.
> > > >
> > > > I searched the group to try and find an answer to my problem. There are
> > > > many similar posts but not quite what I am experiencing.
> > > >
> > > > If I have a key plugged in and switch to CW, I hear a constant sidetone.
> > > > If I put the radio in "send" there is no RF output, but I hear the tone. If
> > > > I press the key, it transmits as it should. The sidetone never stops until
> > > > I unplug the key.
> > > >
> > > > This is just a standard straight key on a mono plug. I even tried plugin
> > > > in a plug with nothing attached and it does the same thing. Oddly enough,
> > > > it randomly will work fine. Today I left the rig turned on in CW mode for
> > > > about an hour. When I came back the tone was gone, but switching to "tune"
> > > > and back to CW caused the sidetone to come on and remain on.
> > > >
> > > > Any ideas? I took the case off and the plug is clean and looks brand new.
> > > >
> > > > 73
> > > >
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41212. Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-01 23:22:11 UTC
From: tfrugia81
Topic: 41132 Message: 41212

One more observation. When the receive is out, if I put the mode to TUNE and the function switch to VFO, I can hear white noise just as normal. Any other combination of MODE and FUNCTION cause it to have no receive.

--- In TS-520_820_530_830@yahoogroups.com, "tfrugia81" <tfrugia@...> wrote:
>
> I'm not sure why my reply to this didn't show last night, but for the record the KEY terminal was loose. Soldering it back together solved the sidetone issue. Thanks Alan!
>
> Regarding the loss of receive audio. When it happens if I tune to the 25 kHz calibrator I do not hear the tone. When the receive finally comes back I DO hear the tone, but while it's dropped out I do not hear it. I can still hear other stations in SSB, but I have to turn the volume up all of the way and even then it's barely audible.
>
> I also tried keying the microphone several times. I can hear the relays clicking but I do not get any RF output while this is happening. Once the receive comes back everything works normal again. I also tried cycling the receive antenna switch. It has something wedged in to keep it "up" all of the time. I will take that out and see if toggling the switch makes a difference.
>
> Oddly, once the radio has been on for a while this issue doesn't seem to happen at all. But it's really frustrating sometimes!
>
> Thanks again for your help,
>
>
> Tyler
> k7fru
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Alan Riley" <arr44@> wrote:
> >
> > Well, the video tells me you may have a bad TR relay causing the intermittent
> > loss of receive audio. You can check for this by turning on the internal 25 kHz
> > calibrator. If it is the TR relay, the signal from the internal calibrator will still
> > be at itâ☐☐s normal level even though the received signal off of the antenna has
> > dropped out. Connect a microphone and key it briefly a few times and see if
> > the signal from the antenna returns. In addition, exercise the external receive
> > antenna switch on the rear of the rig since the receive signal path goes through
> > it too.
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> > On the constant sidetone issue, look closely at all soldered connections in
> > the sidetone circuit and especially any wire-wrap connections. You should
> > be able to track down the problem there with your voltmeter. Also, make
> > sure the board mounting screws are tight.

> >
> > 73,
> > Alan, KD5R
> >
> >
> >
> > From: tfrugia81
> > Sent: Tuesday, February 26, 2013 12:42 PM
> > To: TS-520_820_530_830@yahoogroups.com
> > Subject: [TS-520_820_530_830] Re: ts520se sidetone question
> >
> >
> > Thanks again for the help. I will test this tonight.
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> > > thus turning it off and interrupting the feedback path necessary for Q6 to
> > > oscillate.
> > >
> > > It appears that your Ã¢Â□"63 volts is either not reaching the diode or else the
> > > diode is shorted. A positive voltage of about +100 vdc enters the AF board
> > > at the Ã¢Â□Â□STBÃ¢Â□Â□ terminal. This +100v and the voltage at the Ã¢Â□Â□KEYÃ¢Â□Â□ terminal
> > > (-63v key up, 0v key down) are combined through resistors R35 and R36
> > > such that D3 is forward biased when your key contacts are closed but
> > > when the key contacts open, the Ã¢Â□"63v Ã¢Â□Â□overpowersÃ¢Â□Â□ the positive voltage,
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> > > One other possibility would be for the R35 and/or R36 values to have changed
> > > such that the negative voltage is not quite able to overcome the positive voltage.
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> > > Also, if you are using an analog meter or a digital meter with a diode test
> > > function, measure resistance both directions across D3 (be sure there is
> > > no voltage present on the diode when you do this).
> > >
> > > Let us know what you find.
> > >
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> > > Alan, KD5R
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> > >
> > > From: tfrugia81
> > > Sent: Monday, February 25, 2013 8:20 PM
> > > To: mailto:TS-520_820_530_830%40yahoogroups.com

> > > Subject: [TS-520_820_530_830] Re: ts520se sidetone question
> > >
> > >
> > > Got it, thank you for the clarification.
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> > > I measured voltage at the KEY terminal on the AF board, and it indeed has -63ish volts DC with the key open. All of the connections on the AF board look ok to my naked eye. I traced the ones that I could easily follow and they seemed ok (using a meter to test continuity).
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> > > > at that point or not but if it does, then I suspect you will find it to be the
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> > > > If you donÃ□Â¢Ã□Â□Ã□Â□t have the manuals for it, you can download them from GordonÃ□Â¢Ã□Â□Ã□Â□s
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> > > >
> > > > Let us know what you find.
> > > >
> > > > 73,
> > > > Alan, KD5R
> > > >
> > > >
> > > >
> > > > From: Tyler Frugia
> > > > Sent: Sunday, February 24, 2013 9:07 PM
> > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > > Subject: Re: [TS-520_820_530_830] ts520se sidetone question
> > > >
> > > >

> > > > Hi Alan,
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> > > >
> > > > Tyler
> > > > k7fru
> > > >
> > > > On Sun, Feb 24, 2013 at 6:52 PM, Alan Riley mailto:arr44%40suddenlink.net> wrote:
> > > >
> > > > > **
> > > > >
> > > > >
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> > > > > contact on connector FIX3-11 not making connection to the pin on the pcb.
> > > > >
> > > > > 73,
> > > > > Alan, KD5R
> > > > >
> > > > > From: tfrugia81
> > > > > Sent: Saturday, February 23, 2013 11:09 PM
> > > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > > > Subject: [TS-520_820_530_830] ts520se sidetone question
> > > > >
> > > > >
> > > > > Hello all. I'm a new owner of a kenwood hybrid. I absolutely love it.
> > > > >
> > > > > I searched the group to try and find an answer to my problem. There are
> > > > > many similar posts but not quite what I am experiencing.
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> > > > > If I have a key plugged in and switch to CW, I hear a constant sidetone.
> > > > > If I put the radio in "send" there is no RF output, but I hear the tone. If
> > > > > I press the key, it transmits as it should. The sidetone never stops until
> > > > > I unplug the key.
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> > > > > This is just a standard straight key on a mono plug. I even tried plugin
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> > > > > it randomly will work fine. Today I left the rig turned on in CW mode for
> > > > > about an hour. When I came back the tone was gone, but switching to "tune"
> > > > > and back to CW caused the sidetone to come on and remain on.
> > > > >
> > > > > Any ideas? I took the case off and the plug is clean and looks brand new.
> > > > >
> > > > > 73

> > > > >
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>

41213. Re: TS820S now not receiving

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-01 23:32:44 UTC
From: roberteleazer@rocketmail.com
Topic: 41207 Message: 41213

First, that relay on the bottom has an incredible ability to fall back out of its socket if the bottom case is not on nice and tight. You should check that.

As for the VFO, the process to remove and clean it is a bit involved, with a number of steps that must be followed in series, but it is really not difficult to perform. There are indeed screws in unexpected places that you have to locate and remove. K4EAA has a detailed series of photographs on his website that show how it is done. I followed his instructions when I had to remove and clean the tuning cap for my TS-802S and all went well - athough I will admit that the dial light quit working after that, the VFO started working fine. Given that it has a digital display, I do not consider the loss of the dial light to be of much concern; maybe I'll fix it one day when I run out of more important things to do.

Good luck!

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "Prof. Arnaldo Coro Antich" <coro@...> wrote:
>
> Dear amigos:
> This morning I opened up the rig and started to carefully disconnect the
> myriad of multipoint
> connectors and spray the pins with a good quality spray.
> Started by opening the top part, and after finishing that area, I ran a
> test and the rig
> was with audio, receiving , but with the same problem with the VCO not
> locking PLL.
> Then I proceeded to remove the bottom cover and extracted the relay,
> cleaned it
> and sprayed the contacts. Also proceeded to carefully disconnect each of
> the multipoint
> connectors , spray the pins and put them back in place.
> Apparently something went terribly wrong , and now the rig is not
> working at all.
> The meter in the receive mode went at first to the end of the scale...
> then after
> fiddling with several of those connectors, it settled down to a lower
> point in the scale.
> I do not have a printed circuit diagram, and it is very difficult to
> follow the wiring
> by looking at the small computer screen here.
> Any suggestions about how to try to isolate the fault will be much
> appreciated.
> It seems like the VFO variable capacitor has a very unstable ground contact
> spring , so the VFO must be taken apart, something that seems to be quite
> a taske. The frequency counter is stuck on a set of numbers and only one

> digit, the last one seems to move.
> As the possibility of obtaining a replacement transceiver locally are
> NIHL, all
> efforts to bring this radio back to working conditions are going to be
> attempted.
> I do not have an oscilloscope , and also no frequency counter. Only
> instruments
> are a digital multimeter, a signal generator and an RF detector probe.
> Maybe some of the list participants has developed ways to isolate
> defects on the
> TS820 that may help to revive this rig that is of great value during the
> hurricane
> season.
> 73 and DX
> Arnie Coro
> CO2KK
>

41214. Re: Transverter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-01 23:39:23 UTC
From: james27613
Topic: 41200 Message: 41214

hi Rick,

I used an older RCA audio cable as the jumper.

I have the 12 pin transverter connectors on ebay,
as well as HV capacitors.

please search for kenwood transverter.

73 james ke4drn

41215. Pilot Lamps

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-01 23:40:58 UTC
From: Rick
Topic: 41215 Message: 41215

I just acquired a TS-820 and it needs a little TLC. A couple of the pilot lamps are out and I want to replace them first. I see how to replace the meter light but do I have to remove the VFO to get to the dial light? Is there a dial light? I took the tuning knob and assembly off but still no access to a lamp of any kind. I am working from a Service Manual online until my hard copy arrives and I can't see lamps indicated for the dial much less how to replace them. Are they wheat lamps? Any all help will be much appreciated.

Tnx,

Rick /K5IAR

[Non-text portions of this message have been removed]

41216. RE: [TS-520_820_530_830] Re: Transverter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-02 03:28:24 UTC
From: Rick
Topic: 41200 Message: 41216

Hi James. thanks for the info.

Rick/K5IAR

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of james27613
Sent: Friday, March 01, 2013 5:39 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Transverter

hi Rick,

I used an older RCA audio cable as the jumper.

I have the 12 pin transverter connectors on ebay,
as well as HV capacitors.

please search for kenwood transverter.

73 james ke4drn

[Non-text portions of this message have been removed]

41217. pre amp install

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-02 03:34:18 UTC
From: Tim
Topic: 41217 Message: 41217

I am looking into installing a pre-amp in my trusty old 830 for use in the higher bands..I have a 15 db Low noise less than 2db@30mhz wideband Mosfet pre-amp..Next question I want to install it inside the rig..Where would i hook it up?Coming off the rf board?relays somewhere?Any hints or advice would be appreciated.I know the 830 has a very good receiver..But i have 2 830's and just thought i would give my banged up one some experimenting just to see how effective it would be..I have already installed one in an ft-101 and wow it works great in it as i am much more familiar with it than the ts830..Thanks in advance..

41218. Re: [TS-520_820_530_830] Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-02 04:31:27 UTC
From: Alan Riley
Topic: 41132 Message: 41218

This problem could be a little harder to track down. If you haven't done so already, make sure all board mounting screws are tight – loosen them up a little first and then retighten. If you have a quality spray contact cleaner such as DeoxIT D5, you could clean the MODE and FUNCTION switch contacts, followed by blowing them dry with compressed air, but I really don't think it is a switch contact issue.

Since you have already found one bad solder connection, it is very possible that there may another one that is temperature sensitive causing this problem. It is affecting both the receive and transmit functions so that narrows it down a bit.

I think I would concentrate on the RF, IF, and GENERATOR board connections. Using a hair dryer to warm each board a little might point you to the general area of the problem but you can't concentrate the heat well enough to really isolate the problem. Don't use a soldering iron for this since the rig will need to have power applied. ***The RF unit has dangerous voltages applied***.

Using an insulated tool such as a wooden popsickle stick, gently wiggle the wires at the soldered connections with the rig powered up. There could also be an issue with a component lead not making reliable contact but check the wire connections to the terminals first.

If this doesn't work, we will try something else. Also, there are other forum members with more experience on these rigs than I have, so feel free to jump in.

73,
Alan, KD5R

From: tfrugia81
Sent: Friday, March 01, 2013 5:22 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: ts520se sidetone question

One more observation. When the receive is out, if I put the mode to TUNE and the function switch to VFO, I can hear white noise just as normal. Any other combination of MODE and FUNCTION cause it to have no receive.

--- In mailto:TS-520_820_530_830%40yahoogroups.com, "tfrugia81" wrote:
>
> I'm not sure why my reply to this didn't show last night, but for the record the KEY terminal was loose. Soldering it back together solved the sidetone issue. Thanks Alan!
>
> Regarding the loss of receive audio. When it happens if I tune to the 25 kHz calibrator I do not hear the tone. When the receive finally comes back I DO hear the tone, but while it's dropped out I do not hear it. I can still hear other

stations in SSB, but I have to turn the volume up all of the way and even then it's barely audible.
>
> I also tried keying the microphone several times. I can hear the relays clicking but I do not get any RF output while this is happening. Once the receive comes back everything works normal again. I also tried cycling the receive antenna switch. It has something wedged in to keep it "up" all of the time. I will take that out and see if toggling the switch makes a difference.
>
> Oddly, once the radio has been on for a while this issue doesn't seem to happen at all. But it's really frustrating sometimes!
>
> Thanks again for your help,
>
>
> Tyler
> k7fru
>
>
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley" wrote:
> >
> > Well, the video tells me you may have a bad TR relay causing the intermittent
> > loss of receive audio. You can check for this by turning on the internal 25 kHz
> > calibrator. If it is the TR relay, the signal from the internal calibrator will still
> > be at itâ□□s normal level even though the received signal off of the antenna has
> > dropped out. Connect a microphone and key it briefly a few times and see if
> > the signal from the antenna returns. In addition, exercise the external receive
> > antenna switch on the rear of the rig since the receive signal path goes through
> > it too.
> >
> > On the constant sidetone issue, look closely at all soldered connections in
> > the sidetone circuit and especially any wire-wrap connections. You should
> > be able to track down the problem there with your voltmeter. Also, make
> > sure the board mounting screws are tight.
> >
> > 73,
> > Alan, KD5R
> >
> >
> >
> > From: tfrugia81
> > Sent: Tuesday, February 26, 2013 12:42 PM
> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > Subject: [TS-520_820_530_830] Re: ts520se sidetone question
> >
> >
> > Thanks again for the help. I will test this tonight.
> >
> > Here is an issue I'm having as well, could this be related? I would think not, but thought I'd send it anyway - http://www.youtube.com/watch?v=AAWdikZZt58
> >

> > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley" wrote:
> > >
> > > Ok, good. The purpose of this Ã¢Â□"63 vdc is to inhibit the sidetone oscillator
> > > when your key contacts are open. It does this by reverse biasing diode D3,
> > > thus turning it off and interrupting the feedback path necessary for Q6 to
> > > oscillate.
> > >
> > > It appears that your Ã¢Â□"63 volts is either not reaching the diode or else the
> > > diode is shorted. A positive voltage of about +100 vdc enters the AF board
> > > at the Ã¢Â□Â□STBÃ¢Â□Â□ terminal. This +100v and the voltage at the Ã¢Â□Â□KEYÃ¢Â□Â□ terminal
> > > (-63v key up, 0v key down) are combined through resistors R35 and R36
> > > such that D3 is forward biased when your key contacts are closed but
> > > when the key contacts open, the Ã¢Â□"63v Ã¢Â□Â□overpowersÃ¢Â□Â□ the positive voltage,
> > > killing the oscillator.
> > >
> > > One other possibility would be for the R35 and/or R36 values to have changed
> > > such that the negative voltage is not quite able to overcome the positive voltage.
> > >
> > > Measure the voltage at the anode of D3 under key up and key down conditions.
> > > Also, if you are using an analog meter or a digital meter with a diode test
> > > function, measure resistance both directions across D3 (be sure there is
> > > no voltage present on the diode when you do this).
> > >
> > > Let us know what you find.
> > >
> > > 73,
> > > Alan, KD5R
> > >
> > >
> > > From: tfrugia81
> > > Sent: Monday, February 25, 2013 8:20 PM
> > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > Subject: [TS-520_820_530_830] Re: ts520se sidetone question
> > >
> > >
> > > Got it, thank you for the clarification.
> > >
> > > I measured voltage at the KEY terminal on the AF board, and it indeed has -63ish volts DC with the key open. All of the connections on the AF board look ok to my naked eye. I traced the ones that I could easily follow and they seemed ok (using a meter to test continuity).
> > >
> > > I am very much new to these radios (and radio repair in general). Is there anything else I should be looking for? I appreciate your help!
> > >
> > > 73
> > >
> > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley" wrote:
> > > >
> > > > Tyler, your TS-520SE wonÃ□Â¢Ã□Â□Ã□Â□t have a FIX3-11, that is just the place I located

> > > > the problem in my TS-820S. Sorry, I should have pointed that out.
> > > >
> > > > Your problem, however appears to be the same as mine was Ã□Â¢Ã□Â□" loss of cutoff
> > > > voltage to the sidetone oscillator. The sidetone oscillator runs when the key
> > > > is closed but it is cut off by a negative voltage applied when the key is open.
> > > >
> > > > In the TS-520SE, the sidetone oscillator is Q6 on the AF Unit (X49-008-01).
> > > > The Ã□Â¢Ã□Â□Ã□Â□KEYÃ□Â¢Ã□Â□Ã□Â□ terminal on that board should have a negative voltage of about
> > > > -65 vdc in the key-up condition (it should be the same as the open-circuit
> > > > voltage across your key contacts). Check there to see if the negative voltage
> > > > is present. I donÃ□Â¢Ã□Â□Ã□Â□t know whether the TS-520SE uses a wire-wrap connection
> > > > at that point or not but if it does, then I suspect you will find it to be the
> > > > problem. If it is a bad wire-wrap connection, clean it good and solder it.
> > > >
> > > > If you donÃ□Â¢Ã□Â□Ã□Â□t have the manuals for it, you can download them from GordonÃ□Â¢Ã□Â□Ã□Â□s
> > > > website as I just did (thanks, Gordon!).
> > > >
> > > > Let us know what you find.
> > > >
> > > > 73,
> > > > Alan, KD5R
> > > >
> > > >
> > > >
> > > > From: Tyler Frugia
> > > > Sent: Sunday, February 24, 2013 9:07 PM
> > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > > Subject: Re: [TS-520_820_530_830] ts520se sidetone question
> > > >
> > > >
> > > > Hi Alan,
> > > >
> > > > Thanks for the email. Pardon my ignorance, but where would I find
> > > > FIX3-11?
> > > >
> > > > I appreciate any help!
> > > >
> > > > 73,
> > > >
> > > > Tyler
> > > > k7fru
> > > >
> > > > On Sun, Feb 24, 2013 at 6:52 PM, Alan Riley mailto:arr44%40suddenlink.net> wrote:
> > > >
> > > > > **
> > > > >
> > > > >

> > > > > My TS-820S had the exact same problem when I bought it. I found the
> > > > > problem to be a broken
> > > > > contact on connector FIX3-11 not making connection to the pin on the pcb.
> > > > >
> > > > > 73,
> > > > > Alan, KD5R
> > > > >
> > > > > From: tfrugia81
> > > > > Sent: Saturday, February 23, 2013 11:09 PM
> > > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > > > Subject: [TS-520_820_530_830] ts520se sidetone question
> > > > >
> > > > >
> > > > > Hello all. I'm a new owner of a kenwood hybrid. I absolutely love it.
> > > > >
> > > > > I searched the group to try and find an answer to my problem. There are
> > > > > many similar posts but not quite what I am experiencing.
> > > > >
> > > > > If I have a key plugged in and switch to CW, I hear a constant sidetone.
> > > > > If I put the radio in "send" there is no RF output, but I hear the tone. If
> > > > > I press the key, it transmits as it should. The sidetone never stops until
> > > > > I unplug the key.
> > > > >
> > > > > This is just a standard straight key on a mono plug. I even tried plugin
> > > > > in a plug with nothing attached and it does the same thing. Oddly enough,
> > > > > it randomly will work fine. Today I left the rig turned on in CW mode for
> > > > > about an hour. When I came back the tone was gone, but switching to "tune"
> > > > > and back to CW caused the sidetone to come on and remain on.
> > > > >
> > > > > Any ideas? I took the case off and the plug is clean and looks brand new.
> > > > >
> > > > > 73
> > > > >
> > > > > [Non-text portions of this message have been removed]
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41219. Re: [TS-520_820_530_830] Pilot Lamps

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-02 04:45:27 UTC
From: Joseph Stiles
Topic: 41215 Message: 41219

Rick,

  The lamp in question is behind the inner most dial...the one that's graduated....."0" "100" "200"...etc., it is just like the meter lamps. You can go about it two ways: From the top(top cover already off) remove the digital display tube...if any...you should be able to see the round rubberish lamp holder(use a bright light)...using a blunt tool...push down on the rubber holder...the holder and lamp should slid right off...it's more of a pain getting it back on. The metal holder is held in with a small screw...you should be able to remove that also...and get a bit more "wiggle room." Make sure that the bulb comes out enough through the slot to light up the dials. OR........

  you can remove all the VFO knobs & dials from the front...and get to the light that way. Not as scary as it sounds. If you can receive WWV, you can re-assemble
the dials etc to match the frequency...or use your digital readout...if your rig has one. You can also apply a small amount of your preferred lube at the VFO shafts
wear points.

  I have done it both ways...I prefer the latter ....as it give me a better view to inspect the gear train.

73 Joe
WB7UQU

From: Rick <rickb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, March 1, 2013 3:40 PM
Subject: [TS-520_820_530_830] Pilot Lamps

I just acquired a TS-820 and it needs a little TLC. A couple of the pilot lamps are out and I want to replace them first. I see how to replace the meter light but do I have to remove the VFO to get to the dial light? Is there a dial light? I took the tuning knob and assembly off but still no access to a lamp of any kind. I am working from a Service Manual online until my hard copy arrives and I can't see lamps indicated for the dial much less how to replace them. Are they wheat lamps? Any all help will be much appreciated.

Tnx,

Rick /K5IAR

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[Non-text portions of this message have been removed]

41220. RE: [TS-520_820_530_830] Pilot Lamps

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-02 14:32:26 UTC
From: Rick
Topic: 41215 Message: 41220

Thanks, Joe! I'm sure glad to hear I don't have to remove the entire front panel or the VFO. I think I'll take your second method since I'm already half way there. I'll let you know how it goes. My old hands and fingers are not a nimble as they once were, but I'll give it a shot.

73,

Rick/K5IAR

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Joseph Stiles
Sent: Friday, March 01, 2013 10:45 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Pilot Lamps

Rick,

The lamp in question is behind the inner most dial...the one that's graduated....."0" "100" "200"...etc., it is just like the meter lamps. You can go about it two ways:
From the top(top cover already off) remove the digital display tube...if any...you should be able to see the round rubberish lamp holder(use a bright light)...using a blunt tool...push down on the rubber holder...the holder and lamp should slid right off...it's more of a pain getting it back on. The metal holder is held in with a small screw...you should be able to remove that also...and get a bit more "wiggle room." Make sure that the bulb comes out enough through the slot to light up the dials. OR.....

you can remove all the VFO knobs & dials from the front...and get to the light that way. Not as scary as it sounds. If you can receive WWV, you can re-assemble
the dials etc to match the frequency...or use your digital readout...if your rig has one. You can also apply a small amount of your preferred lube at the VFO shafts
wear points.

I have done it both ways...I prefer the latter ....as it give me a better view to inspect the gear train.

73 Joe
WB7UQU

From: Rick rickb@... <mailto:rickb%40tx.rr.com> >
To: TS-520_820_530_830@yahoogroups.com

<mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Friday, March 1, 2013 3:40 PM
Subject: [TS-520_820_530_830] Pilot Lamps

I just acquired a TS-820 and it needs a little TLC. A couple of the pilot lamps are out and I want to replace them first. I see how to replace the meter light but do I have to remove the VFO to get to the dial light? Is there a dial light? I took the tuning knob and assembly off but still no access to a lamp of any kind. I am working from a Service Manual online until my hard copy arrives and I can't see lamps indicated for the dial much less how to replace them. Are they wheat lamps? Any all help will be much appreciated.

Tnx,

Rick /K5IAR

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41221. Re: [TS-520_820_530_830] Pilot Lamps

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-02 18:31:46 UTC
From: Joseph Stiles
Topic: 41215 Message: 41221

Rick,

  Hands still work good for me..just the ol' peepers...need some magnification at times. Some of those screws are very small...a decent
quality set of "phillips" & "regular" jewelers screwdrivers are a must. It can be a bit frustrating when putting the dial back together.
Note that the inner dial has a slot...about 25% of the bulb should protrude...adjust as necessary. the next dial has groupings of 1,2,3,4,5
the next or outer dial has the square hole where the first digit is. Pay attention to how these are set...at times it seems like your trying to
crack a safe combo..getting the right "group" to show through window.

73 Joe
WB7UQU

From: Rick <rickb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, March 2, 2013 6:32 AM
Subject: RE: [TS-520_820_530_830] Pilot Lamps

Thanks, Joe! I'm sure glad to hear I don't have to remove the entire front
panel or the VFO. I think I'll take your second method since I'm already
half way there. I'll let you know how it goes. My old hands and fingers are
not a nimble as they once were, but I'll give it a shot.

73,

Rick/K5IAR

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Joseph Stiles
Sent: Friday, March 01, 2013 10:45 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Pilot Lamps

Rick,

The lamp in question is behind the inner most dial...the one that's
graduated....."0" "100" "200"...etc., it is just like the meter lamps. You
can go about it two ways:
From the top(top cover already off) remove the digital display tube...if
any...you should be able to see the round rubberish lamp holder(use a
bright light)...using a blunt tool...push down on the rubber holder...the
holder and lamp should slid right off...it's more of a pain getting it back

on. The metal holder is held in with a small screw...you should be able to remove that also...and get a bit more "wiggle room." Make sure that the bulb comes out enough through the slot to light up the dials. OR.....

you can remove all the VFO knobs & dials from the front...and get to the light that way. Not as scary as it sounds. If you can receive WWV, you can re-assemble
the dials etc to match the frequency...or use your digital readout...if your rig has one. You can also apply a small amount of your preferred lube at the VFO shafts
wear points.

I have done it both ways...I prefer the latter ....as it give me a better view to inspect the gear train.

73 Joe
WB7UQU

From: Rick rickb@....com >
To: TS-520_820_530_830@yahoogroups.com

Sent: Friday, March 1, 2013 3:40 PM
Subject: [TS-520_820_530_830] Pilot Lamps

I just acquired a TS-820 and it needs a little TLC. A couple of the pilot lamps are out and I want to replace them first. I see how to replace the meter light but do I have to remove the VFO to get to the dial light? Is there a dial light? I took the tuning knob and assembly off but still no access to a lamp of any kind. I am working from a Service Manual online until my hard copy arrives and I can't see lamps indicated for the dial much less how to replace them. Are they wheat lamps? Any all help will be much appreciated.

Tnx,

Rick /K5IAR

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41222. Re: [TS-520_820_530_830] TS-830S Rectifier Board voltages

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-02 17:24:23 UTC
From: Ronald Burnor
Topic: 41205 Message: 41222

Hi Joe and thank you for the prompt reply ie voltages on rectifier board. I have zero voltson the tune and stb terminals and i think some of nthe other voltages are incorrect. I plan to pull the board. What voltage should i be seeing on the tune and stb terminal. Thanks and 73's Ron KD0KPM

From: Joseph Stiles <stilesjoseph@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Fri, March 1, 2013 11:25:47 AM
Subject: Re: [TS-520_820_530_830] TS-830S Rectifier Board voltages

Ron,

Most of the voltages are printed right on the rectifier board itself...or, look at pg 11 of the service manual. I suggest that you power off rig...and unplug it.

Using a bright light and maybe some magnification...identify the locations that you want to test....some areas are a bit crowded...I have found that making

an enlarged drawing...with post/terminals marked...take measurements and place on your drawing for further/future reference.

  Be very careful poking around here...there is potential for +900VDC in this area...which can/will make you and SK!

73 Joe
WB7UQU

From: "ronaldburnor@..." ronaldburnor@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, March 1, 2013 8:53 AM
Subject: [TS-520_820_530_830] TS-830S Rectifier Board voltages

Hi Guys and thanks for the time and effort that is spent to help us hybrid users. I have a ts-830s and would like to know what the voltages on the rectifier board should measure. Is there documentation on this somewhere? Thanks and 73's Ron KD0KPM

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[Non-text portions of this message have been removed]

41223. Re: [TS-520_820_530_830] TS-830S Rectifier Board voltages

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-02 21:11:53 UTC
From: Joseph Stiles
Topic: 41205 Message: 41223

Ron,

You should have approx 140VDC on the "STB" post. My notes do not indicate the voltage for the "TUNE" post...but...with power on, heater switch on..measure voltage...it should be approx 200 or so VDC in send. It is not uncommon for Resistors 15 & 16...both 56k on the rectifier board to be way out of spec..or open.
This is one of the major causes of "no ALC in TUNE" complaint.

I can not remember if you stated prior, about the overall function of the rig? Does it receive good...bulbs/lamps, digital readout...etc...seem to function correctly...if so...the general health of the rectifier board is good. Have you tried to tune the rig up?? If not OK...as there are several voltages that are critical...especially the -C (minus C)...without this voltage present...and you turn on the heater switch...the finals will glow a real nice BRIGHT RED...
and destroy themselves and possible taking some other parts with them. The -C voltage should be approx -110 or so.
The voltages that are on the rectifier board are not "exact"...but should be close.

Be carefull "pulling the board." Most any repair can be done with the screws removed and the board GENTLY lifted and rotated to get access to
the foil side. When done...fully inspect ALL the wires/ wrap posts. Those wires have been in the same position for possibly 25 years...and have been
known to crack and break when angered ....just guess how I know.

I am not a repair expert...but I do have experience with some basic functions and problem solving with the 820/830....not 'cause I'm smart...just
been there and done that. I have received lots of help from members of this group in the past few years...and I 'm trying to return the favor.
As I stated...write it all down and keep it...you might just need it in about...oh...10 years.... hihi

73 Joe
WB7UQU

From: Ronald Burnor <ronaldburnor@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, March 2, 2013 9:24 AM
Subject: Re: [TS-520_820_530_830] TS-830S Rectifier Board voltages

Hi Joe and thank you for the prompt reply ie voltages on rectifier board. I have zero voltson the tune and stb terminals and i think some of nthe other voltages are incorrect. I plan to pull the board. What voltage should i be seeing on the tune and stb terminal. Thanks and 73's Ron KD0KPM

From: Joseph Stiles stilesjoseph@...>

To: "TS-520_820_530_830@yahoogroups.com" TS-520_820_530_830@yahoogroups.com>
Sent: Fri, March 1, 2013 11:25:47 AM
Subject: Re: [TS-520_820_530_830] TS-830S Rectifier Board voltages

Ron,

Most of the voltages are printed right on the rectifier board itself...or, look at pg 11 of the service manual. I suggest that you power off rig...and unplug it.

Using a bright light and maybe some magnification...identify the locations that you want to test....some areas are a bit crowded...I have found that making

an enlarged drawing...with post/terminals marked...take measurements and place on your drawing for further/future reference.

  Be very careful poking around here...there is potential for +900VDC in this area...which can/will make you and SK!

73 Joe
WB7UQU

From: "ronaldburnor@...@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, March 1, 2013 8:53 AM
Subject: [TS-520_820_530_830] TS-830S Rectifier Board voltages

Hi Guys and thanks for the time and effort that is spent to help us hybrid users. I have a ts-830s and would like to know what the voltages on the rectifier board should measure. Is there documentation on this somewhere? Thanks and 73's Ron KD0KPM

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[Non-text portions of this message have been removed]

41224. Kenwood TV-502

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-02 22:02:58 UTC
From: k7mks@...
Topic: 41224 Message: 41224

I have a need for a 38.666 Mc 3rd overtone crystal (HC-25U holder) as u sed in the Kenwood TV-502. If you have a par ts TV-502 or know of a possib le source where su ch a part might be hiding please let me know.

Thank you,

joe k7mks

[Non-text portions of this message have been removed]

41225. Re: [TS-520_820_530_830] Kenwood TV-502

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-02 23:10:07 UTC
From: Joseph Stiles
Topic: 41224 Message: 41225

Joe,

 You can try Bob Mansker...ke5ftf@... ...he has lots of Kenwood parts.....or...
International Crystals: http://www.icmfg.com/crystals.html

  I have purchased from International Crystals before...they are top notch

73 Joe
WB7UQU

From: "k7mks@..." <k7mks@...>
To: "530, TS-520" <TS-520_820_530_830@yahoogroups.com>
Sent: Saturday, March 2, 2013 2:02 PM
Subject: [TS-520_820_530_830] Kenwood TV-502

I have a need for a 38.666 Mc 3rd overtone crystal (HC-25U holder) as u sed in the Kenwood TV-502. If you have a par ts TV-502 or know of a possib le source where su ch a part might be hiding please let me know.

Thank you,

joe k7mks

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[Non-text portions of this message have been removed]

41226. Re: Plate current falling

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-03 00:05:37 UTC
From: k5hfg
Topic: 40568 Message: 41226

Hello guys,

Here is an update on this thread I started a few months ago. That's right, I work when I can and when I can I work slow.....Forget everything they say about not replacing it if it is not broke. I have rebuilt the rectifier board and final board and replaced HV caps and screen and driver caps and all is back to manual specs. I suspect the small caps on the IF board were as much to blame as the HV caps. After 30+ years they all need retired. They did more than there jobs for all that time. Amazing! So, if you resurect any of these Hybrids or have trouble with that deal from Ebay, start at the beginning and at least recap before you start to check things out. Jim S taught me that.....I hope Yahoo does not eat this post like so many others. I want everyone to at least read this whether they agree or not. I have been redoing all my rectifier and final boards and I have 4 Hybrids on my bench waiting for their new guts. It takes awhile but I think you will agree it is worth it. NO MORE SHORTCUTS!!!!!!!!!!

73 all,
Don K5HFG

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
>
> Don, Enjoy the radios, nothing nicer knowing that you have done the hard work repairing it. It took me nearly 6 months to fully resotre to radios, both with different problems. If it wasn't for the great folks on this forum then I wouldn't have gotten the passion back to get back into it. I can give you lots my info to check but like to do the simple things first then progress to the harder things, but I'm sure you doing that already. Enjoy and look forward to hearing more of what you find
>
> Dave
> VK5PDL

41227. Re: [TS-520_820_530_830] Kenwood TV-502

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-03 00:18:27 UTC
From: Joseph Stiles
Topic: 41224 Message: 41227

I guess I should also add: I have purchased from Bob Mansker before also....he's top notch also...he just may not have the xtal

sorry Bob

73 Joe
WB7UQU

From: Joseph Stiles <stilesjoseph@...>
To: "TS-520_820_530_830@...m" <TS-520_820_530_830@yahoogroups.com>
Sent: Saturday, March 2, 2013 3:10 PM
Subject: Re: [TS-520_820_530_830] Kenwood TV-502

Joe,

 You can try Bob Mansker...ke5ftf@... ...he has lots of Kenwood parts.....or...
International Crystals: http://www.icmfg.com/crystals.html

  I have purchased from International Crystals before...they are top notch

73 Joe
WB7UQU

From: "k7mks@..." k7mks@...>
To: "530, TS-520" TS-520_820_530_830@yahoogroups.com>
Sent: Saturday, March 2, 2013 2:02 PM
Subject: [TS-520_820_530_830] Kenwood TV-502

I have a need for a 38.666 Mc 3rd overtone crystal (HC-25U holder) as u sed in the Kenwood TV-502. If you have a par ts TV-502 or know of a possib le source where su ch a part might be hiding please let me know.

Thank you,

joe k7mks

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[Non-text portions of this message have been removed]

41228. Re: [TS-520_820_530_830] Kenwood TV-502

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-03 00:50:53 UTC
From: k7mks@...
Topic: 41224 Message: 41228

Thank you Joe - I'll try them both

Joe

----- Original Message -----

From: "Joseph Stiles" <stilesjoseph@...>
To: "TS-520 820 530 830" <TS-520_820_530_830@yahoogroups.com>
Sent: Saturday, March 2, 2013 4:18:27 PM
Subject: Re: [TS-520_820_530_830] Kenwood TV-502

I guess I should also add: I have purchased from Bob Mansker before also....he's top notch also...he just may not have the xtal

sorry Bob

73 Joe
WB7UQU

From: Joseph Stiles stilesjoseph@... >
To: " TS-520_820_530_830@...m " TS-520_820_530_830@yahoogroups.com >
Sent: Saturday, March 2, 2013 3:10 PM
Subject: Re: [TS-520_820_530_830] Kenwood TV-502

Joe,

 You can try Bob Mansker...ke5ftf@... ...he has lots of Kenwood parts.....or...
International Crystals: http://www.icmfg.com/crystals.html

  I have purchased from International Crystals before...they are top notch

73 Joe
WB7UQU

From: " k7mks@... k7mks@... >
To: "530, TS-520" TS-520_820_530_830@yahoogroups.com >
Sent: Saturday, March 2, 2013 2:02 PM
Subject: [TS-520_820_530_830] Kenwood TV-502

I have a need for a 38.666 Mc 3rd overtone crystal (HC-25U holder) as u sed in the Kenwood TV-502. If you have a par ts TV-502 or know of a possib le source where su ch a part might be hiding please let me know.

Thank you,

joe k7mks

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[Non-text portions of this message have been removed]

41229. Re: Kenwood TV-502

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-03 15:04:07 UTC
From: james27613
Topic: 41224 Message: 41229

hi,

I found another possible crystal source
for early HC-25/U kenwood and other makes.

http://www.af4k.com/hc50u_crystals.htm

72 james ke4drn

41230. Re: [TS-520_820_530_830] Re: Kenwood TV-502

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-03 15:23:11 UTC
From: k7mks@...
Topic: 41224 Message: 41230

He is special order only w/ 4 wks delvy for HC-25U

Joe

----- Original Message -----

From: "james27613" <james27613@...>
To: "TS-520 820 530 830" <TS-520_820_530_830@yahoogroups.com>
Sent: Sunday, March 3, 2013 7:04:07 AM
Subject: [TS-520_820_530_830] Re: Kenwood TV-502

hi,

I found another possible crystal source
for early HC-25/U kenwood and other makes.

http://www.af4k.com/hc50u_crystals.htm

72 james ke4drn

[Non-text portions of this message have been removed]

41231. RE: [TS-520_820_530_830] Pilot Lamps

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-03 15:41:58 UTC
From: Rick
Topic: 41215 Message: 41231

Thanks, Joe. I wrestled with it a while last night and finally decided I'd sleep on the situation and try again when rested. My main problem at the moment is the plate that has the slot in it. After changing the bulb I haven't been able to persuade it back in behind the front panel. It came out so I know it will go back I just have to find the combination. Thank again for all the help and advice!

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Joseph Stiles
Sent: Saturday, March 02, 2013 12:32 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Pilot Lamps

Rick,

Hands still work good for me..just the ol' peepers...need some magnification at times. Some of those screws are very small...a decent quality set of "phillips" & "regular" jewelers screwdrivers are a must. It can be a bit frustrating when putting the dial back together.
Note that the inner dial has a slot...about 25% of the bulb should protrude...adjust as necessary. the next dial has groupings of 1,2,3,4,5 the next or outer dial has the square hole where the first digit is. Pay attention to how these are set...at times it seems like your trying to crack a safe combo..getting the right "group" to show through window.

73 Joe
WB7UQU

From: Rick rickb@... <mailto:rickb%40tx.rr.com> >
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Saturday, March 2, 2013 6:32 AM
Subject: RE: [TS-520_820_530_830] Pilot Lamps

Thanks, Joe! I'm sure glad to hear I don't have to remove the entire front panel or the VFO. I think I'll take your second method since I'm already half way there. I'll let you know how it goes. My old hands and fingers are not a nimble as they once were, but I'll give it a shot.

73,

Rick/K5IAR

From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
[mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Joseph Stiles
Sent: Friday, March 01, 2013 10:45 PM
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Subject: Re: [TS-520_820_530_830] Pilot Lamps

Rick,

The lamp in question is behind the inner most dial...the one that's graduated....."0" "100" "200"...etc., it is just like the meter lamps. You can go about it two ways:
From the top(top cover already off) remove the digital display tube...if any...you should be able to see the round rubberish lamp holder(use a bright light)...using a blunt tool...push down on the rubber holder...the holder and lamp should slid right off...it's more of a pain getting it back on. The metal holder is held in with a small screw...you should be able to remove that also...and get a bit more "wiggle room." Make sure that the bulb comes out enough through the slot to light up the dials. OR.....

you can remove all the VFO knobs & dials from the front...and get to the light that way. Not as scary as it sounds. If you can receive WWV, you can re-assemble
the dials etc to match the frequency...or use your digital readout...if your rig has one. You can also apply a small amount of your preferred lube at the VFO shafts
wear points.

I have done it both ways...I prefer the latter ....as it give me a better view to inspect the gear train.

73 Joe
WB7UQU

From: Rick rickb@... <mailto:rickb%40tx.rr.com> >
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>

Sent: Friday, March 1, 2013 3:40 PM
Subject: [TS-520_820_530_830] Pilot Lamps

I just acquired a TS-820 and it needs a little TLC. A couple of the pilot lamps are out and I want to replace them first. I see how to replace the meter light but do I have to remove the VFO to get to the dial light? Is there a dial light? I took the tuning knob and assembly off but still no access to a lamp of any kind. I am working from a Service Manual online until my hard copy arrives and I can't see lamps indicated for the dial much less how to replace them. Are they wheat lamps? Any all help will be much appreciated.

Tnx,

Rick /K5IAR

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41232. Re: Kenwood TV-502

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-03 15:51:21 UTC
From: w9cac
Topic: 41224 Message: 41232

Try Mercury Electronics. www.mercuryelectronics.com

Dave W9CAC

--- In TS-520_820_530_830@yahoogroups.com, k7mks@... wrote:
>
>
>
> He is special order only w/ 4 wks delvy for HC-25U
>
>
>
> Joe
>
>
>
> ----- Original Message -----
>
>
> From: "james27613" <james27613@...>
> To: "TS-520 820 530 830" <TS-520_820_530_830@yahoogroups.com>
> Sent: Sunday, March 3, 2013 7:04:07 AM
> Subject: [TS-520_820_530_830] Re: Kenwood TV-502
>
> Â
>
>
>
>
> hi,
>
> I found another possible crystal source
> for early HC-25/U kenwood and other makes.
>
> http://www.af4k.com/hc50u_crystals.htm
>
> 72 james ke4drn
>
>
>
>
> [Non-text portions of this message have been removed]
>

41233. Re: Plate current falling

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-03 16:09:46 UTC
From: roberteleazer@rocketmail.com
Topic: 40568 Message: 41233

Don:

I have a TS-520 that has a fried - as in smoking - power supply section. Given that I decided that I had no choice but to replace everything but the transformer.

But as this effort progesses and I am in the process of recapping the power supply, I am astonished to find that I have not found a single HV cap that does not hold a charge very well after I removed it. And one of them - a 100mfd 500V - was so smokey looking I just knew it was bad. Admittedly, I do not have a cap tester and I just charge them up with a suitable voltage and observe how quickly they decay - but they all look pretty good.

You are right though - better be safe now than be confused forever.

Good luck!

Robert

--- In TS-520_820_530_830@yahoogroups.com, "k5hfg" <dlbowders@...> wrote:
>
> Hello guys,
>
> Here is an update on this thread I started a few months ago. That's right, I work when I can and when I can I work slow.....Forget everything they say about not replacing it if it is not broke. I have rebuilt the rectifier board and final board and replaced HV caps and screen and driver caps and all is back to manual specs. I suspect the small caps on the IF board were as much to blame as the HV caps. After 30+ years they all need retired. They did more than there jobs fw all that time. Amazing! So, if you resurect any of these Hybrids or have trouble with that deal from Ebay, start at the beginning and at least recap before you start to check things out. Jim S taught me that.....I hope Yahoo does not eat this post like so many others. I want everyone to at least read this whether they agree or not. I have been redoing all my rectifier and final boards and I have 4 Hybrids on my bench waiting for their new guts. It takes awhile but I think you will agree it is worth it. NO MORE SHORTCUTS!!!!!!!!!!
>
> 73 all,
> Don K5HFG
>
> --- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@> wrote:
> >
> >
> > Don, Enjoy the radios, nothing nicer knowing that you have done the hard work repairing it. It took me nearly 6 months to fully resotre to radios, both with different problems. If it wasn't for the great folks on this forum then I wouldn't have gotten the passion back to get back into it. I can give you lots my info to check but like to do the simple things first then progress to the harder things, but I'm sure you doing that already. Enjoy and look forward to hearing more of what you find

> >
> > Dave
> > VK5PDL
>

41234. Re: Kenwood TV-502

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-03 12:30:35 UTC
From: herpsrwe
Topic: 41224 Message: 41234

Did you try
www.kenselectronics.com

There is also a fellow HAM
http://af4k.com/

--- In TS-520_820_530_830@yahoogroups.com, k7mks@... wrote:
>
>
>
> Thank you Joe - I'll try them both
>
>
>
> Joe
>
>
>
> ----- Original Message -----
>
>
> From: "Joseph Stiles" <stilesjoseph@...>
> To: "TS-520 820 530 830" <TS-520_820_530_830@yahoogroups.com>
> Sent: Saturday, March 2, 2013 4:18:27 PM
> Subject: Re: [TS-520_820_530_830] Kenwood TV-502
>
> Â
>
>
>
>
> I guess I should also add:Â Â I have purchased from Bob Mansker before also....he's top notch also...he just may not have the xtal
>
> sorry Bob
>
> Â
> 73Â Joe
> WB7UQU
>
> _____
> From: Joseph Stiles stilesjoseph@... >
> To: " TS-520_820_530_830@yahoogroups.com " TS-520_820_530_830@yahoogroups.com >
> Sent: Saturday, March 2, 2013 3:10 PM
> Subject: Re: [TS-520_820_530_830] Kenwood TV-502

>
>
> Â
> Joe,
>
> Â You can try Bob Mansker...ke5ftf@... ...he has lots of Kenwood parts.....or...
International Crystals:Â http://www.icmfg.com/crystals.html
>
> Â I have purchased from International Crystals before...they are top notch
>
> Â
> 73Â Joe
> WB7UQU
>
> _____
> From: " k7mks@... k7mks@... >
> To: "530, TS-520" TS-520_820_530_830@yahoogroups.com >
> Sent: Saturday, March 2, 2013 2:02 PM
> Subject: [TS-520_820_530_830] Kenwood TV-502
>
> Â
>
> I have a need for a 38.666 Mc 3rd overtone crystal (HC-25U holder) Â as u sed in the
Kenwood TV-502.Â If you have a par ts TV-502 or know of a possib le source where su ch a
part might beÂ hiding please let me know.
>
> Thank you,
>
> joe k7mks
>
> [Non-text portions of this message have been removed]
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41235. Re: [TS-520_820_530_830] Pilot Lamps

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-03 19:15:07 UTC
From: Joseph Stiles
Topic: 41215 Message: 41235

Rick,

U R welcome. I did learn that I should not work on rigs when tired...or p'd off..I have an electrical arc burn to prove it :}

73 Joe
WB7UQU

From: Rick <rickb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, March 3, 2013 7:41 AM
Subject: RE: [TS-520_820_530_830] Pilot Lamps

Thanks, Joe. I wrestled with it a while last night and finally decided I'd sleep on the situation and try again when rested. My main problem at the moment is the plate that has the slot in it. After changing the bulb I haven't been able to persuade it back in behind the front panel. It came out so I know it will go back I just have to find the combination. Thank again for all the help and advice!

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Joseph Stiles
Sent: Saturday, March 02, 2013 12:32 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Pilot Lamps

Rick,

Hands still work good for me..just the ol' peepers...need some magnification at times. Some of those screws are very small...a decent quality set of "phillips" & "regular" jewelers screwdrivers are a must. It can be a bit frustrating when putting the dial back together.
Note that the inner dial has a slot...about 25% of the bulb should protrude...adjust as necessary. the next dial has groupings of 1,2,3,4,5 the next or outer dial has the square hole where the first digit is. Pay attention to how these are set...at times it seems like your trying to crack a safe combo..getting the right "group" to show through window.

73 Joe
WB7UQU

From: Rick rickb@... >
To: TS-520_820_530_830@yahoogroups.com

Sent: Saturday, March 2, 2013 6:32 AM
Subject: RE: [TS-520_820_530_830] Pilot Lamps

Thanks, Joe! I'm sure glad to hear I don't have to remove the entire front panel or the VFO. I think I'll take your second method since I'm already half way there. I'll let you know how it goes. My old hands and fingers are not a nimble as they once were, but I'll give it a shot.

73,

Rick/K5IAR

_____

From: TS-520_820_530_830@yahoogroups.com

[mailto:TS-520_820_530_830@yahoogroups.com
] On Behalf Of Joseph Stiles
Sent: Friday, March 01, 2013 10:45 PM
To: TS-520_820_530_830@yahoogroups.com

Subject: Re: [TS-520_820_530_830] Pilot Lamps

Rick,

The lamp in question is behind the inner most dial...the one that's graduated....."0" "100" "200"...etc., it is just like the meter lamps. You can go about it two ways:
From the top(top cover already off) remove the digital display tube...if any...you should be able to see the round rubberish lamp holder(use a bright light)...using a blunt tool...push down on the rubber holder...the holder and lamp should slid right off...it's more of a pain getting it back on. The metal holder is held in with a small screw...you should be able to remove that also...and get a bit more "wiggle room." Make sure that the bulb comes out enough through the slot to light up the dials. OR.....

you can remove all the VFO knobs & dials from the front...and get to the light that way. Not as scary as it sounds. If you can receive WWV, you can re-assemble
the dials etc to match the frequency...or use your digital readout...if your rig has one. You can also apply a small amount of your preferred lube at the VFO shafts
wear points.

I have done it both ways...I prefer the latter ....as it give me a better view to inspect the gear train.

73 Joe
WB7UQU

_____
From: Rick rickb@... >
To: TS-520_820_530_830@yahoogroups.com

Sent: Friday, March 1, 2013 3:40 PM
Subject: [TS-520_820_530_830] Pilot Lamps

I just acquired a TS-820 and it needs a little TLC. A couple of the pilot lamps are out and I want to replace them first. I see how to replace the meter light but do I have to remove the VFO to get to the dial light? Is there a dial light? I took the tuning knob and assembly off but still no access to a lamp of any kind. I am working from a Service Manual online until my hard copy arrives and I can't see lamps indicated for the dial much less how to replace them. Are they wheat lamps? Any all help will be much appreciated.

Tnx,

Rick /K5IAR

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41236. KENWOOD HYBRID USER NET (March 3rd, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-03 21:02:22 UTC
From: mvgilger
Topic: 41236 Message: 41236

The Saturday's net on 40 meter we had 40 stations checking with good band conditions. There were 5 new stations checking in. Out of those, there was:

9 running TS-520(x)
4 running TS-530(x)
3 running TS-820(x)
5 running TS-830S
0 running a set of 599D Twins

I was running my TS-830s. The rest were running non hybrids of one model or another.

Tom, WB0SGA tried calling the Sunday 20 meter net, but decided to call it off due to QRM being generated from the contesters. Hope next week is better .

We have been having several people checking in regularly with their TS-430, TS-440, and TS-940's, which of course is not a hybrid, although over 30+ years old. Everyone is welcome as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a net control station, please send me an email. Currently it's just myself, WB2KNR and WB0SGA. I would like to get several more. If we do, we can alternate so everyone might be on a 3-4 week rotation. It's a lot of fun and a good way to make sure you station is optimized.

For anyone that has not heard, we have a new web site that WB4HFN is hosting. He currently has a very nice site for Drake, Collins and Heathkit and now Kenwood Hybrids. Good quality manuals plus sale flyers and brochures will be found here, along with user supplied information for all Hybrids.

His URL is:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754 check-ins, Sunday total 563 check-ins

November 2012, Saturday's, net total = 47, Sundays total = 20
December 2012, Saturday's, net total = 74, Sunday's total = 70
January 2013, Saturday's, net total = 93, Sunday's total = 87
February 2013, Saturday's net total = 103, Sundays total = 87
March 2013, Saturday's, net total = 40, Sunday's total = 0 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

41237. Re: [TS-520_820_530_830] KENWOOD HYBRID USER NET (March 3rd, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-03 21:15:17 UTC
From: W LEWIS
Topic: 41236 Message: 41237

Hi Mark,
How many check ins were there Sunday? I was going to check in but a friend came by unexpectedly right at 1800Z and stayed for a couple of hours so I missed the net.
73s,
Butch
KØPSA

--- On Sun, 3/3/13, mvgilger <mgilger@...> wrote:

From: mvgilger <mgilger@...>
Subject: [TS-520_820_530_830] KENWOOD HYBRID USER NET (March 3rd, update)
To: TS-520_820_530_830@yahoogroups.com
Date: Sunday, March 3, 2013, 3:02 PM

The Saturday's net on 40 meter we had 40 stations checking with good band conditions. There were 5 new stations checking in. Out of those, there was:

9 running TS-520(x)
4 running TS-530(x)
3 running TS-820(x)
5 running TS-830S
0 running a set of 599D Twins

I was running my TS-830s. The rest were running non hybrids of one model or another.

Tom, WB0SGA tried calling the Sunday 20 meter net, but decided to call it off due to QRM being generated from the contesters. Hope next week is better….

We have been having several people checking in regularly with their TS-430, TS-440, and TS-940's, which of course is not a hybrid, although over 30+ years old. Everyone is welcome as long as they have an interest in the older equipment.

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Web Site:
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73's,
Mark, WB0IQK

[Non-text portions of this message have been removed]

41238. Re: [TS-520_820_530_830] KENWOOD HYBRID USER NET (March 3rd, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-03 22:02:43 UTC
From: Mark Gilger
Topic: 41236 Message: 41238

Tom indicated that he did not run the net Sunday,
due to QRM from the contesters. So the long answer is none.

Mark

At 04:15 PM 3/3/2013, W LEWIS wrote:
>
>
>Hi Mark,
>How many check ins were there Sunday?Â IÂ was
>going to check in but a friend came by
>unexpectedly right at 1800Z and stayed for a
>couple of hours so IÂ missed the net.
>73s,
>Butch
>KÃ□PSA
>
>--- On Sun, 3/3/13, mvgilger
><mailto:mgilger%40brightdsl.net>mgilger@...> wrote:
>
>From: mvgilger <mailto:mgilger%40brightdsl.net>mgilger@...>
>Subject: [TS-520_820_530_830] KENWOOD HYBRID USER NET (March 3rd, update)
>To:
><mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>Date: Sunday, March 3, 2013, 3:02 PM
>
>Â
>
>The Saturday's net on 40 meter we had 40
>stations checking with good band conditions.
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>4 running TS-530(x)
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>0 running a set of 599D Twins
>
>I was running my TS-830s. The rest were running
>non hybrids of one model or another.
>
>Tom, WB0SGA tried calling the Sunday 20 meter
>net, but decided to call it off due to

>QRM being generated from the contesters. Hope next week is better ..
>
>We have been having several people checking in
>regularly with their TS-430, TS-440, and
>TS-940's, which of course is not a hybrid,
>although over 30+ years old. Everyone is welcome
>as long as they have an interest in the older equipment.
>
>If anyone would be interested in filling in as a
>net control station, please send me an email.
>Currently it's just myself, WB2KNR and WB0SGA. I
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>alternate so everyone might be on a 3-4 week
>rotation. It's a lot of fun and a good way to
>make sure you station is optimized.
>
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>site that WB4HFN is hosting. He currently has a
>very nice site for Drake, Collins and Heathkit
>and now Kenwood Hybrids. Good quality manuals
>plus sale flyers and brochures will be found
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>
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>
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>
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><http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHome
Page.htm
>
>73's,
>Mark, WB0IQK
>

>[Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

41239. Re: [TS-520_820_530_830] KENWOOD HYBRID USER NET (March 3rd, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-03 22:12:50 UTC
From: Joe
Topic: 41239 Message: 41239

We've a major problem here on the Left Coast. A very powerful jammer that is wreaking havoc on all sorts of nets on 75 and 40 meters. It is so bad, the RV Net has created a $300.00 bounty to who finds (and can prove) who the jammer is. We DO know it is the same person everywhere...His M.O. is exactly the same. It really hurts the lower power operators, those of us with horsepower can usually blast right through him. If I caught him, I would be tempted to just jam his fingers in the high voltage section of his radio and hold him there until he stopped twitching...but...you know, the last time I checked, murder was illegal, even if the murderer was contributing something good to the community.

Joe - WA6RKN
Reno, Nevada

----- Original Message -----
From: "Mark Gilger" <mgilger@...>
Subject: Re: [TS-520_820_530_830] KENWOOD HYBRID USER NET (March 3rd, update)

Tom indicated that he did not run the net Sunday,
due to QRM from the contesters. So the long answer is none.

Mark

41240. TS-830S very low RX audio

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-04 05:40:30 UTC
From: k5xrf
Topic: 41240 Message: 41240

Hi All,

My TS-830S has developed a problem where the RX audio is very low with the RF and AF gains turned fully clockwise. I can hear stations clearly, just at a very reduced audio level. The S-meter shows that the signals are very strong so I don't suspect the receiver front-end. For example, one European station is regularly +10 to +20 on 40 meters and is still that strong with this new problem.

Suspecting the audio amplifier I replaced the audio amplifier IC(HA1368R)and the problem persists. I then checked all of the DC voltages in the audio circuit on the AF-Unit called out on the service manual schematic and they all checked out.

Rather than shotgunning more parts I thought it best to ask for some direction in locating and fixing this problem. Has anyone ever seen this problem before? Any tips on how to diagnose the cause are greatly appreciated.
73,

Jon KR5C

41241. Re: [TS-520_820_530_830] TS-830S very low RX audio

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-04 08:48:19 UTC
From: Michel van der Walle
Topic: 41240 Message: 41241

Check your headphone socket
vk3kvw

----- Original Message -----
From: k5xrf
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, March 04, 2013 4:40 PM
Subject: [TS-520_820_530_830] TS-830S very low RX audio

Hi All,

My TS-830S has developed a problem where the RX audio is very low with the RF and AF gains turned fully clockwise. I can hear stations clearly, just at a very reduced audio level. The S-meter shows that the signals are very strong so I don't suspect the receiver front-end. For example, one European station is regularly +10 to +20 on 40 meters and is still that strong with this new problem.

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73,

Jon KR5C

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Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 9.1.0.2900, Virus/Spyware Database: 6.21050)
http://www.pctools.com
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http://www.pctools.com/
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[Non-text portions of this message have been removed]

41242. Re: [TS-520_820_530_830] TS-830S very low RX audio

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-04 09:07:41 UTC
From: Michel van der Walle
Topic: 41240 Message: 41242

To explain a bit better.
The output of the audio Amp is first send to the Phone socket, then to the external speaker socket and last to speaker itself
These are all in series.
If no Headphones or external speaker is connected then audio appears at the internal speaker itself.
However if the phone socket contacts are dirty, or faulty, or the external speaker socket is dirty or faulty no audio or little audio will get through to the speaker.
Dirty contacts present a high impedence to a signal.
First clean the contacts on the phone socket and external speaker socket and see what happens.
Ofcourse the internal speaker may be faulty as well but highly unlikely

Regards

Michel vk3kvw

----- Original Message -----
From: k5xrf
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, March 04, 2013 4:40 PM
Subject: [TS-520_820_530_830] TS-830S very low RX audio

Hi All,

My TS-830S has developed a problem where the RX audio is very low with the RF and AF gains turned fully clockwise. I can hear stations clearly, just at a very reduced audio level. The S-meter shows that the signals are very strong so I don't suspect the receiver front-end. For example, one European station is regularly +10 to +20 on 40 meters and is still that strong with this new problem.

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73,

Jon KR5C

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=======

[Non-text portions of this message have been removed]

41243. Re: [TS-520_820_530_830] TS-830S very low RX audio

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-04 09:13:37 UTC
From: Michel van der Walle
Topic: 41240 Message: 41243

And a bit more.
Connect a set of heaphones to the phono socket.
If full audio there then connect a external speaker to the external speaker socket.
If full audio is there you have a problem in either or both sockets (dirty)
If no audio on the headphones I am affraid it is back to trouble shooting the audio stages.

Regards,
Michel
vk3kvw

----- Original Message -----
From: k5xrf
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, March 04, 2013 4:40 PM
Subject: [TS-520_820_530_830] TS-830S very low RX audio

Hi All,

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73,

Jon KR5C

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(Email Guard: 9.1.0.2900, Virus/Spyware Database: 6.21050)
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=======

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(Email Guard: 9.1.0.2900, Virus/Spyware Database: 6.21050)
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[Non-text portions of this message have been removed]

41244. RE: [TS-520_820_530_830] TS-830S very low RX audio

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-04 11:04:20 UTC
From: fpath fpath
Topic: 41240 Message: 41244

Jon,

Have your tried the relay on the audio board?
Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: k5xrf@...
Date: Mon, 4 Mar 2013 05:40:30 +0000
Subject: [TS-520_820_530_830] TS-830S very low RX audio

Hi All,

My TS-830S has developed a problem where the RX audio is very low with the RF and AF gains turned fully clockwise. I can hear stations clearly, just at a very reduced audio level. The S-meter shows that the signals are very strong so I don't suspect the receiver front-end. For example, one European station is regularly +10 to +20 on 40 meters and is still that strong with this new problem.

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Rather than shotgunning more parts I thought it best to ask for some direction in locating and fixing this problem. Has anyone ever seen this problem before? Any tips on how to diagnose the cause are greatly appreciated.
73,

Jon KR5C

[Non-text portions of this message have been removed]

41245. Re: [TS-520_820_530_830] TS-830S very low RX audio

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-04 16:40:45 UTC
From: Mike
Topic: 41240 Message: 41245

As Dave said, check the relay on the AF Unit board. You can do that by lightly tapping on the relay's cover with a wooden pencil or plastic rode. Don't simply "visually inspect" the relay, as many hams tend to do, that won't tell you anything about the relay. If tapping on the relay cover results in changes in the audio then I suspect the relay is bad and should be replaced. The relay on the AF Unit board has been known to be the source of numerous problems in the 830 as well as other Kenwood transceivers, see Ken, K4EAA, website link below for details.

www.k4eaa.com

73
Mike

On 3/4/2013 5:04 AM, fpath fpath wrote:
> Jon,
>
> Have your tried the relay on the audio board?
> Dave
> VK5PDL
>
>
>
>
> To: TS-520_820_530_830@yahoogroups.com
> From: k5xrf@...
> Date: Mon, 4 Mar 2013 05:40:30 +0000
> Subject: [TS-520_820_530_830] TS-830S very low RX audio
>
>
>
>
>
> Hi All,
>
> My TS-830S has developed a problem where the RX audio is very low with the RF and AF gains turned fully clockwise. I can hear stations clearly, just at a very reduced audio level. The S-meter shows that the signals are very strong so I don't suspect the receiver front-end. For example, one European station is regularly +10 to +20 on 40 meters and is still that strong with this new problem.
>
> Suspecting the audio amplifier I replaced the audio amplifier IC(HA1368R)and the problem persists. I then checked all of the DC voltages in the audio circuit on the AF-Unit called out on the service manual schematic and they all checked out.
>
> Rather than shotgunning more parts I thought it best to ask for some direction in

locating and fixing this problem. Has anyone ever seen this problem before? Any tips on how to diagnose the cause are greatly appreciated.
> 73,
>
> Jon KR5C
>
>
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> [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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[Non-text portions of this message have been removed]

41246. Re: Kenwood TS-520 Transmits, but no recieve. (It's really a TS-520S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-04 17:53:08 UTC
From: w_cavendish
Topic: 41189 Message: 41246

This weekend I spent some more time on the radio and cleaned switches with deoxit, and still nothing. I did try listening with another radio to the IF frequency as Robert suggested, but I did not hear anything from radio I was using to listen with.

Desperate times call for desperate measure, so I started reading the *gasp* service manual.

Right now I am looking at the troubleshooting flow chart and was planning on following that. The first step in the no reception is to check the speaker, which I have. Next it say to check Q3 and Q4.

Forgive my ignorance, but what is the best way for me to check the function of these transistors?

Thanks for the help guys,

73's
KF5NOL
Brian

--- In TS-520_820_530_830@yahoogroups.com, "w_cavendish" <w_cavendish@...> wrote:
>
>
> I did try it with headphones and I still hear no audio. I also do not see any movement on the analog meter, this makes me think this is not just an audio issue. The meter does behave normally in TX, and it does move if I turn down the RF gain.
>
> I have an 820s and an 830s I have used in the past, so while I am no expert, I am pretty sure I have the controls set correctly.
>
> That is a good idea to try and listen to the IF, I'll work on trying that this weekend.
>
> Thanks and 73's
>
> Brian
> KF5NOL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> >
> > Well, I think a key point is that you hear nothing from the speaker at all except a crackle when changing bands.
> >
> > This may sound dumb, but have you tried using a headset? I have two radios that have nothing coming from the speaker but work fine if you plug in headphones.
> >
> > And a trick I like to use for troubleshooting is to open the case, and tune in another

receiver to the IF frequency of the radio you are working on. If the sections before the audio amp are working you will hear the TS-520S received signals in the other receiver.
> >
> > So tune in at 3395 KHZ and see how that works.
> >
> > Good Luck!
> >
> > Robert
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w_cavendish" <w_cavendish@> wrote:
> > >
> > >
> > > I tried that and discovered something I can't believe I missed. This is a 520s not a 520. Just to try it, I did work the RF attenuation switch a few times. Still nothing.
> > >
> > > I did try swapping the antenna relay with one from my 820s, but that did not help. This was more me testing the 820's relay than believing it would work. Oh well.
> > >
> > >
> > > Thanks for the effort, any other ideas?
> > >
> > > KF5NOL
> > > Brian
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, John Donnelly <jack@> wrote:
> > > >
> > > > Try working the JJY/WWV switch to clean the contacts.Â It will kill your receive if it's not making contact.
> > > >
> > > >
> > > > Â
> > > >
> > > > Jack DonnellyÂ Â Â Â Â Â Â Â KV4JX
> > > > Ball Ground Video Productions
> > > > 308 Calusa Place
> > > >
> > > > Ball Ground, GA 30107
> > > > Phone 678-592-9974
> > > > www.ballgroundvideo.com
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41247. TV-502 Crystal 38.666 3rd overtone

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-04 19:28:14 UTC
From: k7mks@...
Topic: 41247 Message: 41247

Does anyone have an idea wher e I might find a HC-25U c ryst al for my TV- 502 2m transverter. i' ve checked Kenwood, , Bri an AF4xxx, Bo b k5ftf , etc

Thank you

joe k7mks

[Non-text portions of this message have been removed]

41248. Re: [TS-520_820_530_830] TV-502 Crystal 38.666 3rd overtone

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-04 19:39:44 UTC
From: Richard Radke
Topic: 41247 Message: 41248

check with International Crystal...probably a custom order though...I
needed one for a VBT xtal in a 830S...took about 2 weeks...$30 shipped

http://www.icmfg.com/

Rick
W9WS

On Mar 4, 2013, at 1:28 PM, k7mks@comcast.net wrote:

Does anyone have an idea wher e I might find a HC-25U c ryst al for
my TV- 502 2m transverter. i' ve checked Kenwood, , Bri an AF4xxx,
Bo b k5ftf , etc

Thank you

joe k7mks

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41249. Re: [TS-520_820_530_830] TV-502 Crystal 38.666 3rd overtone

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-04 20:07:27 UTC
From: k7mks@...
Topic: 41247 Message: 41249

Thank you Rick

Joe

----- Original Message -----

From: "Richard Radke" <rar100@...>
To: "TS-520 820 530 830" <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, March 4, 2013 11:39:44 AM
Subject: Re: [TS-520_820_530_830] TV-502 Crystal 38.666 3rd overtone

check with International Crystal...probably a custom order though...I
needed one for a VBT xtal in a 830S...took about 2 weeks...$30 shipped

  http://www.icmfg.com/

Rick
W9WS

On Mar 4, 2013, at 1:28 PM, k7mks@... wrote:

Does anyone have an idea wher e I might find a HC-25U c ryst al for
my TV- 502 2m transverter. i' ve checked Kenwood, , Bri an AF4xxx,
Bo b k5ftf , etc

Thank you

joe k7mks

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

Yahoo! Groups Links

[Non-text portions of this message have been removed]

41250. Re: [TS-520_820_530_830] TV-502 Crystal 38.666 3rd overtone

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-04 20:11:05 UTC
From: Richard Radke
Topic: 41247 Message: 41250

your very welcome..they probably already have all the specs. on
file...they did for mine

R

On Mar 4, 2013, at 2:07 PM, k7mks@... wrote:

Thank you Rick

Joe

----- Original Message -----

From: "Richard Radke" rar100@...>
To: "TS-520 820 530 830" TS-520_820_530_830@yahoogroups.com>
Sent: Monday, March 4, 2013 11:39:44 AM
Subject: Re: [TS-520_820_530_830] TV-502 Crystal 38.666 3rd overtone

check with International Crystal...probably a custom order though...I
needed one for a VBT xtal in a 830S...took about 2 weeks...$30 shipped

http://www.icmfg.com/

Rick
W9WS

On Mar 4, 2013, at 1:28 PM, k7mks@... wrote:

Does anyone have an idea wher e I might find a HC-25U c ryst al for
my TV- 502 2m transverter. i' ve checked Kenwood, , Bri an AF4xxx,
Bo b k5ftf , etc

Thank you

joe k7mks

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

Yahoo! Groups Links

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41251. TS820 Freq readout

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-04 23:56:48 UTC
From: wallydoc
Topic: 41251 Message: 41251

TS820 freq readout problem
I am having trouble getting the freq readout to be correct on all bands. When I center it on 20MHz, it it off by 400 (.4, last digit) on 7MHz band and about the same on 14 MHz.
Does anyone have any suggestions? Perhaps I am forgetting something.
I did rebuild this unit and think I got all the adjusts correct.
The radio works quite well otherwise.

Wally
KC9INK

41252. Re: TS-830S Rectifier Board voltages

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-05 00:01:02 UTC
From: wallydoc
Topic: 41205 Message: 41252

The volt readings are not exact, but a reading of 0 would indicate there is a bad component. Look at the resistors on the board, I'll bet one is open. Just measure them in place.
Wally
KC9INK

--- In TS-520_820_530_830@yahoogroups.com, Ronald Burnor <ronaldburnor@...> wrote:
>
> Hi Joe and thank you for the prompt reply ie voltages on rectifier board.Â I
> have zero voltson the tune and stb terminals and i think some of nthe other
> voltages are incorrect.Â I plan to pull the board.Â What voltage should i be
> seeing on the tune and stb terminal.Â Thanks and 73's Ron KD0KPM
>
>
>
>
> _____
> From: Joseph Stiles <stilesjoseph@...>
> To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
> Sent: Fri, March 1, 2013 11:25:47 AM
> Subject: Re: [TS-520_820_530_830] TS-830S Rectifier Board voltages
>
> Â
> Ron,
>
> Most of the voltages are printed right on the rectifier board itself...or, look
> at pg 11 of the service manual. I suggest that you power off rig...and unplug
> it.
>
> Using a bright light and maybe some magnification...identify the locations that
> you want to test....some areas are a bit crowded...I have found that making
>
> an enlarged drawing...with post/terminals marked...take measurements and place
> on your drawingÂ for further/future reference.
>
> Â Be very careful poking around here...there is potential for +900VDC in this
> area...which can/will make you and SK!
>
> Â
> 73Â Joe
> WB7UQU
>
> _____
> From: "ronaldburnor@..." ronaldburnor@...>
> To: TS-520_820_530_830@yahoogroups.com

> Sent: Friday, March 1, 2013 8:53 AM
> Subject: [TS-520_820_530_830] TS-830S Rectifier Board voltages
>
>
> Â
> Hi Guys and thanks for the time and effort that is spent to help us hybrid
> users. I have a ts-830s and would like to know what the voltages on the
> rectifier board should measure. Is there documentation on this somewhere? Thanks
> and 73's Ron KD0KPM
>
> [Non-text portions of this message have been removed]
>
>
>
>
> [Non-text portions of this message have been removed]
>

41253. Re: Kenwood TV-502

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-05 00:05:16 UTC
From: wallydoc
Topic: 41224 Message: 41253

Try Ken's Electronics:
http://kenselectronics.com/lists/cbxtal.htm
He has all sorts of Xtals and they are labeled on the list with their overtones. Prices are not too bad.
Wally
KC9INK
--- In TS-520_820_530_830@yahoogroups.com, k7mks@... wrote:
>
>
>
> I have a need for a 38.666 Mc 3rd overtone crystal (HC-25U holder) Â as u sed in the Kenwood TV-502.Â If you have a par ts TV-502 or know of a possib le source where su ch a part might beÂ hiding please let me know.
>
>
>
> Thank you,
>
>
>
> joe k7mks
>
> [Non-text portions of this message have been removed]
>

41254. Re: TS-830S very low RX audio

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-05 05:11:11 UTC
From: k5xrf
Topic: 41240 Message: 41254

Michel,

Thanks for the reply. I forgot to include part of my diagnostic process. I have the same low audio level at the phones jack, external speaker and internal speaker which is why I took the covers off and started into the AF-Unit. I was hoping that it would be something simple like the phones jack. No such luck! On to the relay.
73,

Jon KR5C

--- In TS-520_820_530_830@yahoogroups.com, "Michel van der Walle" <vk3kvw@...> wrote:
>
> And a bit more.
> Connect a set of heaphones to the phono socket.
> If full audio there then connect a external speaker to the external speaker socket.
> If full audio is there you have a problem in either or both sockets (dirty)
> If no audio on the headphones I am affraid it is back to trouble shooting the audio stages.
>
> Regards,
> Michel
> vk3kvw
>
> ----- Original Message -----
> From: k5xrf
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, March 04, 2013 4:40 PM
> Subject: [TS-520_820_530_830] TS-830S very low RX audio
>
>
>
> Hi All,
>
> My TS-830S has developed a problem where the RX audio is very low with the RF and AF gains turned fully clockwise. I can hear stations clearly, just at a very reduced audio level. The S-meter shows that the signals are very strong so I don't suspect the receiver front-end. For example, one European station is regularly +10 to +20 on 40 meters and is still that strong with this new problem.
>
> Suspecting the audio amplifier I replaced the audio amplifier IC(HA1368R)and the problem persists. I then checked all of the DC voltages in the audio circuit on the AF-Unit called out on the service manual schematic and they all checked out.
>
> Rather than shotgunning more parts I thought it best to ask for some direction in locating and fixing this problem. Has anyone ever seen this problem before? Any tips on how to diagnose the cause are greatly appreciated.

> 73,
>
> Jon KR5C
>
>
>
>
>
>
>
>
> =======
> Email scanned by PC Tools - No viruses or spyware found.
> (Email Guard: 9.1.0.2900, Virus/Spyware Database: 6.21050)
> http://www.pctools.com
> =======
>
>
>
> =======
> Email scanned by PC Tools - No viruses or spyware found.
> (Email Guard: 9.1.0.2900, Virus/Spyware Database: 6.21050)
> http://www.pctools.com/
> =======
>
>
> [Non-text portions of this message have been removed]
>

41255. Re: TS-830S very low RX audio

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-05 05:13:49 UTC
From: k5xrf
Topic: 41240 Message: 41255

Mike and Dave,

Thanks for the advice. I will take a look at the relay tomorrow when I plan on digging into this problem more. I'll post what I find.
73,

Jon KR5C

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> As Dave said, check the relay on the AF Unit board. You can do that by
> lightly tapping on the relay's cover with a wooden pencil or plastic
> rode. Don't simply "visually inspect" the relay, as many hams tend to
> do, that won't tell you anything about the relay. If tapping on the
> relay cover results in changes in the audio then I suspect the relay is
> bad and should be replaced. The relay on the AF Unit board has been
> known to be the source of numerous problems in the 830 as well as other
> Kenwood transceivers, see Ken, K4EAA, website link below for details.
>
> www.k4eaa.com
>
> 73
> Mike
>
> On 3/4/2013 5:04 AM, fpath fpath wrote:
> > Jon,
> >
> > Have your tried the relay on the audio board?
> > Dave
> > VK5PDL
> >
> >
> >
> >
> > To: TS-520_820_530_830@yahoogroups.com
> > From: k5xrf@...
> > Date: Mon, 4 Mar 2013 05:40:30 +0000
> > Subject: [TS-520_820_530_830] TS-830S very low RX audio
> >
> >
> >
> >
> >
> > Hi All,
> >
> > My TS-830S has developed a problem where the RX audio is very low with the RF and AF

gains turned fully clockwise. I can hear stations clearly, just at a very reduced audio level. The S-meter shows that the signals are very strong so I don't suspect the receiver front-end. For example, one European station is regularly +10 to +20 on 40 meters and is still that strong with this new problem.
> >
> > Suspecting the audio amplifier I replaced the audio amplifier IC(HA1368R)and the problem persists. I then checked all of the DC voltages in the audio circuit on the AF-Unit called out on the service manual schematic and they all checked out.
> >
> > Rather than shotgunning more parts I thought it best to ask for some direction in locating and fixing this problem. Has anyone ever seen this problem before? Any tips on how to diagnose the cause are greatly appreciated.
> > 73,
> >
> > Jon KR5C
> >
> >
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
> >
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> > ------------------------------------
> >
> > Yahoo! Groups Links
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> >
>
>
>
> [Non-text portions of this message have been removed]
>

41256. Re: Kenwood TS-520 Transmits, but no recieve. (It's really a TS-520S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-05 11:24:20 UTC
From: Brian Allen
Topic: 41256 Message: 41256

I replaced the relay on the AF board on my TS 830. I would highly suggest you replace the relay before doing any other trouble shooting. Very good chance it will fix your problem.

[Non-text portions of this message have been removed]

41257. Re: [TS-520_820_530_830] Re: TS-830S very low RX audio

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-05 15:22:29 UTC
From: Michel van der Walle
Topic: 41240 Message: 41257

Hi Jon,
Yes you had not stated that you allready had checked the audio output ports on the back of the radio.
In good trouble shooting proceedures, one allways works backwards, never forward.
Hence my suggestion to you.
I hope you find a new relay will sort out your problem
The upside is you have a spare audio amp to put on the shelf .
Regards,
Michel vk3kvw

----- Original Message -----
From: k5xrf
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, March 05, 2013 4:11 PM
Subject: [TS-520_820_530_830] Re: TS-830S very low RX audio

Michel,

Thanks for the reply. I forgot to include part of my diagnostic process. I have the same low audio level at the phones jack, external speaker and internal speaker which is why I took the covers off and started into the AF-Unit. I was hoping that it would be something simple like the phones jack. No such luck! On to the relay.
73,

Jon KR5C

--- In TS-520_820_530_830@yahoogroups.com, "Michel van der Walle" wrote:
>

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 9.1.0.2900, Virus/Spyware Database: 6.21050)
http://www.pctools.com/
=======

[Non-text portions of this message have been removed]

41258. Re: Kenwood TS-520 Transmits, but no recieve. (It's really a TS-520S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-05 17:21:48 UTC
From: w_cavendish
Topic: 41256 Message: 41258

I don't have the radio in front of my, but I do not believe the 520s has a relay on the AF board. I'll double check when I get home.

I have tried swapping the antenna relay with one from my 830s and it made no difference.

73's
KF5NOL
Brian

--- In TS-520_820_530_830@yahoogroups.com, Brian Allen <bsa0791@...> wrote:
>
>
> I replaced the relay on the AF board on my TS 830. I would highly suggest you replace the relay before doing any other trouble shooting. Very good chance it will fix your problem.
>
>
>
> [Non-text portions of this message have been removed]
>

41259. Re: [TS-520_820_530_830] Re: Kenwood TS-520 Transmits, but no recieve. (It's really a TS-520S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-05 18:16:57 UTC
From: Joseph Stiles
Topic: 41256 Message: 41259

Greetings group,

There is no relay on the AF board. There are two relays....one is hidden under the "VOX BOARD," the other is next to the "final board" under the metal
shield. The first is a bit difficult to get to as the VOX BOARD needs to be unscrewed and tilted up/out of the way...the second...is easier.

73 Joe
WB7UQU

From: w_cavendish <w_cavendish@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, March 5, 2013 9:21 AM
Subject: [TS-520_820_530_830] Re: Kenwood TS-520 Transmits, but no recieve. (It's really a TS-520S

I don't have the radio in front of my, but I do not believe the 520s has a relay on the AF board. I'll double check when I get home.

I have tried swapping the antenna relay with one from my 830s and it made no difference.

73's
KF5NOL
Brian

--- In TS-520_820_530_830@yahoogroups.com, Brian Allen wrote:
>
>
> I replaced the relay on the AF board on my TS 830. I would highly suggest you replace the relay before doing any other trouble shooting. Very good chance it will fix your problem.
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

41260. Re: [TS-520_820_530_830] Re: Kenwood TS-520 Transmits, but no recieve. (It's really a TS-520S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-05 18:47:30 UTC
From: n6wk@...
Topic: 41256 Message: 41260

Be sure to check the connections of the two little black Coaxes on the
left side of the radio.
I think they went to the NB board. It is just under the VOX unit if I
recall.
It has been a while since I worked on a 520, but I do recall a bad
connection on either of those will do what you are talking about.
I wish I had one in front of me at the moment.

73,
Gordon

On 3/5/2013 10:16 AM, Joseph Stiles wrote:
>
> Greetings group,
>
> There is no relay on the AF board. There are two relays....one is
> hidden under the "VOX BOARD," the other is next to the "final board"
> under the metal
> shield. The first is a bit difficult to get to as the VOX BOARD needs
> to be unscrewed and tilted up/out of the way...the second...is easier.
>
>
> 73 Joe
> WB7UQU
>
> _____
> From: w_cavendish w_cavendish@... <mailto:w_cavendish%40yahoo.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Tuesday, March 5, 2013 9:21 AM
> Subject: [TS-520_820_530_830] Re: Kenwood TS-520 Transmits, but no
> recieve. (It's really a TS-520S
>
>
>
> I don't have the radio in front of my, but I do not believe the 520s
> has a relay on the AF board. I'll double check when I get home.
>
> I have tried swapping the antenna relay with one from my 830s and it
> made no difference.
>
> 73's
> KF5NOL
> Brian

>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Brian Allen wrote:
> >
> >
> > I replaced the relay on the AF board on my TS 830. I would highly
> suggest you replace the relay before doing any other trouble shooting.
> Very good chance it will fix your problem.
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
> [Non-text portions of this message have been removed]
>
>

41261. Re: [TS-520_820_530_830] TS820 Freq readout

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-05 22:09:03 UTC
From: Joseph Stiles
Topic: 41251 Message: 41261

Wally,

Please clarify some of the statements you made:
"Centered on 20Mhz?" do you mean 20 meters? what does "centered" mean?
The 820 has a VCO...voltage controlled oscillator. I have seen VCO's correctly adjusted..according to the service manual...either for voltage or,
frequency, and still vary slightly from band to band.

What are you using to monitor frequency? You do not state if the 820 has a "digital readout." Some 820's came without it...but were added later.
Some came from the factory with it already installed......the 820S.

What was rebuilt?

73 Joe
WB7UQU

From: wallydoc <wallydoc@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, March 4, 2013 3:56 PM
Subject: [TS-520_820_530_830] TS820 Freq readout

TS820 freq readout problem
I am having trouble getting the freq readout to be correct on all bands. When I center it on 20MHz, it it off by 400 (.4, last digit) on 7MHz band and about the same on 14 MHz.
Does anyone have any suggestions? Perhaps I am forgetting something.
I did rebuild this unit and think I got all the adjusts correct.
The radio works quite well otherwise.

Wally
KC9INK

[Non-text portions of this message have been removed]

41262. Re: [TS-520_820_530_830] TS820 Freq readout

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-06 01:05:01 UTC
From: Mike
Topic: 41251 Message: 41262

The VCOs by themselves have an initial alignment adjustment shown in the 820 service manual.

During normal operation the PLL Unit's "PD" (Phase Detector) make any/all necessary adjustments to the PLL Unit's band switch selected VCO by applying a small DC voltage to the VCO.

The VCO signal is used in both transmit AND receive. Therefore, if the PLL Unit changes to an "Unlock" state, the VCO signal applied to the RF Unit's "VCO" terminal will be missing resulting in no transmit and no receive.

This is explained and shown on page 10 in the 820 service manual.

73
Mike
W5RKL

On 3/5/2013 4:09 PM, Joseph Stiles wrote:
>
> Wally,
>
> Please clarify some of the statements you made:
> "Centered on 20Mhz?" do you mean 20 meters? what does
> "centered" mean?
> The 820 has a VCO...voltage controlled oscillator. I have seen
> VCO's correctly adjusted..according to the service manual...either for
> voltage or,
> frequency, and still vary slightly from band to band.
>
> What are you using to monitor frequency? You do not state if
> the 820 has a "digital readout." Some 820's came without it...but were
> added later.
> Some came from the factory with it already installed......the 820S.
>
> What was rebuilt?
>
>
> 73 Joe
> WB7UQU
>
> _____
> From: wallydoc wallydoc@... <mailto:wallydoc%40yahoo.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Monday, March 4, 2013 3:56 PM

> Subject: [TS-520_820_530_830] TS820 Freq readout
>
>
>
> TS820 freq readout problem
> I am having trouble getting the freq readout to be correct on all
> bands. When I center it on 20MHz, it it off by 400 (.4, last digit) on
> 7MHz band and about the same on 14 MHz.
> Does anyone have any suggestions? Perhaps I am forgetting something.
> I did rebuild this unit and think I got all the adjusts correct.
> The radio works quite well otherwise.
>
> Wally
> KC9INK
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

41263. Re: Kenwood TS-520 Transmits, but no recieve. (It's really a TS-520S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-06 01:27:59 UTC
From: w_cavendish
Topic: 41256 Message: 41263

Joe, you win the Kewpie doll!

Tried the relay from my 820s and now I have audio. Well, at least I can hear the CAL tone. I'm going to put the rest of this radio back together and see what it does with an antenna.

Thank you very much for your help with this.

73's
KF5NOL
Brian

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Greetings group,
>
> Â There is no relay on the AF board. There are two relays....one is hidden under the "VOX BOARD," the other is next to the "final board" under the metal
> shield. The first is a bit difficult to get to as the VOX BOARD needs to be unscrewed and tilted up/out of the way...the second...is easier.
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: w_cavendish <w_cavendish@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tuesday, March 5, 2013 9:21 AM
> Subject: [TS-520_820_530_830] Re: Kenwood TS-520 Transmits, but no recieve. (It's really a TS-520S
>
>
> Â
> I don't have the radio in front of my, but I do not believe the 520s has a relay on the AF board. I'll double check when I get home.
>
> I have tried swapping the antenna relay with one from my 830s and it made no difference.
>
> 73's
> KF5NOL
> Brian
>
> --- In TS-520_820_530_830@yahoogroups.com, Brian Allen wrote:

> >
> >
> > I replaced the relay on the AF board on my TS 830. I would highly suggest you replace the relay before doing any other trouble shooting. Very good chance it will fix your problem.
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
>
>
>
> [Non-text portions of this message have been removed]
>

41264. Re: [TS-520_820_530_830] Re: Kenwood TS-520 Transmits, but no recieve. (It's really a TS-520S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-06 04:12:37 UTC
From: Joseph Stiles
Topic: 41256 Message: 41264

Brian,

  Glad I could help. Those relays have been workin' for 30+ years. I will check them as one of the first steps.
They are getting hard to find....but there is a guy on this board who has some other replacement parts including
relays....Hybrid Restore.com Jim Showker/A7OJ. I keep a couple around.
Good luck and, keep us up on your progress

73 Joe
WB7UQU

From: w_cavendish <w_cavendish@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, March 5, 2013 5:27 PM
Subject: [TS-520_820_530_830] Re: Kenwood TS-520 Transmits, but no recieve. (It's really a TS-520S

Joe, you win the Kewpie doll!

Tried the relay from my 820s and now I have audio. Well, at least I can hear the CAL tone. I'm going to put the rest of this radio back together and see what it does with an antenna.

Thank you very much for your help with this.

73's
KF5NOL
Brian

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles wrote:
>
> Greetings group,
>
> Â There is no relay on the AF board. There are two relays....one is hidden under the "VOX BOARD," the other is next to the "final board" under the metal
> shield. The first is a bit difficult to get to as the VOX BOARD needs to be unscrewed and tilted up/out of the way...the second...is easier.
>
>
> Â
> 73Â Joe
> WB7UQU
>
>

>
> _____
> From: w_cavendish
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tuesday, March 5, 2013 9:21 AM
> Subject: [TS-520_820_530_830] Re: Kenwood TS-520 Transmits, but no recieve. (It's really a TS-520S
>
>
> Â
> I don't have the radio in front of my, but I do not believe the 520s has a relay on the AF board. I'll double check when I get home.
>
> I have tried swapping the antenna relay with one from my 830s and it made no difference.
>
> 73's
> KF5NOL
> Brian
>
> --- In TS-520_820_530_830@yahoogroups.com, Brian Allen wrote:
> >
> >
> > I replaced the relay on the AF board on my TS 830. I would highly suggest you replace the relay before doing any other trouble shooting. Very good chance it will fix your problem.
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

41265. Readout

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-06 03:24:57 UTC
From: Rick
Topic: 41265 Message: 41265

I know it's unlikely anyone has one of these, but it never hurts to ask. I am looking for a DG-1 for my newly acquired TS-820. Please, contact me off list at rsbtexas@... if you happen to have one for sale.

Tnx and vy 73, Rick / K5IAR

[Non-text portions of this message have been removed]

41266. Re: TS-830S very low RX audio

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-06 06:24:26 UTC
From: k5xrf
Topic: 41240 Message: 41266

I had a chance to tap on the AF-Unit's relay cover this evening with a plastic ruler. It made absolutely no difference in audio quality or volume. Does that mean that the relay is definitively not a problem or should I consider replacing it as a preventative measure?

If not the relay, where to look next? Could the other circuitry connected to the audio amplifier output be heavily loading the signal? I thought about temporarily pulling the electrolytic just past the inductor to see if something after it is loading the output. Thoughts?
73,

Jon KR5C

--- In TS-520_820_530_830@yahoogroups.com, "k5xrf" <k5xrf@...> wrote:
>
> Mike and Dave,
>
> Thanks for the advice. I will take a look at the relay tomorrow when I plan on digging into this problem more. I'll post what I find.
> 73,
>
> Jon KR5C
>
> --- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@> wrote:
> >
> > As Dave said, check the relay on the AF Unit board. You can do that by
> > lightly tapping on the relay's cover with a wooden pencil or plastic
> > rode. Don't simply "visually inspect" the relay, as many hams tend to
> > do, that won't tell you anything about the relay. If tapping on the
> > relay cover results in changes in the audio then I suspect the relay is
> > bad and should be replaced. The relay on the AF Unit board has been
> > known to be the source of numerous problems in the 830 as well as other
> > Kenwood transceivers, see Ken, K4EAA, website link below for details.
> >
> > www.k4eaa.com
> >
> > 73
> > Mike
> >
> > On 3/4/2013 5:04 AM, fpath fpath wrote:
> > > Jon,
> > >
> > > Have your tried the relay on the audio board?
> > > Dave
> > > VK5PDL
> > >
> > >

> > >
> > >
> > > To: TS-520_820_530_830@yahoogroups.com
> > > From: k5xrf@
> > > Date: Mon, 4 Mar 2013 05:40:30 +0000
> > > Subject: [TS-520_820_530_830] TS-830S very low RX audio
> > >
> > >
> > >
> > >
> > >
> > > Hi All,
> > >
> > > My TS-830S has developed a problem where the RX audio is very low with the RF and AF gains turned fully clockwise. I can hear stations clearly, just at a very reduced audio level. The S-meter shows that the signals are very strong so I don't suspect the receiver front-end. For example, one European station is regularly +10 to +20 on 40 meters and is still that strong with this new problem.
> > >
> > > Suspecting the audio amplifier I replaced the audio amplifier IC(HA1368R)and the problem persists. I then checked all of the DC voltages in the audio circuit on the AF-Unit called out on the service manual schematic and they all checked out.
> > >
> > > Rather than shotgunning more parts I thought it best to ask for some direction in locating and fixing this problem. Has anyone ever seen this problem before? Any tips on how to diagnose the cause are greatly appreciated.
> > > 73,
> > >
> > > Jon KR5C
> > >
> > >
> > >
> > >
> > >
> > >
> > > [Non-text portions of this message have been removed]
> > >
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> > >
> > > ------------------------------------
> > >
> > > Yahoo! Groups Links
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> > [Non-text portions of this message have been removed]

> >
>

41267. Re: Kenwood TS-520 Transmits, but no recieve. (It's really a TS-520S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-06 12:23:25 UTC
From: w_cavendish
Topic: 41256 Message: 41267

Joe,

Yes, I have already placed an order with Jim for an new relay and one of his recap kits. I see some swelling on the underside of the HV caps and, while the HV isn't sagging yet, it is only a matter of time.

Once I got the radio hooked up to my antenna (MFJ-1796) my first contact was with a guy in Arkansas, he reported a good strong signal but my audio was a little off. Once I finish recapping everything I need to learn how to do an alignment. Then I'm sure this little rig will give me years of service.

Thanks again to Joe and everyone else for helping me stumble through this.

73's
KF5NOL
Brian

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Brian,
>
> Â Â Glad I could help. Those relays have been workin' for 30+ years. I will check them as one of the first steps.
> They are getting hard to find....but there is a guy on this board who has some other replacement parts including
> relays....Hybrid Restore.comÂ Â Jim Showker/A7OJ.Â I keep a couple around.
> Good luck and, keep us up on your progress
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: w_cavendish <w_cavendish@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tuesday, March 5, 2013 5:27 PM
> Subject: [TS-520_820_530_830] Re: Kenwood TS-520 Transmits, but no recieve. (It's really a TS-520S
>
>
> Â
>
> Joe, you win the Kewpie doll!
>
> Tried the relay from my 820s and now I have audio. Well, at least I can hear the CAL tone. I'm going to put the rest of

this radio back together and see what it does with an antenna.
>
> Thank you very much for your help with this.
>
> 73's
> KF5NOL
> Brian
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles wrote:
> >
> > Greetings group,
> >
> > Ã□Â There is no relay on the AF board. There are two relays....one is hidden under the "VOX BOARD," the other is next to the "final board" under the metal
> > shield. The first is a bit difficult to get to as the VOX BOARD needs to be unscrewed and tilted up/out of the way...the second...is easier.
> >
> >
> > Ã□Â
> > 73Ã□Â Joe
> > WB7UQU
> >
> >
> >
> > _____
> > From: w_cavendish
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Tuesday, March 5, 2013 9:21 AM
> > Subject: [TS-520_820_530_830] Re: Kenwood TS-520 Transmits, but no recieve. (It's really a TS-520S
> >
> >
> > Ã□Â
> > I don't have the radio in front of my, but I do not believe the 520s has a relay on the AF board. I'll double check when I get home.
> >
> > I have tried swapping the antenna relay with one from my 830s and it made no difference.
> >
> > 73's
> > KF5NOL
> > Brian
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Brian Allen wrote:
> > >
> > >
> > > I replaced the relay on the AF board on my TS 830. I would highly suggest you replace the relay before doing any other trouble shooting. Very good chance it will fix your problem.
> > >
> > >
> > >
> > > [Non-text portions of this message have been removed]

> > >
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
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>
>
> [Non-text portions of this message have been removed]
>

41268. Re: TS820 Freq readout

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-06 13:30:17 UTC
From: wallydoc
Topic: 41251 Message: 41268

Joe:
Sorry,
I centered (adjusted dig readout)it at 29MHz using a fluke sig gen, which I believe is quite accurate.
After that dig readout is a little off on other bands when I put in other signals.
Wally
KC9INK

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Wally,
>
> Â Â Please clarify some of the statements you made:
> Â Â Â Â Â Â Â "Centered on 20Mhz?"Â do you mean 20 meters? what does "centered" mean?
> Â Â Â Â Â Â Â The 820 has a VCO...voltage controlled oscillator. I have seen VCO's correctly adjusted..according to the service manual...either for voltage or,
> frequency, and still vary slightly from band to band.
>
> Â Â Â Â Â Â Â What are you using to monitor frequency? You do not state if the 820 has a "digital readout." Some 820's came without it...but were added later.
> Some came from the factory with it already installed......the 820S.
>
> Â What was rebuilt?
>
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: wallydoc <wallydoc@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, March 4, 2013 3:56 PM
> Subject: [TS-520_820_530_830] TS820 Freq readout
>
>
>
> Â
> TS820 freq readout problem
> I am having trouble getting the freq readout to be correct on all bands. When I center it on 20MHz, it it off by 400 (.4, last digit) on 7MHz band and about the same on 14 MHz.
> Does anyone have any suggestions? Perhaps I am forgetting something.
> I did rebuild this unit and think I got all the adjusts correct.

> The radio works quite well otherwise.
>
> Wally
> KC9INK
>
>
>
>
> [Non-text portions of this message have been removed]
>

41269. Re: [TS-520_820_530_830] Re: TS820 Freq readout

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-06 14:38:56 UTC
From: Mike
Topic: 41251 Message: 41269

Wally, how are you determining the accuracy of the signal generator?
Have you connected a frequency counter in parallel with the signal
generator's output?

73
Mike

On 3/6/2013 7:30 AM, wallydoc wrote:
>
> Joe:
> Sorry,
> I centered (adjusted dig readout)it at 29MHz using a fluke sig gen,
> which I believe is quite accurate.
> After that dig readout is a little off on other bands when I put in
> other signals.
> Wally
> KC9INK
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles wrote:
> >
> > Wally,
> >
> > Â Â Please clarify some of the statements you made:
> > Â Â Â Â Â Â "Centered on 20Mhz?"Â do you mean 20 meters? what does
> "centered" mean?
> > Â Â Â Â Â Â The 820 has a VCO...voltage controlled oscillator. I
> have seen VCO's correctly adjusted..according to the service
> manual...either for voltage or,
> > frequency, and still vary slightly from band to band.
> >
> > Â Â Â Â Â Â What are you using to monitor frequency? You do not
> state if the 820 has a "digital readout." Some 820's came without
> it...but were added later.
> > Some came from the factory with it already installed......the 820S.
> >
> > Â What was rebuilt?
> >
> >
> >
> > Â
> > 73Â Joe
> > WB7UQU
> >
> >

> >
> > _____
> > From: wallydoc
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Monday, March 4, 2013 3:56 PM
> > Subject: [TS-520_820_530_830] TS820 Freq readout
> >
> >
> > Â
> > TS820 freq readout problem
> > I am having trouble getting the freq readout to be correct on all
> bands. When I center it on 20MHz, it it off by 400 (.4, last digit) on
> 7MHz band and about the same on 14 MHz.
> > Does anyone have any suggestions? Perhaps I am forgetting something.
> > I did rebuild this unit and think I got all the adjusts correct.
> > The radio works quite well otherwise.
> >
> > Wally
> > KC9INK
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
>

[Non-text portions of this message have been removed]

41270. Re: [TS-520_820_530_830] Re: TS820 Freq readout

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-07 01:18:48 UTC
From: Mike
Topic: 41251 Message: 41270

There are individual PLL Unit "VCOs" for each band, including JJY/WWV. Adjusting the 29.0Mhz 10 meter VCO will not affect the other band VCOs or have any affect on the other band VCO accuracy.

There are also individual PLL Unit HET crystals for each band, including JJY/WWV. If a HET crystal ages resulting in a change in its frequency, then that crystal will affect the HET oscillator frequency on that band ONLY.

The VFO tuning frequency range is between 5.500Mhz and 5.000Mhz, regardless of the band selected/in use. If the VFO output frequency "drifts" for what ever reason then the PLL Unit's "PD" will notice the "drift" when it compares the VFO signal against the CAR Mixer signal. If there is any difference during the PD's comparison, the PD will adjust the VCO until the VFO signal AND the CAR Mixer signal are the same. A simple example is shown below. We will assume the VFO knob was adjusted slight up in frequency from zero on the dial to the 5Khz tick mark. This results in the VFO frequency to be 5.495Mhz.

VFO output is 5.495Mhz
CAR Mixer output is 5.500Mhz

PD comparison of the 5.500 and 5.495 results in 5Khz difference.

This results in the PD issuing a VCO adjust DC voltage to the VCO in use until the comparison between the VFO AND the CAR mixer signals are the same. At that point the PD ceases adjusting the VCO in use. The VCO output frequency at that point is slightly different than it was BEFORE the PD issued the change to the VCO. The digital display will also change, display the NEW operating frequency.

Any change in the VFO setting or the RIT setting will result in the PLL Unit's PD changing the VCO until the VFO and CAR Mixer signals are the same AND the digital display will update it's display showing the "new" frequency. In transmit, the RIT is "disabled" so the digital display WILL change.

What do you mean when you said

"I centered (adjusted dig readout)it at 29Mhz...."?

The only adjustment the digital display has is the standard oscillator, typically referred to as the digital display reference oscillator. Once this adjustment is made, it has no affect on the accuracy of each individual band's VCO.

73
Mike

On 3/6/2013 7:30 AM, wallydoc wrote:
>
> Joe:
> Sorry,
> I centered (adjusted dig readout)it at 29MHz using a fluke sig gen,
> which I believe is quite accurate.
> After that dig readout is a little off on other bands when I put in
> other signals.
> Wally
> KC9INK
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles wrote:
> >
> > Wally,
> >
> > Â Â Please clarify some of the statements you made:
> > Â Â Â Â Â Â "Centered on 20Mhz?"Â do you mean 20 meters? what does
> "centered" mean?
> > Â Â Â Â Â Â The 820 has a VCO...voltage controlled oscillator. I
> have seen VCO's correctly adjusted..according to the service
> manual...either for voltage or,
> > frequency, and still vary slightly from band to band.
> >
> > Â Â Â Â Â Â What are you using to monitor frequency? You do not
> state if the 820 has a "digital readout." Some 820's came without
> it...but were added later.
> > Some came from the factory with it already installed......the 820S.
> >
> > Â What was rebuilt?
> >
> >
> >
> > Â
> > 73Â Joe
> > WB7UQU
> >
> >
> >
> > _____
> > From: wallydoc
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Monday, March 4, 2013 3:56 PM
> > Subject: [TS-520_820_530_830] TS820 Freq readout
> >
> >
> > Â

> > TS820 freq readout problem
> > I am having trouble getting the freq readout to be correct on all
> bands. When I center it on 20MHz, it it off by 400 (.4, last digit) on
> 7MHz band and about the same on 14 MHz.
> > Does anyone have any suggestions? Perhaps I am forgetting something.
> > I did rebuild this unit and think I got all the adjusts correct.
> > The radio works quite well otherwise.
> >
> > Wally
> > KC9INK
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
>

[Non-text portions of this message have been removed]

41271. TS 520S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-07 06:36:44 UTC
From: robbydot
Topic: 2681 Message: 41271

Hi Group,
I picked up a TS 520S the other day that happens to have a faulty power transformer in it.
Where would the best place be to try to get another one ? (I'm in Aus)
Thanks Guys,
73's
Rob VK3BRS

41272. VFO Spinner knob disassemble

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-07 09:45:46 UTC
From: ea1xf
Topic: 41272 Message: 41272

Good morning everyone,

I have recently purchased a R-820 to hook up to my TS-820s. It came with a VFO spinner knob, but the plastic or Bakelite part has a little crack. I tried to disassemble it in order to repair it and at the same time to polish the aluminium round part. The spinner is very easy to disassemble just unscrewing the little screw at the back of the knob. The question is, does anyone know how to take out the round aluminium piece from the plastic part?. I hope you can help me. Many thanks and kind regards to all.

Carlos,
EA1XF

41273. RE: [TS-520_820_530_830] TS 520S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-07 14:03:16 UTC
From: Rick
Topic: 2681 Message: 41273

I always use Gary at: xfrmrs@.... He has done many transformers
and coils for me and they have all be excellent. His prices are great too.
Of course, the shipping in your case may be a little high.

Rick / K5IAR

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of robbydot
Sent: Thursday, March 07, 2013 12:37 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] TS 520S

Hi Group,
I picked up a TS 520S the other day that happens to have a faulty power
transformer in it.
Where would the best place be to try to get another one ? (I'm in Aus)
Thanks Guys,
73's
Rob VK3BRS

[Non-text portions of this message have been removed]

41274. Re: TS 520S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-07 06:47:57 UTC
From: Dan Haslett
Topic: 2681 Message: 41274

Have you thought about a possible

rewind?

[Non-text portions of this message have been removed]

41275. RE: [TS-520_820_530_830] Re: TS 520S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-07 19:15:50 UTC
From: Rob S.
Topic: 2681 Message: 41275

I've never done one before, I suppose I can't hurt it any more 8-)

I'll take it out today and have a look at it, see what's involved

Thanks for the reply's everyone,

Cheers,

Rob.

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Dan Haslett
Sent: Thursday, 7 March 2013 5:48 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS 520S

Have you thought about a possible

rewind?

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41276. Re: TS 520S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-07 20:06:22 UTC
From: roberteleazer@rocketmail.com
Topic: 2681 Message: 41276

Unfortunately, the "best" place would have been on ebay a week or so ago when one sold for $20, not including shipping.

But I can vouch for Gary. I recently bought a tuning cap for a National receiver from him and he is utterly trustworthy.

Good Luck!

Robert

--- In TS-520_820_530_830@yahoogroups.com, "robbydot" <roberts@...> wrote:
>
> Hi Group,
> I picked up a TS 520S the other day that happens to have a faulty power transformer in it.
> Where would the best place be to try to get another one ? (I'm in Aus)
> Thanks Guys,
> 73's
> Rob VK3BRS
>

41277. Re: [TS-520_820_530_830] VFO Spinner knob disassemble

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-07 20:08:22 UTC
From: Joseph Stiles
Topic: 41272 Message: 41277

Carlos,

  I do not know if it can be safely removed. I have never attempted it. If you want to "polish" it, I have used some regular old toothpaste and a soft bristle old toothbrush or similar...it's amazing what it will do. Plus it might prevent future cavities...and leaves a fresh "minty" scent... hihi

73 Joe
WB7UQU

From: ea1xf <carfernandezg@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, March 7, 2013 1:45 AM
Subject: [TS-520_820_530_830] VFO Spinner knob disassemble

Good morning everyone,

I have recently purchased a R-820 to hook up to my TS-820s. It came with a VFO spinner knob, but the plastic or Bakelite part has a little crack. I tried to disassemble it in order to repair it and at the same time to polish the aluminium round part. The spinner is very easy to disassemble just unscrewing the little screw at the back of the knob. The question is, does anyone know how to take out the round aluminium piece from the plastic part?. I hope you can help me. Many thanks and kind regards to all.

Carlos,
EA1XF

[Non-text portions of this message have been removed]

41278. Re: VFO Spinner knob disassemble

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-07 21:46:14 UTC
From: ea1xf
Topic: 41272 Message: 41278

Hi Joe,

Thank you for your reply. That´s a good alternative to my original idea of trying to separate both parts. I will give a try but I still need to repair the crack. Maybe someone brave has done it before or tried to do it and can let us know his experience with this.

I love these Hybrids and I am now in the process of restoring this receiver, which are not many around specially at this part of the world. Then I want to hook it up to my TS-820s and use them like the Twins, which are another beauty.

73 to all the group and I will keep tuned to see if we have some more feedbacks about this matter.

Carlos,
EA1XF

41279. Re: [TS-520_820_530_830] Re: VFO Spinner knob disassemble

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-07 23:08:23 UTC
From: William Houghton
Topic: 41272 Message: 41279

I have used a toothpick to hold the crack in a knob open a little bit. Then I use another toothpick to apply a tiny dab of glue in the crack. Then remove the first toothpick.

As for cleaning the metal skirts, I wash knobs in dishwashing soap and water. I used a toothbrush to clean them. If this doesn't clean the metal I use rubbing alcohol and a cotton swab. One of my friends uses lemon juice to clean the metal and says it works well.

From: ea1xf <carfernandezg@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, March 7, 2013 1:46:19 PM
Subject: [TS-520_820_530_830] Re: VFO Spinner knob disassemble

Hi Joe,

Thank you for your reply. That´s a good alternative to my original idea of trying to separate both parts. I will give a try but I still need to repair the crack. Maybe someone brave has done it before or tried to do it and can let us know his experience with this.

I love these Hybrids and I am now in the process of restoring this receiver, which are not many around specially at this part of the world. Then I want to hook it up to my TS-820s and use them like the Twins, which are another beauty.

73 to all the group and I will keep tuned to see if we have some more feedbacks about this matter.

Carlos,
EA1XF

[Non-text portions of this message have been removed]

41280. Contest usage of analog rigs with N1MM logger

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-07 23:19:07 UTC
From: bpierfel
Topic: 41280 Message: 41280

I participated in the ARRL DX SSB contest on a casual basis with my TS-830 and it worked out just fine. I used the excellent N1MM logging program in a manual frequency entry mode. I quickly missed it's ability to converse with my TS-570 and automatically log the frequency. I thought about digging into my 830 and extracting frequency info for automatic entry into N1MM logger but came up with a cleaner solution usable on any older rigs. I have a pic processor doing frequency counting (with a pre-scaler & attenuation!) connected to the 830's output. It only reads the frequency on transmit and then the pic emulates a TS-570's serial output and sends the data to a laptop via serial data (I used the TS-570 data format as I own one and decoded it's output) N1MM logger shows the hybrid rig's frequency for logging. Voila; automatic frequency logging with a superb contest rig. My question for the community is whether anyone else would be interested in the schematic, etc. when I get things cleaned up. Would you pay say $10 for a programmed pic?
The caveats are that the frequency resolution is limited to 10 kHz as the counting needs to be very fast for CW and SSB. SSB counting is flaky so far but logs the contact to at least the correct band.
Any interest?
Bob
KB8TL

41281. Re: TS 520S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-08 00:00:29 UTC
From: Bob
Topic: 2681 Message: 41281

I have a clean functional Power Transformer for the 520S...
Part... L01-1056-05
Includes the power strip terminal & long leads on secondary...
No funny smells...
Sell them for $50.00 plus $12.00 by Priority Mail Flat Rate...
Bob
****

--- In TS-520_820_530_830@yahoogroups.com, "robbydot" <roberts@...> wrote:
>
> Hi Group,
> I picked up a TS 520S the other day that happens to have a faulty power transformer in it.
> Where would the best place be to try to get another one ? (I'm in Aus)
> Thanks Guys,
> 73's
> Rob VK3BRS
>

41282. TS-820 drive problems

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-09 03:33:06 UTC
From: Rick
Topic: 41282 Message: 41282

My newly acquired TS-820 has a quirk I have yet to solve. I thought I would see if someone who has been around these fantastic hybrids longer than I could enlighten me.

When I first turn on the rig I have no drive on any band. I have all the controls set properly (as per manual). I have tried three known good sets of 6146B's and 12BY7A's none of which changed the problem. After 15 or 20 minutes I get a little output into my inline watt meter but still no drive indication on the 820's meter. I am able to load the transmitter at that point but to a reduced power output, of course. This condition slowly gets better as time passes. It takes a full hour (sometimes longer) before the drive becomes normal and all is well. The rig then becomes very stable (power wise) and has an output of about 100 watts on 14.250 MC. I have tried this into a dummy load as well as an antenna, not that I think it would matter. I did find that the two electrolytic capacitors on the power supply board were well out of tolerance and replaced them. This did not help the problem at all. The voltages at the 6146's are all normal as are the voltages at the 122BY7A.

Any ideas?

Thanks for any help or advice you can offer.

Rick / K5IAR

[Non-text portions of this message have been removed]

41283. Re: TS-830S very low RX audio

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-09 04:58:32 UTC
From: k5xrf
Topic: 41240 Message: 41283

I believe that replacing RL-1 with a new relay removes it from the list of possible culprits causing my low audio levels. So, I now have a new audio amplifier IC and new RL-1. Any other ideas as to the cause of my low receive audio?
73,

Jon KR5C

--- In TS-520_820_530_830@yahoogroups.com, "k5xrf" <k5xrf@...> wrote:
>
> I had a chance to tap on the AF-Unit's relay cover this evening with a plastic ruler. It made absolutely no difference in audio quality or volume. Does that mean that the relay is definitively not a problem or should I consider replacing it as a preventative measure?
>
> If not the relay, where to look next? Could the other circuitry connected to the audio amplifier output be heavily loading the signal? I thought about temporarily pulling the electrolytic just past the inductor to see if something after it is loading the output.
> Thoughts?
> 73,
>
> Jon KR5C
>
> --- In TS-520_820_530_830@yahoogroups.com, "k5xrf" <k5xrf@> wrote:
> >
> > Mike and Dave,
> >
> > Thanks for the advice. I will take a look at the relay tomorrow when I plan on digging into this problem more. I'll post what I find.
> > 73,
> >
> > Jon KR5C
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@> wrote:
> > >
> > > As Dave said, check the relay on the AF Unit board. You can do that by
> > > lightly tapping on the relay's cover with a wooden pencil or plastic
> > > rode. Don't simply "visually inspect" the relay, as many hams tend to
> > > do, that won't tell you anything about the relay. If tapping on the
> > > relay cover results in changes in the audio then I suspect the relay is
> > > bad and should be replaced. The relay on the AF Unit board has been
> > > known to be the source of numerous problems in the 830 as well as other
> > > Kenwood transceivers, see Ken, K4EAA, website link below for details.
> > >
> > > www.k4eaa.com
> > >
> > > 73

> > > Mike
> > >
> > > On 3/4/2013 5:04 AM, fpath fpath wrote:
> > > > Jon,
> > > >
> > > > Have your tried the relay on the audio board?
> > > > Dave
> > > > VK5PDL
> > > >
> > > >
> > > >
> > > >
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > From: k5xrf@
> > > > Date: Mon, 4 Mar 2013 05:40:30 +0000
> > > > Subject: [TS-520_820_530_830] TS-830S very low RX audio
> > > >
> > > >
> > > >
> > > >
> > > >
> > > > Hi All,
> > > >
> > > > My TS-830S has developed a problem where the RX audio is very low with the RF and AF gains turned fully clockwise. I can hear stations clearly, just at a very reduced audio level. The S-meter shows that the signals are very strong so I don't suspect the receiver front-end. For example, one European station is regularly +10 to +20 on 40 meters and is still that strong with this new problem.
> > > >
> > > > Suspecting the audio amplifier I replaced the audio amplifier IC(HA1368R)and the problem persists. I then checked all of the DC voltages in the audio circuit on the AF-Unit called out on the service manual schematic and they all checked out.
> > > >
> > > > Rather than shotgunning more parts I thought it best to ask for some direction in locating and fixing this problem. Has anyone ever seen this problem before? Any tips on how to diagnose the cause are greatly appreciated.
> > > > 73,
> > > >
> > > > Jon KR5C
> > > >
> > > >
> > > >
> > > >
> > > >
> > > >
> > > > [Non-text portions of this message have been removed]
> > > >
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> > > > ------------------------------------

> > > >
> > > > Yahoo! Groups Links
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> > > [Non-text portions of this message have been removed]
> > >
> >
>

41284. Re: [TS-520_820_530_830] Re: TS-830S very low RX audio

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-09 08:16:50 UTC
From: Adrian Ellison
Topic: 41240 Message: 41284

Hi Jon,

I usually avoid posting here so as to avoid conflict with the regular experts, however seeing as you're still stuck ...

I've seen C24 on the A/F board cause exactly this problem. If you have any means of injecting an audio frequency signal of not very much voltage you could poke a signal in either side to confirm it., otherwise just replace it and see.

Another obvious candate is C34, but I've not seen a failure there ..

You're welcome to contact me off forum if you need further assistance.

Regards

Adrian - ZS1TTZ

On Saturday 09 March 2013 04:58:32 you wrote:

Any other ideas as to the cause of my low receive audio?

[Non-text portions of this message have been removed]

41285. Help - ALC meter and S meter readings high

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-09 15:02:11 UTC
From: dchristensen70
Topic: 41285 Message: 41285

I have a TS-830S that has developed a problem with the ALC meter (and I think S meter) reading. With the radio in tune mode and the carrier control fully counter clockwise the ALC meter reads in the middle of the range. Advancing it even slightly (beyond the 8 o'clock position) pegs the meter making it hard to peak the drive. When tuned and transmitting in SSB the ALC meter pegs with almost no power being generated.

I noticed the other night that S-meter readings appear to be quite high when compared with another radio - normal signals are 20-40 db over S9.

This might have happened when I had a bad section of coax that was presenting a high SWR to the radio on transmit.

The HV meter setting seems normal, the IP Bias on SSB transmit is normal (60 ma), the RF meter setting seems to track an external meter. Just the S-meter and ALC is off.

Thanks and 73

Dave - KD7UM

41286. I.F. tap output

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-09 06:44:26 UTC
From: kd6axr
Topic: 41286 Message: 41286

I have TS-530S but I need to bring out the IF out so I can use a SDR for decoding data. HOW DO I DO IT??

41287. Re: ts820s alc issue--BIRDIES

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-09 18:01:40 UTC
From: emilioc
Topic: 40013 Message: 41287

Hi.
I have same problem on my ts 820s.
Strong birdie on 21200 mhz that can be
Received also other rx.
I worked on rf unit but is ok.
I can believe that can be the pll unit.
I have read other post but i din't found a solution.
Anywsy also on 28 mhz same matter.
Thanks for any other new.
73
Emy

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> Good morning Jim: Well I was not able to cure the strong birdie at 3738 Mhz on the TS-520. I contacted couple of fellows on this forum who are long time 520 owners who have multiple 520s and they reported that they too have strong birdie at 3738. They admit they never noticed it and it apparently has not bothered them.
>
> There are other birdies but not S3 to S4 or stronger levels. I know it is a birdie as it has classic narrow fast tuning rate. I check for them with rig on dummy load so sure not result of off air signal or spurs from modems, computers, switching supplies etc.Â
>
> I tried working all the mixing combinations I could think of including 3rd and 5th harmonics of all the internal LOs (carrier/bfo, het osc, vfo). I looked at IF, Car Osc and VFO frequencies to try and figure out the source. I believe it may be a VFO image? If I subtract VFO from IF I arrive at 3738 mhz.Â
>
>
> I placed rig in Fixed Xtal mode and used Sig Gen output as substitute LO input and if I inject lower VFO level it greatly reduces the birdie level. VFO level is high in these rigs.Â
> I need to ask Mike Waldrop W5RKL as he is Â one of best at figuring out mixing schemes. You may want to contact him and he is a former 820 owner as well.Â
>
> I suspect many if not all TS520 owners are living with these birdies and 3738 is the most prominent one. Terry K9TWÂ
> --- On Mon, 12/17/12, Jim Showker <jshowker@...> wrote:
>
> From: Jim Showker <jshowker@...>
> Subject: Re: [TS-520_820_530_830] Re: ts820s alc issue--BIRDIES
> To: TS-520_820_530_830@yahoogroups.com
> Date: Monday, December 17, 2012, 8:56 AM
>
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>
> Terry,
>
> I was wondering what you figured out on the 520 you were working on,
>
> in regard to the Birdies. I have an 820 with one big birdie each on 21
>
> and 28. I can't see how there is any bias cutoff to the driver tube
>
> when in rx mode. These two birdies are not affected by coil tuning in
>
> either ant or mixer coil pack board. Removing the 12BY7A has no effect.
>
> Adjusting drive control attenuates it greatly. Putting a probe on the
>
> mix Drive variable cap also makes it almost completely go away.
>
> Grounding out the ant input does not affect it. It's definitely in the
>
> front end though, I think in the shared mix drive resonance circuit.
>
>
>
> What did you find?
>
>
>
> Jim KE7OAY

>
>
>
> On 11/25/2012 11:37 AM, Terry Wagoner wrote:
>
> >
>
> > Yes I had the SB-10 also and it used Phasing method to generate SSB
>
> > and I always got very good audio reports with it. I remember it had
>
> > carrier null and balanced modulator controls right on the front panel
>
> > and was pretty intimidating to tune the first time out. I didnt have
>
> > an audio generator or a O-scope in those days so not sure how I ended
>
> > up learning how to tune it. Just remember great audio reports.
>
> >
>
> > Working on TS-520 last couple of days and what a mess. Probably found
>
> > 5 or 6 solder blobs bridging the bottom of the RF board. Looked like
>
> > they were dropped from above while soldering the metal shields between
>
> > the bandswitch boards and the solder splashed to a very thin flashing
>
> > bridging the traces and pads. Had to look close to see them. Also
>
> > someone has replaced Het Osc crystals to put it on 11 meters.
>
> >
>
> > There was no cut off bias on the Driver tube so all kinds of birdies
>
> > in RX mode and when you tuned the Plate Load and Plate tank capacitors
>
> > it would buzz and hum and take off. I have spent pretty much all of
>
> > Friday, Sat, and most of today on it and getting close (I hope).
>
> >
>
> > This is not much fun anymore! I seem to just get the junk that a smart
>
> > tech would turn away. Just about ready to take down my shingle. 73s
>

> > Terry K9TW
>
> >
>
> > --- On Sun, 11/25/12, w5rkl <w5rkl@...
>
> > <mailto:w5rkl%40yahoo.com>> wrote:
>
> >
>
> > From: w5rkl <w5rkl@... <mailto:w5rkl%40yahoo.com>>
>
> > Subject: [TS-520_820_530_830] Re: ts820s alc issue
>
> > To: TS-520_820_530_830@yahoogroups.com
>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
>
> > Date: Sunday, November 25, 2012, 4:27 PM
>
> >
>
> > >
>
> > >
>
> > One last comment. I never had a T-150, always wanted one back then but
>
> > couldn't afford it. I wasn't aware, back my early ham radio days, of
>
> > the Heathkit Apache TX-1 transmitter yet now I have one with the SB-10
>
> > sideband adapter and the matching Mohawk RX-1 receiver. I don't use
>
> > the SB-10, it's just there fore "looks" I guess. The speech amplifier
>
> > has been modified with the W3SCC audio mods, makes the transmit audio
>
> > sound very close to studio audio, it really sounds great on the air. I
>
> > haven't had it on the air in over 4 years so it needs some
>
> > work/cleaning, including replacing the HV caps (they well over 50
>
> > years old). I have a couple of new computer grade 150ufd 450VDC caps I
>
> > intend on using as replacements. It will be fun to put it back on the
>
> > air. No, for those who may be thinking, the Apache TX-1 doesn't have

>
> > ALC, only a few front panel controls along with the gain pot to
>
> > control the microphone's amp's output level that's fed to the input to
>
> > the second half of the 12AX7 triode amplifier stage. The original
>
> > Level control, behind the CW key socket, is taken out of the circuit
>
> > as are a few other components.
>
> >
>
> > 73s
>
> >
>
> > Mike
>
> >
>
> > W5RKL
>
> >
>
> > --- In TS-520_820_530_830@yahoogroups.com
>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Terry Wagoner
>
> > <wagstw46@> wrote:
>
> >
>
> > >
>
> > >
>
> > > I started with a DX-20. Back in the days when you had a grid current
>
> > meter position. Had a bunch of the popular sellers including Knight
>
> > T-150, DX-100, TX-1 Apache, Johnson Viking II and so on until I built
>
> > my HW-101. Back before voltage doublers. When transformers had iron,
>
> > choke filters, mercury vapor rect, clamper tubes, regulated screen
>
> > supply (gas regulator tubes). Ã☐ All very good memories. Ã☐ Of course
>

> > remember Swan and Drake and then the Tempo, Yaesu, Kenwood invasion.
>
> > Never had any Collins gear. 73s Terry K9TW
>
> >
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> > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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>

41288. Re: [TS-520_820_530_830] Re: ts820s alc issue--BIRDIES

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-10 00:35:47 UTC
From: Dave & Loraine
Topic: 40013 Message: 41288

Hi Emy,
My 820s also 21.2.
73 Dave f4eyk

41289. Re: TS-820 drive problems

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-10 01:26:01 UTC
From: Bob
Topic: 41282 Message: 41289

Ohm out the cathode resistors on the Final Board...
You should see 5 ohms from the two cathodes to ground...
These resistors act as a fuse & do change value with time...
Bob
****

--- In TS-520_820_530_830@yahoogroups.com, "Rick" <rickb@...> wrote:
>
> My newly acquired TS-820 has a quirk I have yet to solve. I thought I would
> see if someone who has been around these fantastic hybrids longer than I
> could enlighten me.
>
>
>
> When I first turn on the rig I have no drive on any band. I have all the
> controls set properly (as per manual). I have tried three known good sets of
> 6146B's and 12BY7A's none of which changed the problem. After 15 or 20
> minutes I get a little output into my inline watt meter but still no drive
> indication on the 820's meter. I am able to load the transmitter at that
> point but to a reduced power output, of course. This condition slowly gets
> better as time passes. It takes a full hour (sometimes longer) before the
> drive becomes normal and all is well. The rig then becomes very stable
> (power wise) and has an output of about 100 watts on 14.250 MC. I have tried
> this into a dummy load as well as an antenna, not that I think it would
> matter. I did find that the two electrolytic capacitors on the power supply
> board were well out of tolerance and replaced them. This did not help the
> problem at all. The voltages at the 6146's are all normal as are the
> voltages at the 122BY7A.
>
>
>
> Any ideas?
>
>
>
> Thanks for any help or advice you can offer.
>
>
>
> Rick / K5IAR
>
>
>
> [Non-text portions of this message have been removed]
>

41290. TS820 CW Frequency Shifting when Transmitting Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-10 04:45:57 UTC
From: stever1k
Topic: 41290 Message: 41290

I have an 820 that I recently brought back to life and I notice that when I transmit in CW the display will shift 700HZ from say 7.055.0 to 7.055.7...Is this normal to be 700 hz higher on transmit? Or do I have a problem someplace that needs attention.

Steve NU0P

41291. Re: [TS-520_820_530_830] TS820 CW Frequency Shifting when Transmitting Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-10 15:16:38 UTC
From: Mike
Topic: 41290 Message: 41291

Steve,

Yes, that's normal.

The 820 receives CW using the CAR Unit's "USB" crystal frequency 8831.5Khz then switches, in CW and TUNE mode transmit, to the CAR Unit's "CW" crystal frequency, 8830.7Khz. If you do the CW/TUNE CAR Unit offset simple math (see example below), you will see that using the CAR Unit's CW/TUNE crystal frequency, in CW/TUNE transmit, that the transmitted RF carrier is offset by "800Hz".

8831.5 - 8830.7 = .800

The 3 separate CAR Unit crystal frequencies are as follows (discussed/illustrated in the 820 service manual which I recommend you taking some time to read):

LSB - 8828.5Khz
USB - 8831.5Khz
CW(T) - 8830.7Khz

If the 820 simply kept using the USB CAR Unit frequency, 8831.5Khz, in CW transmit then the distant end station would not hear your CW signal because it would be zero beat at his/her end. Therefore, by "offsetting" the CW transmit carrier signal by 800Hz (switching to the CW CAR Unit crystal) but NOT changing the distant end receiver, the distant end station will hear a "beat note" in his/her speaker (see anther simple explanation below).

The Kenwood TS-820, and other hybrids, are not the only transceivers/transmitters that use this method, Heathkit, for example, does it in their HW-100, HW-101, SB-100, SB-101. SB-102, SB-400, and SB-401 transceveivers and transmitters. There are slight differences but the "idea" and "outcome" is the same. The USB Carrier Generator's crystal is used as the receiver's "BFO" (Beat Frequency Oscillator) to hear the beat note. Switching to the CW Carrier generator crystal for CW transmit allows the distant station to hear a beat note he/she would otherwise NOT hear if the transmitter did NOT switch CAR Unit crystals.

This is shown and explained in the 820 service manual. It's slightly different in the 530/830 but the "idea" AND the "outcome" is the same. Look at it this way, if you tune a receiver to 1.234Khz then transmit an RF carrier at the same 1.234Khz, you would NOT hear a beat note. Now, "Offset" the "transmit" carrier by a few hundred hertz and, BINGO, you hear a "Beat Note".

Again, take some time and read the Circuit Description section in the manuals, there's a lot of valuable information about how your 820 works in that section that can answer a lot of your questions.

73
Mike
W5RKL

On 3/9/2013 10:45 PM, stever1k wrote:
>
> I have an 820 that I recently brought back to life and I notice that
> when I transmit in CW the display will shift 700HZ from say 7.055.0 to
> 7.055.7...Is this normal to be 700 hz higher on transmit? Or do I have
> a problem someplace that needs attention.
>
> Steve NU0P
>
>

[Non-text portions of this message have been removed]

41292. Re: ts820s alc issue--BIRDIES

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-10 10:00:37 UTC
From: emilioc
Topic: 40013 Message: 41292

Ciao Dave.

Well just to informe that i have checked other section but all is after injection simulation.
The signal is very strong and you can ear also in other receiver.
I believe starting from PLL section or CAR assy.
To day i will check with another PLL and CAR.
In my radio repaire experience i never found something like that so strong like a HP generator.
Another problem solved is on RIT and frequency stability solved by change the complete set of very old pot on AFAVR unit with multi-trim pot and now is working very fine and stability is 100% immediatly.
Anyway hope to solve the problem because if you connect ext vfo the signal rise more.

Emy

--- In TS-520_820_530_830@yahoogroups.com, "Dave & Loraine" <dave.crooks@...> wrote:
>
> Hi Emy,
> My 820s also 21.2.
> 73 Dave f4eyk
>

41293. Meter indications.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-10 17:48:47 UTC
From: Peter
Topic: 41293 Message: 41293

Hi to all. I have a new (to me) TS-520 that slams the meter needle hard right when I tune up the rig. This is on all bands and is such that I can't determine the true peak of the reading.
Can anyone give me advice on how to make the needle read "on-scale"?
Thanks & 73,
Pete WW3O

41294. Re: [TS-520_820_530_830] Meter indications.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-10 17:58:26 UTC
From: Joseph Stiles
Topic: 41293 Message: 41294

Pete,

A bit more information is needed: is the rig in "tune" mode? and, what position is the meter selector switch in when you get this problem?

If not familiar with or, tuning up these rigs, I suggest that a review of the procedure in the "operator/owners" manual.

The "bias" control by not be set correctly...the "RF volt" control on the rear may not be set correctly(this does not affect RF output...just the meter reading)

73 Joe
WB7UQU

From: Peter <wb3bqo@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, March 10, 2013 10:48 AM
Subject: [TS-520_820_530_830] Meter indications.

Hi to all. I have a new (to me) TS-520 that slams the meter needle hard right when I tune up the rig. This is on all bands and is such that I can't determine the true peak of the reading.
Can anyone give me advice on how to make the needle read "on-scale"?
Thanks & 73,
Pete WW3O

[Non-text portions of this message have been removed]

41295. RE: [TS-520_820_530_830] Re: TS-820 drive problems

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-10 18:59:35 UTC
From: Rick
Topic: 41282 Message: 41295

Thank, Bob.I'll do just that.

Rick

Ohm out the cathode resistors on the Final Board...
You should see 5 ohms from the two cathodes to ground...
These resistors act as a fuse & do change value with time...
Bob
****

> When I first turn on the rig I have no drive on any band. I have all the
> controls set properly (as per manual). I have tried three known good sets
of
> 6146B's and 12BY7A's none of which changed the problem. After 15 or 20
> minutes I get a little output into my inline watt meter but still no drive
> indication on the 820's meter. I am able to load the transmitter at that
> point but to a reduced power output, of course. This condition slowly gets
> better as time passes. It takes a full hour (sometimes longer) before the
> drive becomes normal and all is well. The rig then becomes very stable
> (power wise) and has an output of about 100 watts on 14.250 MC. I have
tried
> this into a dummy load as well as an antenna, not that I think it would
> matter. I did find that the two electrolytic capacitors on the power
supply
> board were well out of tolerance and replaced them. This did not help the
> problem at all. The voltages at the 6146's are all normal as are the
> voltages at the 122BY7A.
>
> Any ideas?

> Thanks for any help or advice you can offer.
>
> Rick / K5IAR
>

<http://geo.yahoo.com/serv?s=97359714/grpId=7525021/grpspId=1705063108/msgId
=41289/stime=1362878765>

[Non-text portions of this message have been removed]

41296. KENWOOD HYBRID USER NET (March 9th, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-10 18:59:20 UTC
From: mvgilger
Topic: 41296 Message: 41296

The Saturday's net on 40 meter we had 28 stations checking with good band conditions. There were 3 new stations checking in. Out of those, there was:

6 running TS-520(x)
2 running TS-530(x)
5 running TS-820(x)
6 running TS-830S

I was running my TS-940s. The rest were running non hybrids of one model or another.

The Sunday's net on 20 meter we had 18 stations checking with good band conditions. There were 3 new stations checking in. Out of those, there was:

4 running TS-520(x)
0 running TS-530(x)
3 running TS-820(x)
4 running TS-830S

I was running my TS-830s. The rest were running non hybrids of one model or another.

We have been having several people checking in regularly with their TS-430, TS-440, and TS-940's, which of course is not a hybrid, although over 30+ years old. Everyone is welcome as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a net control station, please send me an email. Currently it's just myself, WB2KNR and WB0SGA. I would like to get several more. If we do, we can alternate so everyone might be on a 3-4 week rotation. It's a lot of fun and a good way to make sure you station is optimized.

For anyone that has not heard, we have a new web site that WB4HFN is hosting. He currently has a very nice site for Drake, Collins and Heathkit and now Kenwood Hybrids. Good quality manuals plus sale flyers and brochures will be found here, along with user supplied information for all Hybrids.

His URL is:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754 check-ins, Sunday total 563 check-ins

November 2012, Saturday's, net total = 47, Sundays total = 20
December 2012, Saturday's, net total = 74, Sunday's total = 70
January 2013, Saturday's, net total = 93, Sunday's total = 87
February 2013, Saturday's net total = 103, Sundays total = 87
March 2013, Saturday's, net total = 68, Sunday's total =18 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

41297. External VFOs

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-10 20:51:57 UTC
From: Paul
Topic: 41297 Message: 41297

I need an external VFO for my Kenwood hybrid. I was trying to contact the Clipperton DXpedition but could not move up 5 khz using just the RIT. I have a 520s and an 820s (and looking at an 830s). Which of the external Kenwood VFOs are compatible with these rigs? I see VFOs for sale but don't know about compatibility.
73
KA5IOE

41298. TS-830M

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-10 21:39:20 UTC
From: Radio Vintage
Topic: 41298 Message: 41298

Wanted TS-830M . If you have one for sale please let me know

to: radiovintage2000@...

Tnx Frank

[Non-text portions of this message have been removed]

41299. Re: [TS-520_820_530_830] External VFOs

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-10 22:22:01 UTC
From: W LEWIS
Topic: 41297 Message: 41299

The 520S VFO and the 820(S) VFO are interchangeable.
73s,
Butch Lewis
KØPSA

--- On Sun, 3/10/13, Paul <mudcreektrail@...> wrote:

From: Paul <mudcreektrail@...>
Subject: [TS-520_820_530_830] External VFOs
To: TS-520_820_530_830@yahoogroups.com
Date: Sunday, March 10, 2013, 3:51 PM

I need an external VFO for my Kenwood hybrid. I was trying to contact the Clipperton DXpedition but could not move up 5 khz using just the RIT. I have a 520s and an 820s (and looking at an 830s). Which of the external Kenwood VFOs are compatible with these rigs? I see VFOs for sale but don't know about compatibility.
73
KA5IOE

[Non-text portions of this message have been removed]

41300. Re: [TS-520_820_530_830] Meter indications.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-10 22:24:51 UTC
From: Peter Carr
Topic: 41293 Message: 41300

Hi Joe and thanks for the reply. The rig is in "tune", the Meter switch is in "ALC". That does indicate that the rig comes to resonance but the meter pegs right. I did check and the idle current is 60 ma. I have two manuals and one indicate the current should be 50 ma while the other calls out 60. I haven't adjusted the RF-volt control but will read the manual for it's setting.
Thanks & 73.
Pete WW3O

From: Joseph Stiles <stilesjoseph@...>
To: "TS-520_820_530_830@...m" <TS-520_820_530_830@yahoogroups.com>
Sent: Sunday, March 10, 2013 1:58 PM
Subject: Re: [TS-520_820_530_830] Meter indications.

Pete,

A bit more information is needed: is the rig in "tune" mode? and, what position is the meter selector switch in when you get this problem?

If not familiar with or, tuning up these rigs, I suggest that a review of the procedure in the "operator/owners" manual.

The "bias" control by not be set correctly...the "RF volt" control on the rear may not be set correctly(this does not affect RF output...just the meter reading)

73 Joe
WB7UQU

From: Peter <wb3bqo@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, March 10, 2013 10:48 AM
Subject: [TS-520_820_530_830] Meter indications.

Hi to all. I have a new (to me) TS-520 that slams the meter needle hard right when I tune up the rig. This is on all bands and is such that I can't determine the true peak of the reading.
Can anyone give me advice on how to make the needle read "on-scale"?
Thanks & 73,
Pete WW3O

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41301. Re: [TS-520_820_530_830] Meter indications.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-11 02:21:33 UTC
From: Joseph Stiles
Topic: 41293 Message: 41301

Pete,

  I need to get out my 520 manual and look at the circuit. Since this rig appears new to you..and it seems to have some malfunctions/problems,
may I suggest you check out the value of the "screen" & " cathode" resistors. It's been a bit since I have poked around the 520 but, I'll assist
to the best of my knowledge/experience.
I suggest that you set the "Ip" at the low end for now as, I do not know what finals you have. The original 2001A's were usually set for 60mA,
some replacements...6146B...6146W may require different settings...it really won't hurt to set for 50mA.

Does the "CAR" control have any affect with mode switch in "TUNE" & meter select switch in "ALC" and rig is put into transmit?

73 Joe
WB7UQU

From: Peter Carr <wb3bqo@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Sunday, March 10, 2013 3:24 PM
Subject: Re: [TS-520_820_530_830] Meter indications.

Hi Joe and thanks for the reply. The rig is in "tune", the Meter switch is in "ALC". That does indicate that the rig comes to resonance but the meter pegs right. I did check and the idle current is 60 ma. I have two manuals and one indicate the current should be 50 ma while the other calls out 60. I haven't adjusted the RF-volt control but will read the manual for it's setting.
Thanks & 73.
Pete WW3O

From: Joseph Stiles <stilesjoseph@...>
To: "TS-520_820_530_830@yahoogroups.comTS-520_820_530_830@yahoogroups.com>
Sent: Sunday, March 10, 2013 1:58 PM
Subject: Re: [TS-520_820_530_830] Meter indications.

Pete,

A bit more information is needed: is the rig in "tune" mode? and, what position is the meter selector switch in when you get this problem?

     If not familiar with or, tuning up these rigs, I suggest that a review of the procedure in the "operator/owners" manual.

The "bias" control by not be set correctly...the "RF volt" control on the rear may not be set correctly(this does not affect RF output...just the meter reading)

73 Joe
WB7UQU

From: Peter <wb3bqo@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, March 10, 2013 10:48 AM
Subject: [TS-520_820_530_830] Meter indications.

Hi to all. I have a new (to me) TS-520 that slams the meter needle hard right when I tune up the rig. This is on all bands and is such that I can't determine the true peak of the reading.
Can anyone give me advice on how to make the needle read "on-scale"?
Thanks & 73,
Pete WW3O

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41302. Service manual of Kenwood TS515s and external VFO-5S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-11 03:49:05 UTC
From: Behiels
Topic: 41302 Message: 41302

Hi members;
I am looking for the service manual of this nice peace of equipment for a repair.
I already could find the user manual on the net but the service manual seems to be a problem to obtain ?
Perhaps someone has a example in pdf format on the desk.
I like to receive a copy,if it will be possible for someone ?

My e-mail : on4aef@...

Kindly regards Jean ON4AEF.

41303. Re: TS820 CW Frequency Shifting when Transmitting Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-11 13:59:14 UTC
From: stever1k
Topic: 41290 Message: 41303

Thanks Mike

An excellent explanation. While I was aware of the mixing that has to take place in order to hear the signal I was not aware of how display was designed to show this. As you are aware not all radios chose to use this design approach.

But now at least we can be confident that another fine radio was saved from being parted out or placed in a dumpster. I hate seeing that happen. These radios are such fine pieces of engineering.

Thank you again for your help

Steve NU0P

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> Steve,
>
> Yes, that's normal.
>
> The 820 receives CW using the CAR Unit's "USB" crystal frequency
> 8831.5Khz then switches, in CW and TUNE mode transmit, to the CAR Unit's
> "CW" crystal frequency, 8830.7Khz. If you do the CW/TUNE CAR Unit offset
> simple math (see example below), you will see that using the CAR Unit's
> CW/TUNE crystal frequency, in CW/TUNE transmit, that the transmitted RF
> carrier is offset by "800Hz".
>
> 8831.5 - 8830.7 = .800
>
> The 3 separate CAR Unit crystal frequencies are as follows
> (discussed/illustrated in the 820 service manual which I recommend you
> taking some time to read):
>
> LSB - 8828.5Khz
> USB - 8831.5Khz
> CW(T) - 8830.7Khz
>
> If the 820 simply kept using the USB CAR Unit frequency, 8831.5Khz, in
> CW transmit then the distant end station would not hear your CW signal
> because it would be zero beat at his/her end. Therefore, by "offsetting"
> the CW transmit carrier signal by 800Hz (switching to the CW CAR Unit
> crystal) but NOT changing the distant end receiver, the distant end
> station will hear a "beat note" in his/her speaker (see anther simple
> explanation below).
>
> The Kenwood TS-820, and other hybrids, are not the only

> transceivers/transmitters that use this method, Heathkit, for example,
> does it in their HW-100, HW-101, SB-100, SB-101. SB-102, SB-400, and
> SB-401 transceveivers and transmitters. There are slight differences but
> the "idea" and "outcome" is the same. The USB Carrier Generator's
> crystal is used as the receiver's "BFO" (Beat Frequency Oscillator) to
> hear the beat note. Switching to the CW Carrier generator crystal for CW
> transmit allows the distant station to hear a beat note he/she would
> otherwise NOT hear if the transmitter did NOT switch CAR Unit crystals.
>
> This is shown and explained in the 820 service manual. It's slightly
> different in the 530/830 but the "idea" AND the "outcome" is the same.
> Look at it this way, if you tune a receiver to 1.234Khz then transmit an
> RF carrier at the same 1.234Khz, you would NOT hear a beat note. Now,
> "Offset" the "transmit" carrier by a few hundred hertz and, BINGO, you
> hear a "Beat Note".
>
> Again, take some time and read the Circuit Description section in the
> manuals, there's a lot of valuable information about how your 820 works
> in that section that can answer a lot of your questions.
>
> 73
> Mike
> W5RKL
>
>
>
> On 3/9/2013 10:45 PM, stever1k wrote:
> >
> > I have an 820 that I recently brought back to life and I notice that
> > when I transmit in CW the display will shift 700HZ from say 7.055.0 to
> > 7.055.7...Is this normal to be 700 hz higher on transmit? Or do I have
> > a problem someplace that needs attention.
> >
> > Steve NU0P
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

41306. Re: [TS-520_820_530_830] "Plate Idling Current" for a Kenwood TS-820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-11 19:10:48 UTC
From: Joseph Stiles
Topic: 41305 Message: 41306

kc2mru,

Not to over simplify, but do the following: power up rig, turn "heater" switch ON, "SG" switch to ON...it's on the rear panel.. mode switch to either USB or LSB, meter select switch to "IP," flip "send/rcv" switch to "send." You should see no more than 60mA reading on the meter.

Make sure that you are either connected to a dummy load or suitable antenna...dummy load preferred.

If you are not familiar with tuning tube type rigs...may I suggest that a couple of "dry runs" may be in order...ie..location of needed controls...etc.
The final amplifier tubes can be harmed, as some other components.. by being operated out of tune/resonance for extended time periods.

You can go to Ken Kemski's web site k4eaa.com he has some very good info/instructions for the beginning tube rig "tuner."

73 Joe
WB7UQU

From: kc2mru <KC2MRU@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, March 11, 2013 5:52 AM
Subject: [TS-520_820_530_830] "Plate Idling Current" for a Kenwood TS-820

I recently bought a nice little TS-820 from another Ham , but I haven't messed with it alot yet . I finally got around to tuning it up so I could try and talk on it . I read the directions in the manual , but at the risk of sounding dumb , for some reason I'm not getting any reading on the meter when attempting to check the Plate Idling Current , even when I attempt to adjust the rear panel bias control ... am I over looking something , or is there a deeper problem , like maybe a repair needs to be done ?

Is there anyone else that has experienced this problem that can help me out with this ?

Thanks

[Non-text portions of this message have been removed]

41307. Kenwood TS-520s re-cap question.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-11 19:17:33 UTC
From: w_cavendish
Topic: 41307 Message: 41307

I have a Kenwood TS-520s that I have just gotten back on the air thanks to this group. One of the things I noticed in reviving this radio was the caps in the power supply have started to bulge. I ordered a kit from Jim (KE7OAY) over at hybridrestore.com to go ahead and recap the whole thing.

My current plan is to start with the power supply first, then go and replace them one board at a time. I don't see how it would matter, but is there any order I should work in?

73's
KF5NOL
Brian

41308. Rookie Mistake!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-11 20:42:21 UTC
From: Rick
Topic: 41308 Message: 41308

I pulled the IF (X48-1150-00) card out of my TS-820 to examine it thoroughly and clean all the contacts. I "assumed" the connectors were all butted against each other and would go back easily. I assumed wrong. There are 2- 3 pin connectors. One of them fits the 3 pins between two larger connectors. The other one, however, fits on 3 of 5 possible pins. From looking at the schematic it appears to me it would have to go on the middle (numbers 2, 3 and 4) pins, BUT I don't want to take a chance on it. I know it's a rookie mistaken not to take a picture of the board prior to removing the cables or at least write down any situations like this. After 50 years of working on radios you'd think I would have learned that! This is on the socket labeled "IF2" and is sandwiched between a 7 pin socket and a 17 pin socket. If, by chance, anyone has their TS-820 open or has the knowledge of where this 3 pin plug goes please let me know.

Thanks for the bandwidth and sorry for the long explanation.

Rick / K5IAR

[Non-text portions of this message have been removed]

41309. RE: [TS-520_820_530_830] Rookie Mistake!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-11 21:08:54 UTC
From: Rick
Topic: 41308 Message: 41309

Thanks to all! It goes in the middle three as I suspected.

Rick/K5IAR

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Rick
Sent: Monday, March 11, 2013 2:42 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Rookie Mistake!

I pulled the IF (X48-1150-00) card out of my TS-820 to examine it thoroughly and clean all the contacts. I "assumed" the connectors were all butted against each other and would go back easily. I assumed wrong. There are 2- 3 pin connectors. One of them fits the 3 pins between two larger connectors. The other one, however, fits on 3 of 5 possible pins. From looking at the schematic it appears to me it would have to go on the middle (numbers 2, 3 and 4) pins, BUT I don't want to take a chance on it. I know it's a rookie mistaken not to take a picture of the board prior to removing the cables or at least write down any situations like this. After 50 years of working on radios you'd think I would have learned that! This is on the socket labeled "IF2" and is sandwiched between a 7 pin socket and a 17 pin socket. If, by chance, anyone has their TS-820 open or has the knowledge of where this 3 pin plug goes please let me know.

Thanks for the bandwidth and sorry for the long explanation.

Rick / K5IAR

[Non-text portions of this message have been removed]

'---

[Non-text portions of this message have been removed]

41310. Re: [TS-520_820_530_830] Kenwood TS-520s re-cap question.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-11 20:47:10 UTC
From: Jim S
Topic: 41307 Message: 41310

You can often tell if a cap is getting hot due to leakage current.
Replace those first, as they are probably going to be the first to
fail. Don't touch them with power applied, they could have voltage on
the cans, and could be hot enough to actually burn your skin ! Don't
wait too long to replace all of them that are bulged out, and it
wouldn't be a bad idea to just do them all!

Jim AG3Y

On 3/11/2013 3:17 PM, w_cavendish wrote:
>
> I have a Kenwood TS-520s that I have just gotten back on the air
> thanks to this group. One of the things I noticed in reviving this
> radio was the caps in the power supply have started to bulge. I
> ordered a kit from Jim (KE7OAY) over at hybridrestore.com to go ahead
> and recap the whole thing.
>
> My current plan is to start with the power supply first, then go and
> replace them one board at a time. I don't see how it would matter, but
> is there any order I should work in?
>
> 73's
> KF5NOL
> Brian
>
>
>
>
>
>
>
> =======
> Email scanned by PC Tools - No viruses or spyware found.
> (Email Guard: 9.0.0.2308, Virus/Spyware Database: 6.21060)
> http://www.pctools.com
> <http://www.pctools.com/?cclick=EmailFooterClean_51>
> =======

[Non-text portions of this message have been removed]

41311. Re: Rookie Mistake!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-11 21:12:37 UTC
From: roberteleazer@rocketmail.com
Topic: 41308 Message: 41311

Ah, I well remember that socket! When I bought my TS-820S it had a whole lot of things wrong with it, but as I fixed them and got it working to a degree, I wondered why in the world that it would transmit SSB but not CW. I did not see how that was possible.

It turned out that you have to place that socket in one position if you have a CW filter and another if you do not. This is not mentioned at all in the Service Manual but is in the Operating Handbook.

Good luck!

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "Rick" <rickb@...> wrote:
>
> I pulled the IF (X48-1150-00) card out of my TS-820 to examine it thoroughly
> and clean all the contacts. I "assumed" the connectors were all butted
> against each other and would go back easily. I assumed wrong. There are 2- 3
> pin connectors. One of them fits the 3 pins between two larger connectors.
> The other one, however, fits on 3 of 5 possible pins. From looking at the
> schematic it appears to me it would have to go on the middle (numbers 2, 3
> and 4) pins, BUT I don't want to take a chance on it. I know it's a rookie
> mistaken not to take a picture of the board prior to removing the cables or
> at least write down any situations like this. After 50 years of working on
> radios you'd think I would have learned that! This is on the socket labeled
> "IF2" and is sandwiched between a 7 pin socket and a 17 pin socket. If, by
> chance, anyone has their TS-820 open or has the knowledge of where this 3
> pin plug goes please let me know.
>
>
>
> Thanks for the bandwidth and sorry for the long explanation.
>
>
>
> Rick / K5IAR
>
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

41312. RE: [TS-520_820_530_830] Re: Rookie Mistake!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-11 23:47:29 UTC
From: Rick
Topic: 41308 Message: 41312

Thank you, Robert. I did not know that fact. You□re sure right about no mention of it in the Service Manual, but there it was, pretty as you please, in the Operators Manual. I decided I didn□t have it right after all and changed it to option □B□. It works great from there. I wish I could say that solved all of my problems, but I still have some other issues to work through. When I turn on the processor I lose more than half of my RF out. I read online that this is usually due to a defective Q30 transistor on the IF board. I□ll check it tomorrow. Hopefully, that will cure the processor problem and the fact that my meter needle lacks about a ¼□ going all the way back to zero. This little gift about the needle just sprung up yesterday when I turned it on. Nothing like a good surprise! HI HI.

Thanks again,

Rick / K5IAR

From: TS-520_820_530_830@...m
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of
roberteleazer@rocketmail.com
Sent: Monday, March 11, 2013 3:13 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Rookie Mistake!

Ah, I well remember that socket! When I bought my TS-820S it had a whole lot of things wrong with it, but as I fixed them and got it working to a degree, I wondered why in the world that it would transmit SSB but not CW. I did not see how that was possible.

It turned out that you have to place that socket in one position if you have a CW filter and another if you do not. This is not mentioned at all in the Service Manual but is in the Operating Handbook.

Good luck!

Robert
WB5WSV

[Non-text portions of this message have been removed]

41313. Re: [TS-520_820_530_830] Kenwood TS-520s re-cap question.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-11 23:42:01 UTC
From: Jim Lamanteer
Topic: 41307 Message: 41313

BRIAN THIS IS MY ADVICE TO YOU. REPLACE THE HIGH VOLTAGE CAPS YES BUT I WOULD NOT START REPLACEING ALL THE CAPS IF THE RIG IS OPERATING OK AFTER U REPLACE THE H.V. CAPS YOU COULD FIND OUT THAT CAN CAUSE U MORE PROBLEMS THAN U WANT TO DEAL WITH. THIS IS JUST MY OPINION IAM ONLY TRYING TO HELP U. I HAVE A 35 YEAR OLD 520 AND I HAVE NOT REPLACED ANY CAPS AS OF YET. JUST DONT WANT TO SEE U MAKE A LOT OF UNNESSATY PROBLEMS FOR YOUR SELF. HOPE THIS HELPS JIMMY.

From: w_cavendish <w_cavendish@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, March 11, 2013 3:17 PM
Subject: [TS-520_820_530_830] Kenwood TS-520s re-cap question.

I have a Kenwood TS-520s that I have just gotten back on the air thanks to this group. One of the things I noticed in reviving this radio was the caps in the power supply have started to bulge. I ordered a kit from Jim (KE7OAY) over at hybridrestore.com to go ahead and recap the whole thing.

My current plan is to start with the power supply first, then go and replace them one board at a time. I don't see how it would matter, but is there any order I should work in?

73's
KF5NOL
Brian

[Non-text portions of this message have been removed]

41314. Re: [TS-520_820_530_830] Kenwood TS-520s re-cap question.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-12 08:57:07 UTC
From: Keith Hutt
Topic: 41307 Message: 41314

I do not see how re-capping a 520 can cause problems as long as they are replaced with the correct value caps. I have also just ordered full re-cap set also for one of my 520s, from the Hybrid Store.

I have done this on the past on a 530s and had no problems. I see no reason to do them in a specific order
after you have done the HV and power supply caps first.

Keith G0TSH

[Non-text portions of this message have been removed]

41315. Re: [TS-520_820_530_830] Kenwood TS-520s re-cap question.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-12 16:39:32 UTC
From: Jim Lamanteer
Topic: 41307 Message: 41315

WELL KEITH THATS FINE TO EACH HIS OWN BUT WHEN U START DOING A LOT OF SOLDERING ON 30 + YEAR OLD BOARDS ANYTHING CAN HAPPEN U CAN START LIFTING FOILS ECT. ITS JUST MY ADVICE TO LEAVE WELL ENOUGH ALONE AFTER HIGH VOLTAGE CAPS ARE REPLACED U WILL NOT GAIN THAT MUCH BY A TOTAL RECAPING. 73`S JIMMY.

From: Keith Hutt <keith.hutt@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, March 12, 2013 4:57 AM
Subject: Re: [TS-520_820_530_830] Kenwood TS-520s re-cap question.

I do not see how re-capping a 520 can cause problems as long as they are replaced with the correct value caps. I have also just ordered full re-cap set also for one of my 520s, from the Hybrid Store.

I have done this on the past on a 530s and had no problems. I see no reason to do them in a specific order
after you have done the HV and power supply caps first.

Keith G0TSH

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41316. Re: [TS-520_820_530_830] Kenwood TS-520s re-cap question.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-12 20:39:32 UTC
From: John Donnelly
Topic: 41307 Message: 41316

Keith,

Another vote for leaving it alone if it's working. I just restored a TS-520 and replaced a lot of caps and one of the problems I ran into was having slivers
of solder from the desoldering tool I was using get into the boards. I was lucky enough to be able to blow them all out with my compresser and air chuck
but having one lodge somewhere could have ben devastating. It's really hard to clean the solder off the old boards so you can do a proper component
replacement and resolder with a pencil iron.

Jack Donnelly KV4JX
Ball Ground Video Productions
308 Calusa Place

Ball Ground, GA 30107
Phone 678-592-9974www.ballgroundvideo.com

From: Jim Lamanteer <jimlamanteer@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, March 12, 2013 12:39 PM
Subject: Re: [TS-520_820_530_830] Kenwood TS-520s re-cap question.

WELL KEITH THATS FINE TO EACH HIS OWN BUT WHEN U START DOING A LOT OF SOLDERING ON 30 + YEAR OLD BOARDS ANYTHING CAN HAPPEN U CAN START LIFTING FOILS ECT. ITS JUST MY ADVICE TO LEAVE WELL ENOUGH ALONE AFTER HIGH VOLTAGE CAPS ARE REPLACED U WILL NOT GAIN THAT MUCH BY A TOTAL RECAPING. 73`S JIMMY.

From: Keith Hutt <mailto:keith.hutt%40virgin.net>
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Tuesday, March 12, 2013 4:57 AM
Subject: Re: [TS-520_820_530_830] Kenwood TS-520s re-cap question.

I do not see how re-capping a 520 can cause problems as long as they are replaced with the correct value caps. I have also just ordered full re-cap set also for one of my 520s, from the Hybrid Store.

I have done this on the past on a 530s and had no problems. I see no reason to do them in a specific order
after you have done the HV and power supply caps first.

Keith G0TSH

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41317. Re: "Plate Idling Current" for a Kenwood TS-820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-12 22:35:47 UTC
From: kc2mru
Topic: 41305 Message: 41317

Hey Joe,
Thanks for the reply ... I've followed the procedure as it was described in the manual . Then I tried the procedure that you told me to do , and then I tried it the way that "k4eaa" said to do on his site ... and no matter which one I'm trying , I'm still not getting a reading on the Plate Idling Current . It would possibly be something like a weak tube would it ?

Thanks,
Del

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> kc2mru,
>
> Â Â Not to over simplify, but do the following:Â power up rig, turn "heater" switch ON, "SG" switch to ON...it's on the rear panel.. mode switch to either USB or LSB, meter select switch to "IP," flip "send/rcv" switch to "send." You should see no more than 60mA reading on the meter.
>
> Â Â Make sure that you are either connected to a dummy load or suitable antenna...dummy load preferred.
>
> If you are not familiar with tuning tube type rigs...may I suggest that a couple of "dry runs" may be in order...ie..location of needed controls...etc.
> The final amplifier tubes can be harmed, as some other components.. by being operated out of tune/resonance for extended time periods.
>
> You can go to Ken Kemski's web siteÂ Â Â k4eaa.comÂ Â he has some very good info/instructions for the beginning tube rig "tuner."
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: kc2mru <KC2MRU@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, March 11, 2013 5:52 AM
> Subject: [TS-520_820_530_830] "Plate Idling Current" for a Kenwood TS-820
>
>
> Â

> I recently bought a nice little TS-820 from another Ham , but I haven't messed with it alot yet . I finally got around to tuning it up so I could try and talk on it . I read the directions in the manual , but at the risk of sounding dumb , for some reason I'm not getting any reading on the meter when attempting to check the Plate Idling Current , even when I attempt to adjust the rear panel bias control ... am I over looking something , or is there a deeper problem , like maybe a repair needs to be done ?
>
> Is there anyone else that has experienced this problem that can help me out with this ?
>
> Thanks
>
>
>
>
> [Non-text portions of this message have been removed]
>

41318. 820S power transformer replacement

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-13 02:45:07 UTC
From: Kevin O'Dell N0IRW
Topic: 41318 Message: 41318

I came into possession of an 820S the other day. It didn't have the tubes in it, no final cage, no power plug, no fuse and only about 3 screws holding the case together.....but otherwise seemed clean. I got a power connector and built the power cable. Built a final cage out of roof flashing (LOTS of holes drilled). Got the 4 mm screws at the hardware store for the case. Got a new 12BY7A driver at a hamfest this past weekend. A matched pair of Taylor 6146B's will arrive tomorrow from RF Parts. 6 amp 3AG fuses will also arrive tomorrow from Mouser.....So, this afternoon with a 5 amp fuse in the holder I plugged it in and flipped the switch.....all the lights came on as did the display. It had a LOUD 60 cycle hum in the audio and after about 45 seconds or so, there was a frying sound and some smoke started coming out of the rear. I powered down and unplugged. After waiting about 30 minutes, I pulled the covers and flipped it on its top....plugged back in and turned it on again...after the requisite 30 or 40 seconds the frying started and the smoke came out from under the windings of the power transformer...Upon closer inspection, the wires from the power plug have been hot before. So, I obviously have a problem in the power transformer. I have located a replacement (same part number) transformer and have ordered it. The next question is what is causing the transformer to fail.....bad caps, or what?? Also, what is the proceedure for changing out the transformer??

thanks and 73,

Kevin O'Dell, N0IRW

41319. Re: [TS-520_820_530_830] Re: "Plate Idling Current" for a Kenwood TS-820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-13 03:12:54 UTC
From: Joseph Stiles
Topic: 41305 Message: 41319

Del,

I am going to assume that the meter and the selector switch works in the other positions.

I am going to have to dig out my schematic and look...but check this: with rig OFF and power cord UNPLUGGED...let it sit for a bit...your going to be poking close to 800+ volts. Let the capacitors drain....remove the top and bottom covers...be careful of the speaker wire. Turn rig upside down...and look at the final amplifier board...find the 2(two) 10 ohm, 1 watt resistors on the board...there the biggest ones there. With a VOM/DMM measure them to ground....they are in parallel...so should be close to 5 ohms...closer to 5 ohms the better...anything higher indicates one or both are high in value or one is open. While your there..check the 2(two) 100 ohm 1/2 watt resistors...they should be 100 ohms +/- tolerance.
A weak tube would not cause this fault.

73 Joe
WB7UQU

From: kc2mru <KC2MRU@aol.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, March 12, 2013 3:35 PM
Subject: [TS-520_820_530_830] Re: "Plate Idling Current" for a Kenwood TS-820

Hey Joe,
Thanks for the reply ... I've followed the procedure as it was described in the manual . Then I tried the procedure that you told me to do , and then I tried it the way that "k4eaa" said to do on his site ... and no matter which one I'm trying , I'm still not getting a reading on the Plate Idling Current . It would possibly be something like a weak tube would it ?

Thanks,
Del

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> kc2mru,
>
> Â Â Not to over simplify, but do the following:Â power up rig, turn "heater" switch ON, "SG" switch to ON...it's on the rear panel.. mode switch to either USB or LSB, meter select switch to "IP," flip "send/rcv" switch to "send." You should see no more than 60mA reading on the meter.
>
> Â Â Make sure that you are either connected to a dummy load or suitable antenna...dummy load preferred.

>
> If you are not familiar with tuning tube type rigs...may I suggest that a couple of "dry runs" may be in order...ie..location of needed controls...etc.
> The final amplifier tubes can be harmed, as some other components.. by being operated out of tune/resonance for extended time periods.
>
> You can go to Ken Kemski's web siteÂ Â Â k4eaa.comÂ Â he has some very good info/instructions for the beginning tube rig "tuner."
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: kc2mru <KC2MRU@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, March 11, 2013 5:52 AM
> Subject: [TS-520_820_530_830] "Plate Idling Current" for a Kenwood TS-820
>
>
> Â
> I recently bought a nice little TS-820 from another Ham , but I haven't messed with it alot yet . I finally got around to tuning it up so I could try and talk on it . I read the directions in the manual , but at the risk of sounding dumb , for some reason I'm not getting any reading on the meter when attempting to check the Plate Idling Current , even when I attempt to adjust the rear panel bias control ... am I over looking something , or is there a deeper problem , like maybe a repair needs to be done ?
>
> Is there anyone else that has experienced this problem that can help me out with this ?
>
> Thanks
>
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

41320. TS-830S Paper Feast!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-13 04:15:54 UTC
From: k7mks@...
Topic: 41320 Message: 41320

A 11 ounce grab envelope 1/2" thick of 8 1/2 x 11sheets w/ TS-830 hints, emails, update info, etc. If you are into 830s then this is for you. Cover my postage and it is yours. Give me your ZIP so I can figure postage. Pls reply direct.

Joe k7mks

[Non-text portions of this message have been removed]

41321. Re: Kenwood TS-520s re-cap question.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-13 12:00:17 UTC
From: Brian Allen
Topic: 41307 Message: 41321

I'll also vote to leave it alone if it is working. I had to work on the af board on a TS 520. I really hated to undo those wire wraps!

[Non-text portions of this message have been removed]

41322. Re: TS820 Freq readout

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-13 13:41:36 UTC
From: wallydoc
Topic: 41251 Message: 41322

Frequency generator has been set by a reference standard. It also reads correctly on several counters to more than 1ppm, probably 1ppb or better.

The radio came with half the PLL unit, and the counter was broken in several places, really dead.
I rebuilt the entire 820, every board needed attention, and adjusted everything including the PLL etc.... It took it on as a personal challenge, I think I stopped counting after replacing a dozen or so transistors. If I sell the 820, I'll never recoup my expenses. However, ham radio is a hobby, not a business.
I have the readout problem somewhat in line. The 820 readout is close, sometimes a little off received signal.(at least I think so) It behaves quite well an all bands in trans and receive.
I have used it on the hybrid net
Thanks to all for your input.
Wally
KC9INK

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> Wally, how are you determining the accuracy of the signal generator?
> Have you connected a frequency counter in parallel with the signal
> generator's output?
>
> 73
> Mike
>
>
>
>
>
> On 3/6/2013 7:30 AM, wallydoc wrote:
> >
> > Joe:
> > Sorry,
> > I centered (adjusted dig readout)it at 29MHz using a fluke sig gen,
> > which I believe is quite accurate.
> > After that dig readout is a little off on other bands when I put in
> > other signals.
> > Wally
> > KC9INK
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles wrote:
> > >
> > > Wally,

> > >
> > > Â Â Please clarify some of the statements you made:
> > > Â Â Â Â Â Â "Centered on 20Mhz?"Â do you mean 20 meters? what does
> > "centered" mean?
> > > Â Â Â Â Â Â The 820 has a VCO...voltage controlled oscillator. I
> > have seen VCO's correctly adjusted..according to the service
> > manual...either for voltage or,
> > > frequency, and still vary slightly from band to band.
> > >
> > > Â Â Â Â Â Â What are you using to monitor frequency? You do not
> > state if the 820 has a "digital readout." Some 820's came without
> > it...but were added later.
> > > Some came from the factory with it already installed......the 820S.
> > >
> > > Â What was rebuilt?
> > >
> > >
> > >
> > > Â
> > > 73Â Joe
> > > WB7UQU
> > >
> > >
> > >
> > > _____
> > > From: wallydoc
> > > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Monday, March 4, 2013 3:56 PM
> > > Subject: [TS-520_820_530_830] TS820 Freq readout
> > >
> > >
> > > Â
> > > TS820 freq readout problem
> > > I am having trouble getting the freq readout to be correct on all
> > bands. When I center it on 20MHz, it it off by 400 (.4, last digit) on
> > 7MHz band and about the same on 14 MHz.
> > > Does anyone have any suggestions? Perhaps I am forgetting something.
> > > I did rebuild this unit and think I got all the adjusts correct.
> > > The radio works quite well otherwise.
> > >
> > > Wally
> > > KC9INK
> > >
> > >
> > >
> > >
> > > [Non-text portions of this message have been removed]
> > >
> >

> >
>
>
>
> [Non-text portions of this message have been removed]
>

41323. Re: [TS-520_820_530_830] TS-830S Paper Feast!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-13 04:27:46 UTC
From: Young Kim
Topic: 41320 Message: 41323

Joe,
May I have one?
Young Kim
K6hm

From: "k7mks@..." <k7mks@...>
To: TS-520 530 <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, March 12, 2013 9:15 PM
Subject: [TS-520_820_530_830] TS-830S Paper Feast!

A 11 ounce grab envelope 1/2" thick of 8 1/2 x 11sheets w/ TS-830 hints, emails, update info, etc. If you are into 830s then this is for you. Cover my postage and it is yours. Give me your ZIP so I can figure postage. Pls reply direct.

Joe k7mks

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41324. RE: [TS-520_820_530_830] TS-830S Paper Feast!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-13 04:45:04 UTC
From: Jim Best
Topic: 41320 Message: 41324

I’ll take it and my zip is 82009. Cheyenne WY

73 Jim

WU7G

A 11 ounce grab envelope 1/2" thick of 8 1/2 x 11sheets w/ TS-830 hints, emails, update info, etc. If you are into 830s then this is for you. Cover my postage and it is yours. Give me your ZIP so I can figure postage. Pls reply direct.

Joe k7mks

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41325. !! You Have 1 New Message Via Google Document !!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-13 16:28:44 UTC
From: Robert George Nelson
Topic: 41325 Message: 41325

I have uploaded the document we discussed about, using google docs.
CLICK HERE and just sign in with your email to view the document.

[Non-text portions of this message have been removed]

41326. Re: [TS-520_820_530_830] TS-830S Paper Feast!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-13 17:33:35 UTC
From: k7mks@...
Topic: 41320 Message: 41326

Hi Young

I m sorry but it has been spoken fo r

I tru t all is well with you and y our family.

73 joe k7mks

.

----- Original Message -----

From: "Young Kim" <ykpwr45@...>
To: "TS-520 820 530 830" <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, March 12, 2013 9:27:46 PM
Subject: Re: [TS-520_820_530_830] TS-830S Paper Feast!

Joe,
May I have one?
Young Kim
K6hm

_____
From: " k7mks@... k7mks@... >
To: TS-520 530 < TS-520_820_530_830@yahoogroups.com >
Sent: Tuesday, March 12, 2013 9:15 PM
Subject: [TS-520_820_530_830] TS-830S Paper Feast!

A 11 ounce grab envelope 1/2" thick of 8 1/2 x 11sheets w/ TS-830 hints, emails, update info, etc. If you are into 830s then this is for you. Cover my postage and it is yours. Give me your ZIP so I can figure postage. Pls reply direct.

Joe k7mks

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[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41327. Re: [TS-520_820_530_830] TS-830S Paper Feast!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-13 18:58:00 UTC
From: Young Kim
Topic: 41320 Message: 41327

Joe,
Thanks for information.
Best 73's
Young

From: "k7mks@..." <k7mks@...>
To: TS-520 820 530 830 <TS-520_820_530_830@yahoogroups.com>
Sent: Wednesday, March 13, 2013 10:33 AM
Subject: Re: [TS-520_820_530_830] TS-830S Paper Feast!

Hi Young

I m sorry but it has been spoken fo r

I tru t all is well with you and y our family.

73 joe k7mks

.

----- Original Message -----

From: "Young Kim" <mailto:ykpwr45%40yahoo.com>
To: "TS-520 820 530 830" <mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Tuesday, March 12, 2013 9:27:46 PM
Subject: Re: [TS-520_820_530_830] TS-830S Paper Feast!

Joe,
May I have one?
Young Kim
K6hm

From: " mailto:k7mks%40comcast.net mailto:k7mks%40comcast.net >
To: TS-520 530 < mailto:TS-520_820_530_830%40yahoogroups.com >
Sent: Tuesday, March 12, 2013 9:15 PM
Subject: [TS-520_820_530_830] TS-830S Paper Feast!

A 11 ounce grab envelope 1/2" thick of 8 1/2 x 11sheets w/ TS-830 hints, emails, update info, etc. If you are into 830s then this is for you. Cover my postage and it is yours. Give me your ZIP so I can figure postage. Pls reply direct.

Joe k7mks

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41328. Re: "Plate Idling Current" for a Kenwood TS-820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-14 12:09:36 UTC
From: roberteleazer@rocketmail.com
Topic: 41305 Message: 41328

Del:

When you are have the rig set to Tune Mode, do you get any ALC indication at all?

My first inclination would be to suspect the infamous resistors on the power supply board, but do you gat any ALC?

Robert

--- In TS-520_820_530_830@yahoogroups.com, "kc2mru" <KC2MRU@...> wrote:
>
> Hey Joe,
> Thanks for the reply ... I've followed the procedure as it was described in the manual . Then I tried the procedure that you told me to do , and then I tried it the way that "k4eaa" said to do on his site ... and no matter which one I'm trying , I'm still not getting a reading on the Plate Idling Current . It would possibly be something like a weak tube would it ?
>
> Thanks,
> Del
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@> wrote:
> >
> > kc2mru,
> >
> > Â Â Not to over simplify, but do the following:Â power up rig, turn "heater" switch ON, "SG" switch to ON...it's on the rear panel.. mode switch to either USB or LSB, meter select switch to "IP," flip "send/rcv" switch to "send." You should see no more than 60mA reading on the meter.
> >
> > Â Â Make sure that you are either connected to a dummy load or suitable antenna...dummy load preferred.
> >
> > If you are not familiar with tuning tube type rigs...may I suggest that a couple of "dry runs" may be in order...ie..location of needed controls...etc.
> > The final amplifier tubes can be harmed, as some other components.. by being operated out of tune/resonance for extended time periods.
> >
> > You can go to Ken Kemski's web siteÂ Â Â k4eaa.comÂ Â he has some very good info/instructions for the beginning tube rig "tuner."
> >
> >
> > Â
> > 73Â Joe
> > WB7UQU
> >

> >
> >
> > _____
> > From: kc2mru <KC2MRU@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Monday, March 11, 2013 5:52 AM
> > Subject: [TS-520_820_530_830] "Plate Idling Current" for a Kenwood TS-820
> >
> >
> > Â
> > I recently bought a nice little TS-820 from another Ham , but I haven't messed with it alot yet . I finally got around to tuning it up so I could try and talk on it . I read the directions in the manual , but at the risk of sounding dumb , for some reason I'm not getting any reading on the meter when attempting to check the Plate Idling Current , even when I attempt to adjust the rear panel bias control ... am I over looking something , or is there a deeper problem , like maybe a repair needs to be done ?
> >
> > Is there anyone else that has experienced this problem that can help me out with this ?
> >
> > Thanks
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

41329. Re: 820S power transformer replacement

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-14 12:17:03 UTC
From: roberteleazer@rocketmail.com
Topic: 41318 Message: 41329

Kevin:

I suggest you first disconnect the power transformer outputs from everything - cut the wires if you have to and connect them to some terminal strips to make sure they are isolated. Then power up the rig and see what happens then. Measure the voltages at each output if there is no smoke. This will help you isolate what teh prpobelm is.

I have been working on a TS-520 that has some big power supply problems. There was smoke comning from the rectifier board, and I replaced that with a rebuilt one and I am replacing all of the HV caps also - although I have yet to find what loks like a bad cap in the ones I have removed and tested.

Good Luck!

Robert

--- In TS-520_820_530_830@yahoogroups.com, Kevin O'Dell N0IRW <n0irw@...> wrote:
>
> I came into possession of an 820S the other day. It didn't have the tubes in it, no final cage, no power plug, no fuse and only about 3 screws holding the case together.....but otherwise seemed clean. I got a power connector and built the power cable. Built a final cage out of roof flashing (LOTS of holes drilled). Got the 4 mm screws at the hardware store for the case. Got a new 12BY7A driver at a hamfest this past weekend. A matched pair of Taylor 6146B's will arrive tomorrow from RF Parts. 6 amp 3AG fuses will also arrive tomorrow from Mouser.....So, this afternoon with a 5 amp fuse in the holder I plugged it in and flipped the switch.....all the lights came on as did the display. It had a LOUD 60 cycle hum in the audio and after about 45 seconds or so, there was a frying sound and some smoke started coming out of the rear. I powered down and unplugged. After waiting about 30 minutes, I pulled the covers and flipped it on its top....plugged back in and turned it on again...after the requisite 30 or 40 seconds the frying started and the smoke came out from under the windings of the power transformer...Upon closer inspection, the wires from the power plug have been hot before. So, I obviously have a problem in the power transformer. I have located a replacement (same part number) transformer and have ordered it. The next question is what is causing the transformer to fail.....bad caps, or what?? Also, what is the proceedure for changing out the transformer??
>
> thanks and 73,
>
> Kevin O'Dell, N0IRW
>

41330. TS-820 Speech Processor

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-14 14:02:10 UTC
From: Rick
Topic: 41330 Message: 41330

I am back to square one on the extremely low RF output when the processor is on. With the processor off I get normal RF output. I have replaced Q30 on the IF board as advised but the problem was unchanged. I guess the next step is to trace the signal through its entire circuit until the bad stage is detected. Any and all advise will certainly be appreciated.

73,

Rick / K5IAR

[Non-text portions of this message have been removed]

41331. Re: *** SPAM ***[TS-520_820_530_830] Re: "Plate Idling Current" for a Kenwood TS-820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-14 13:44:22 UTC
From: Mike
Topic: 41305 Message: 41331

Del has indicated more than once that his 820's IP idling current still
remains at "zero" even after following Joe's suggestion to ensure the
rear panel SG switch is set to ON and the Heater switch is set to ON.

Using different tune up procedures has nothing to do with this problem.

Typically loss of IP idling current is the result of one of the follwing:

1. SG switch is set to OFF
2. Bad Cathode resistors in the final tubes
3. Heater switch is turned OFF

Since Del said he checked items 1 and 3, those 2 items no longer
suspects in this problem.

I recommend Del thoroughly check item 2 since bad cathode resistors can
easily cause an "open" in the final tube's cathode circuit preventing
electron flow in the final tubes, hence "zero" IP idling current. Del
did say he adjusted the bias pot so that's not the problem either.

73
Mike

On 3/14/2013 7:09 AM, roberteleazer@rocketmail.com wrote:
>
> Del:
>
> When you are have the rig set to Tune Mode, do you get any ALC
> indication at all?
>
> My first inclination would be to suspect the infamous resistors on the
> power supply board, but do you gat any ALC?
>
> Robert
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "kc2mru" <KC2MRU@...>
> wrote:
> >
> > Hey Joe,
> > Thanks for the reply ... I've followed the procedure as it was
> described in the manual . Then I tried the procedure that you told me
> to do , and then I tried it the way that "k4eaa" said to do on his
> site ... and no matter which one I'm trying , I'm still not getting a
> reading on the Plate Idling Current . It would possibly be something

> like a weak tube would it ?
> >
> > Thanks,
> > Del
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles
> <stilesjoseph@> wrote:
> > >
> > > kc2mru,
> > >
> > > Â Â Not to over simplify, but do the following:Â power up rig,
> turn "heater" switch ON, "SG" switch to ON...it's on the rear panel..
> mode switch to either USB or LSB, meter select switch to "IP," flip
> "send/rcv" switch to "send." You should see no more than 60mA reading
> on the meter.
> > >
> > > Â Â Make sure that you are either connected to a dummy load or
> suitable antenna...dummy load preferred.
> > >
> > > If you are not familiar with tuning tube type rigs...may I suggest
> that a couple of "dry runs" may be in order...ie..location of needed
> controls...etc.
> > > The final amplifier tubes can be harmed, as some other
> components.. by being operated out of tune/resonance for extended time
> periods.
> > >
> > > You can go to Ken Kemski's web siteÂ Â Â k4eaa.comÂ Â he has some
> very good info/instructions for the beginning tube rig "tuner."
> > >
> > >
> > > Â
> > > 73Â Joe
> > > WB7UQU
> > >
> > >
> > >
> > > _____
> > > From: kc2mru <KC2MRU@>
> > > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Monday, March 11, 2013 5:52 AM
> > > Subject: [TS-520_820_530_830] "Plate Idling Current" for a Kenwood
> TS-820
> > >
> > >
> > > Â
> > > I recently bought a nice little TS-820 from another Ham , but I
> haven't messed with it alot yet . I finally got around to tuning it up
> so I could try and talk on it . I read the directions in the manual ,

> but at the risk of sounding dumb , for some reason I'm not getting any
> reading on the meter when attempting to check the Plate Idling Current
> , even when I attempt to adjust the rear panel bias control ... am I
> over looking something , or is there a deeper problem , like maybe a
> repair needs to be done ?
> > >
> > > Is there anyone else that has experienced this problem that can
> help me out with this ?
> > >
> > > Thanks
> > >
> > >
> > >
> > >
> > > [Non-text portions of this message have been removed]
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>

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41332. RE: [TS-520_820_530_830] TS-830S Paper Feast!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-14 06:51:55 UTC
From: Jim Best
Topic: 41320 Message: 41332

Hi Young,

Did I win the prize or did some one beat me to it?

73 Jim

WU7G

Joe,
Thanks for information.
Best 73's
Young

From: "k7mks@... <mailto:k7mks%40comcast.net> k7mks@comcast.net
<mailto:k7mks%40comcast.net> >
To: TS-520 820 530 830 <TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> >
Sent: Wednesday, March 13, 2013 10:33 AM
Subject: Re: [TS-520_820_530_830] TS-830S Paper Feast!

Hi Young

I m sorry but it has been spoken fo r

I tru t all is well with you and y our family.

73 joe k7mks

.

----- Original Message -----

From: "Young Kim" <mailto:ykpwr45%40yahoo.com>
To: "TS-520 820 530 830" <mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Tuesday, March 12, 2013 9:27:46 PM
Subject: Re: [TS-520_820_530_830] TS-830S Paper Feast!

Joe,
May I have one?
Young Kim
K6hm

From: " mailto:k7mks%40comcast.net mailto:k7mks%40comcast.net >
To: TS-520 530 < mailto:TS-520_820_530_830%40yahoogroups.com >
Sent: Tuesday, March 12, 2013 9:15 PM
Subject: [TS-520_820_530_830] TS-830S Paper Feast!

A 11 ounce grab envelope 1/2" thick of 8 1/2 x 11sheets w/ TS-830 hints, emails, update info, etc. If you are into 830s then this is for you. Cover my postage and it is yours. Give me your ZIP so I can figure postage. Pls reply direct.

Joe k7mks

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41333. 262 degree 'Kenwood' style 8 pin Din Plugs

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-14 14:45:00 UTC
From: Ricky Delve
Topic: 41333 Message: 41333

Hi

Retired within the last year and now finally I have some time to pursue a hobby I took my RAE nearly 40 years ago to do.

Having acquired a TS830S and associated accessories I have recently fabricated a lead to connect the external VFO.

Refraining from waffling further I just thought I would like to share for those readers in the UK particularly that the seemingly oft difficult to locate 262 degree Kenwood style 8 PIN DIN plugs can be had presently from the most unlikely of stores at □CoolNovelties.co.uk□. The plugs are listed as □8 PIN "U" DIN MALE PLUG 262 DEG□.

I can confirm having soldered 16 connections to two of the plugs, that they are very good quality and can be bought currently at a very good price of only £1.65 inc. each.

I know this will be of use to anyone who like me has searched fairly fruitlessly to find a country local supply of a plug that actually FITS the socket like a glove..

Why do they sell them?... Hmmm I think they are used in the vintage/retro □commodore□ computer series in which they specialise I was a Microtan 65 and Atari person myself.

73□s

Ricky

G1FZR

[Non-text portions of this message have been removed]

41334. Re: *** SPAM ***[TS-520_820_530_830] Re: "Plate Idling Current" for a Kenwood TS-820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-14 17:31:48 UTC
From: cmerje@juno.com
Topic: 41305 Message: 41334

Hi Mike, Something to check is the SG Switch. I had problems with my 830. Found SG sw. not working right, went to remove it and it fell apart. I cleaned it and put it back together and all is WELL. Just a though.
Wayne W6WMV Finley,Ca.
---------- Original Message ----------
From: Mike <w5rkl@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: *** SPAM ***[TS-520_820_530_830] Re: "Plate Idling Current" for a Kenwood TS-820
Date: Thu, 14 Mar 2013 08:44:22 -0500

Del has indicated more than once that his 820's IP idling current still remains at "zero" even after following Joe's suggestion to ensure the rear panel SG switch is set to ON and the Heater switch is set to ON.

Using different tune up procedures has nothing to do with this problem.

Typically loss of IP idling current is the result of one of the follwing:

1. SG switch is set to OFF
2. Bad Cathode resistors in the final tubes
3. Heater switch is turned OFF

Since Del said he checked items 1 and 3, those 2 items no longer suspects in this problem.

I recommend Del thoroughly check item 2 since bad cathode resistors can easily cause an "open" in the final tube's cathode circuit preventing electron flow in the final tubes, hence "zero" IP idling current. Del did say he adjusted the bias pot so that's not the problem either.

73
Mike

On 3/14/2013 7:09 AM, roberteleazer@... wrote:
>
> Del:
>
> When you are have the rig set to Tune Mode, do you get any ALC
> indication at all?
>
> My first inclination would be to suspect the infamous resistors on the
> power supply board, but do you gat any ALC?
>
> Robert

>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "kc2mru" <KC2MRU@...>
> wrote:
> >
> > Hey Joe,
> > Thanks for the reply ... I've followed the procedure as it was
> described in the manual . Then I tried the procedure that you told me
> to do , and then I tried it the way that "k4eaa" said to do on his
> site ... and no matter which one I'm trying , I'm still not getting a
> reading on the Plate Idling Current . It would possibly be something
> like a weak tube would it ?
> >
> > Thanks,
> > Del
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles
> <stilesjoseph@> wrote:
> > >
> > > kc2mru,
> > >
> > > ?? Not to over simplify, but do the following:? power up rig,
> turn "heater" switch ON, "SG" switch to ON...it's on the rear panel..
> mode switch to either USB or LSB, meter select switch to "IP," flip
> "send/rcv" switch to "send." You should see no more than 60mA reading
> on the meter.
> > >
> > > ?? Make sure that you are either connected to a dummy load or
> suitable antenna...dummy load preferred.
> > >
> > > If you are not familiar with tuning tube type rigs...may I suggest
> that a couple of "dry runs" may be in order...ie..location of needed
> controls...etc.
> > > The final amplifier tubes can be harmed, as some other
> components.. by being operated out of tune/resonance for extended time
> periods.
> > >
> > > You can go to Ken Kemski's web site???k4eaa.com?? he has some
> very good info/instructions for the beginning tube rig "tuner."
> > >
> > >
> > > ?> > > 73? Joe
> > > WB7UQU
> > >
> > >
> > >
> > > _____
> > > From: kc2mru <KC2MRU@>
> > > To: TS-520_820_530_830@yahoogroups.com

> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Monday, March 11, 2013 5:52 AM
> > > Subject: [TS-520_820_530_830] "Plate Idling Current" for a Kenwood
> TS-820
> > >
> > >
> > > ?> > > I recently bought a nice little TS-820 from another Ham , but I
> haven't messed with it alot yet . I finally got around to tuning it up
> so I could try and talk on it . I read the directions in the manual ,
> but at the risk of sounding dumb , for some reason I'm not getting any
> reading on the meter when attempting to check the Plate Idling Current
> , even when I attempt to adjust the rear panel bias control ... am I
> over looking something , or is there a deeper problem , like maybe a
> repair needs to be done ?
> > >
> > > Is there anyone else that has experienced this problem that can
> help me out with this ?
> > >
> > > Thanks
> > >
> > >
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> > >
> > > [Non-text portions of this message have been removed]
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Yahoo! Groups Links

How to Sleep Like a Rock
Obey this one natural trick to fall asleep and stay asleep all night.
http://thirdpartyoffers.juno.com/TGL3141/514209c26e4349c22b3ast04duc

41335. TS-830 Power Transformer

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-14 18:31:46 UTC
From: ronaldburnor@sbcglobal.net
Topic: 3527 Message: 41335

Hi guys: Thanks for the info on my rectifier board i.e. voltages. While i had the board out replacing the resistors i decided to check the voltages on the transformer and found no voltage reading on the green lead going to the H.V. capacitor.. Looking at the schematic it shows 0 volts. Why would this be?? Thanks. 73's Ron

41336. WTB Slip on tube shield for 12BY7A

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-15 03:15:37 UTC
From: Rick
Topic: 41336 Message: 41336

The subject says it all. My TS-820 is missing the shield on the 12BY7A driver. Please, contact me off list at: rsbtexas@... if you have one or more to sell.

Tnx and vy 73,

Rick / K5IAR

[Non-text portions of this message have been removed]

41337. Re: [TS-520_820_530_830] Re: 820S power transformer replacement

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-15 02:38:22 UTC
From: Alan Barber
Topic: 41318 Message: 41337

You might want to check out The Kenwood Service Manual at
http://www.n6wk.com/kenwood/

73s
Earl

--- On Thu, 3/14/13, roberteleazer@... <roberteleazer@rocketmail.com> wrote:

From: roberteleazer@... <roberteleazer@rocketmail.com>
Subject: [TS-520_820_530_830] Re: 820S power transformer replacement
To: TS-520_820_530_830@yahoogroups.com
Date: Thursday, March 14, 2013, 7:17 AM

Kevin:

I suggest you first disconnect the power transformer outputs from everything - cut the wires if you have to and connect them to some terminal strips to make sure they are isolated. Then power up the rig and see what happens then. Measure the voltages at each output if there is no smoke. This will help you isolate what teh prpobelm is.

I have been working on a TS-520 that has some big power supply problems. There was smoke comning from the rectifier board, and I replaced that with a rebuilt one and I am replacing all of the HV caps also - although I have yet to find what loks like a bad cap in the ones I have removed and tested.

Good Luck!

Robert

--- In TS-520_820_530_830@yahoogroups.com, Kevin O'Dell N0IRW <n0irw@...> wrote:

>

> I came into possession of an 820S the other day. It didn't have the tubes in it, no final cage, no power plug, no fuse and only about 3 screws holding the case together.....but otherwise seemed clean. I got a power connector and built the power cable. Built a final cage out of roof flashing (LOTS of holes drilled). Got the 4 mm screws at the hardware store for the case. Got a new 12BY7A driver at a hamfest this past weekend. A matched pair of Taylor 6146B's will arrive tomorrow from RF Parts. 6 amp 3AG fuses will also arrive tomorrow from Mouser.....So, this afternoon with a 5 amp fuse in the holder I plugged it in and flipped the switch.....all the lights came on as did the display. It had a LOUD 60 cycle hum in the audio and after about 45 seconds or so, there was a frying sound and some smoke started coming out of the rear. I powered down and unplugged. After waiting about 30 minutes, I pulled the covers and flipped it on its top....plugged back in and turned it on again...after the requisite 30 or 40 seconds the frying started and the smoke came out from under the windings of the power transformer...Upon closer inspection, the wires from the power plug have been hot before. So, I obviously have a problem in the power transformer. I have located a replacement (same

part number) transformer and have ordered it. The next question is what is causing the transformer to fail.......bad caps, or what?? Also, what is the proceedure for changing out the transformer??

>

> thanks and 73,

>

> Kevin O'Dell, N0IRW

>

[Non-text portions of this message have been removed]

41338. VFO-230 Wanted

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-15 02:46:33 UTC
From: percussion1812
Topic: 41338 Message: 41338

Anyone have a VFO-230 for sale?

41339. Re: [TS-520_820_530_830] WTB Slip on tube shield for 12BY7A

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-15 03:00:03 UTC
From: Kevin ODell
Topic: 41336 Message: 41339

I didn't know it was suppose to have one.....

Sent from my iPhone
Keep thy airspeed, lest the ground shall rise up and smite thy machine.

On Mar 14, 2013, at 10:15 PM, Rick <rickb@...> wrote:

> The subject says it all. My TS-820 is missing the shield on the 12BY7A
> driver. Please, contact me off list at: rsbtexas@... if you have one
> or more to sell.
>
> Tnx and vy 73,
>
> Rick / K5IAR
>
> [Non-text portions of this message have been removed]
>
>

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41340. RE: [TS-520_820_530_830] WTB Slip on tube shield for 12BY7A

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-15 04:13:03 UTC
From: Rick
Topic: 41336 Message: 41340

The manual says to be sure the shield is in place and the ground strap is
under the shield. I can't remember the page, but it's in the service manual.

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Kevin ODell
Sent: Thursday, March 14, 2013 9:00 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] WTB Slip on tube shield for 12BY7A

I didn't know it was suppose to have one.....

Sent from my iPhone
Keep thy airspeed, lest the ground shall rise up and smite thy machine.

On Mar 14, 2013, at 10:15 PM, Rick <rickb@...
<mailto:rickb%40tx.rr.com> > wrote:

> The subject says it all. My TS-820 is missing the shield on the 12BY7A
> driver. Please, contact me off list at: rsbtexas@...
<mailto:rsbtexas%40gmail.com> if you have one
> or more to sell.
>
> Tnx and vy 73,
>
> Rick / K5IAR
>
> [Non-text portions of this message have been removed]
>
>

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41341. Re: WTB Slip on tube shield for 12BY7A

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-15 13:44:33 UTC
From: Bob
Topic: 41336 Message: 41341

I have quite a few shields (silver or black)...
Sell them for $3.00 each plus $2.50 to mail...
Bob
****

--- In TS-520_820_530_830@yahoogroups.com, "Rick" <rickb@...> wrote:
>
> The subject says it all. My TS-820 is missing the shield on the 12BY7A
> driver. Please, contact me off list at: rsbtexas@... if you have one
> or more to sell.
>
>
>
> Tnx and vy 73,
>
> Rick / K5IAR
>
>
>
> [Non-text portions of this message have been removed]
>

41342. RE: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-15 15:04:03 UTC
From: Rick
Topic: 41336 Message: 41342

Hi Bob.. are they the slip one type that do not require a special tube socket to hold them on. I wonder if you have a picture of them you could send?

Thanks,

Rick/K5IAR

_____

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Bob
Sent: Friday, March 15, 2013 7:45 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A

I have quite a few shields (silver or black)...
Sell them for $3.00 each plus $2.50 to mail...
Bob
****

--- In TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> , "Rick" <rickb@...> wrote:
>
> The subject says it all. My TS-820 is missing the shield on the 12BY7A
> driver. Please, contact me off list at: rsbtexas@... if you have one
> or more to sell.
>
>
>
> Tnx and vy 73,
>
> Rick / K5IAR

--

[Non-text portions of this message have been removed]

41343. Re: WTB Slip on tube shield for 12BY7A

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-15 14:38:33 UTC
From: roberteleazer@rocketmail.com
Topic: 41336 Message: 41343

I think that the most important aspect, aside from the actual shielding of the tube, is that if the ground strap is not under the tube then it is likely to contact somewhere it should not be.

The TS-820 Service Bulletins say that the ground strap not being under the tube shield can be a cause of an intermittant transmitter.

Robert
--- In TS-520_820_530_830@yahoogroups.com, "Rick" <rickb@...> wrote:
>
> The manual says to be sure the shield is in place and the ground strap is
> under the shield. I can't remember the page, but it's in the service manual.
>
>
>
>
>
>
> _____
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Kevin ODell
> Sent: Thursday, March 14, 2013 9:00 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [TS-520_820_530_830] WTB Slip on tube shield for 12BY7A
>
>
>
>
>
>
> I didn't know it was suppose to have one.....
>
> Sent from my iPhone
> Keep thy airspeed, lest the ground shall rise up and smite thy machine.
>
> On Mar 14, 2013, at 10:15 PM, Rick <rickb@...
> <mailto:rickb%40tx.rr.com> > wrote:
>
> > The subject says it all. My TS-820 is missing the shield on the 12BY7A
> > driver. Please, contact me off list at: rsbtexas@...
> <mailto:rsbtexas%40gmail.com> if you have one
> > or more to sell.
> >
> > Tnx and vy 73,
> >
> > Rick / K5IAR

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41344. RE: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-15 15:52:12 UTC
From: Rick
Topic: 41336 Message: 41344

Thanks! That makes sense. I don't have the service bulletins. Are there many of them? Are they available ?

I appreciate the assistance and advice.

Rick

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of roberteleazer@...
Sent: Friday, March 15, 2013 8:39 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A

I think that the most important aspect, aside from the actual shielding of the tube, is that if the ground strap is not under the tube then it is likely to contact somewhere it should not be.

The TS-820 Service Bulletins say that the ground strap not being under the tube shield can be a cause of an intermittant transmitter.

Robert
--- In TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> , "Rick" <rickb@...> wrote:
>
> The manual says to be sure the shield is in place and the ground strap is
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>
>
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>
>
> -----
>
> From: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>
> [mailto:TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Kevin ODell
> Sent: Thursday, March 14, 2013 9:00 PM
> To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: Re: [TS-520_820_530_830] WTB Slip on tube shield for 12BY7A
>
>

>
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>
> I didn't know it was suppose to have one.....
>
> Sent from my iPhone
> Keep thy airspeed, lest the ground shall rise up and smite thy machine.
>
> On Mar 14, 2013, at 10:15 PM, Rick <rickb@...
> <mailto:rickb%40tx.rr.com> > wrote:
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> > The subject says it all. My TS-820 is missing the shield on the 12BY7A
> > driver. Please, contact me off list at: rsbtexas@...
> <mailto:rsbtexas%40gmail.com> if you have one
> > or more to sell.
> >
> > Tnx and vy 73,
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> > Rick / K5IAR
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41345. Re: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-15 14:40:16 UTC
From: Kevin ODell
Topic: 41336 Message: 41345

Bob,

If you could send me the particulars for payment, i'm gonna need one for my TS-820S.

73,

Kevin, N0IRW

Sent from my iPhone
Keep thy airspeed, lest the ground shall rise up and smite thy machine.

On Mar 15, 2013, at 8:44 AM, Bob <ke5ftf@...> wrote:

> I have quite a few shields (silver or black)...
> Sell them for $3.00 each plus $2.50 to mail...
> Bob
> **********
>
> --- In TS-520_820_530_830@yahoogroups.com, "Rick" <rickb@...> wrote:
> >
> > The subject says it all. My TS-820 is missing the shield on the 12BY7A
> > driver. Please, contact me off list at: rsbtexas@... if you have one
> > or more to sell.
> >
> >
> >
> > Tnx and vy 73,
> >
> > Rick / K5IAR
> >
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41346. DFD2 display installation into TS-820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-15 19:13:10 UTC
From: bbrummans
Topic: 41346 Message: 41346

I just got finished with installing a DFD2 display from Neil (www.aade.com) in my TS-820.
Note it is not as "S" version, so it did not have the display in it.

For those that have the TS-820 (or 530) with a failed OEM display, replacing the display is a bit if work, but well worth it.
The biggest problem is the replacement lcd, it is not going to fit without modifying the front panel.
I've looked for smaller lcd displays to use, but found none.

With the lcd display, the front panel has to be cut to make it fit.
Not only that but the original status led's for "Att,Fix,Vfo,Rit cannot be used (due to lack of space).

I used some small LED's and wired them directly behind the panel.
I'd post some pics but am not sure how.

If you'd like to see the result, send me an e-mail and I'll send some pics of the install.
(cocobean64@...)

73
Bart
KB8BAB

41347. Parting out a TS-820S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-15 18:24:56 UTC
From: kd8cdg
Topic: 41347 Message: 41347

I had a friend become a silent key last year who was in the middle of a recap on this radio so it is in pieces.

He purchased new caps and tubes: 12by7a and a matched pair 6146W still new in the box.

I was there watching so I know where he was in the recap procedure and those board that have not been recapped will come with the new caps. When he started he separated the caps and put those in containers with the individual boards they were to go into.

This radio worked prior to the procedure, he wanted to restore this radio so he could have it for years to come, it is unfortunate that he will never have that pleasure.

Email me off list with your needs and offers and I will get back to you as soon as I can.

41348. Re: WTB Slip on tube shield for 12BY7A

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-15 21:29:29 UTC
From: roberteleazer@rocketmail.com
Topic: 41336 Message: 41348

They should be in the group files section but if you cannot find them contact me directly and I will e-mail them to you.

Good Luck!

Robert
--- In TS-520_820_530_830@yahoogroups.com, "Rick" <rickb@...> wrote:
>
> Thanks! That makes sense. I don't have the service bulletins. Are there many
> of them? Are they available ?
>
> I appreciate the assistance and advice.
>
> Rick
>
>
>
> _____
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of
> roberteleazer@...
> Sent: Friday, March 15, 2013 8:39 AM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A
>
>
>
>
>
> I think that the most important aspect, aside from the actual shielding of
> the tube, is that if the ground strap is not under the tube then it is
> likely to contact somewhere it should not be.
>
> The TS-820 Service Bulletins say that the ground strap not being under the
> tube shield can be a cause of an intermittant transmitter.
>
> Robert
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com> , "Rick" <rickb@> wrote:
> >
> > The manual says to be sure the shield is in place and the ground strap is
> > under the shield. I can't remember the page, but it's in the service
> manual.
> >

> >
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> >
> >
> > _____
> >
> > From: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > [mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Kevin ODell
> > Sent: Thursday, March 14, 2013 9:00 PM
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Subject: Re: [TS-520_820_530_830] WTB Slip on tube shield for 12BY7A
> >
> >
> >
> >
> >
> > I didn't know it was suppose to have one.....
> >
> > Sent from my iPhone
> > Keep thy airspeed, lest the ground shall rise up and smite thy machine.
> >
> > On Mar 14, 2013, at 10:15 PM, Rick <rickb@
> > <mailto:rickb%40tx.rr.com> > wrote:
> >
> > > The subject says it all. My TS-820 is missing the shield on the 12BY7A
> > > driver. Please, contact me off list at: rsbtexas@
> > <mailto:rsbtexas%40gmail.com> if you have one
> > > or more to sell.
> > >
> > > Tnx and vy 73,
> > >
> > > Rick / K5IAR
> > >
> > > [Non-text portions of this message have been removed]
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41349. RE: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-15 22:53:19 UTC
From: Rick
Topic: 41336 Message: 41349

I hate to admit it but I am dumb as a stick when it comes to these reflectors. At 68 years old I have a hard time just getting online. HI HI. I would love to know how to get to the group files section if you'd point me in the right direction.

Thanks

_____

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of roberteleazer@...
Sent: Friday, March 15, 2013 3:29 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A

They should be in the group files section but if you cannot find them contact me directly and I will e-mail them to you.

Good Luck!

Robert
--- In TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> , "Rick" <rickb@...> wrote:
>
> Thanks! That makes sense. I don't have the service bulletins. Are there many
> of them? Are they available ?
>
> I appreciate the assistance and advice.
>
> Rick
>
>
>
> _____
>
> From: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>
> [mailto:TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of
> roberteleazer@...
> Sent: Friday, March 15, 2013 8:39 AM
> To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A

>
>
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>
>
> I think that the most important aspect, aside from the actual shielding of
> the tube, is that if the ground strap is not under the tube then it is
> likely to contact somewhere it should not be.
>
> The TS-820 Service Bulletins say that the ground strap not being under the
> tube shield can be a cause of an intermittant transmitter.
>
> Robert
> --- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com> , "Rick" <rickb@> wrote:
> >
> > The manual says to be sure the shield is in place and the ground strap
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> manual.
> >
> >
> >
> >
> >
> > _____
> >
> > From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > [mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Kevin ODell
> > Sent: Thursday, March 14, 2013 9:00 PM
> > To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Subject: Re: [TS-520_820_530_830] WTB Slip on tube shield for 12BY7A
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> >
> >
> > I didn't know it was suppose to have one.....
> >
> > Sent from my iPhone
> > Keep thy airspeed, lest the ground shall rise up and smite thy machine.
> >
> > On Mar 14, 2013, at 10:15 PM, Rick <rickb@

> > <mailto:rickb%40tx.rr.com> > wrote:
> >
> > > The subject says it all. My TS-820 is missing the shield on the 12BY7A
> > > driver. Please, contact me off list at: rsbtexas@
> > <mailto:rsbtexas%40gmail.com> if you have one
> > > or more to sell.
> > >
> > > Tnx and vy 73,
> > >
> > > Rick / K5IAR
> > >
> > > [Non-text portions of this message have been removed]
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41350. Re: WTB Slip on tube shield for 12BY7A

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-15 22:01:26 UTC
From: Bob
Topic: 41336 Message: 41350

They are pulls from the Hybrids I have parted, Slip on type...
I can take a picture if needed...
Bob
****

--- In TS-520_820_530_830@yahoogroups.com, "Rick" <rickb@...> wrote:
>
> Hi Bob.. are they the slip one type that do not require a special tube
> socket to hold them on. I wonder if you have a picture of them you could
> send?
>
> Thanks,
>
> Rick/K5IAR
>
>
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> _____
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Bob
> Sent: Friday, March 15, 2013 7:45 AM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A
>
>
>
>
>
>
> I have quite a few shields (silver or black)...
> Sell them for $3.00 each plus $2.50 to mail...
> Bob
> **********
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com> , "Rick" <rickb@> wrote:
> >
> > The subject says it all. My TS-820 is missing the shield on the 12BY7A
> > driver. Please, contact me off list at: rsbtexas@ if you have one
> > or more to sell.
> >
> >
> >

> > Tnx and vy 73,
> >
> > Rick / K5IAR
> __
>
>
>
> [Non-text portions of this message have been removed]
>

41351. Re: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-15 22:18:28 UTC
From: Mike
Topic: 41336 Message: 41351

Rick,

You can't get to the group's file section using your e-mail program. You have to log into the Kenwood Yahoo Group's home page. Copy the link below into your web browser's address bar.

http://groups.yahoo.com/group/TS-520_820_530_830/

You can't access the Files section until you log into the Yahoo Kenwood Group's homepage.

When the page comes up, look at the top left of the page, you will see the "Login" link. Click on that and when the login page comes up, enter your username and password then press enter. The username and password are the same ones you use with your e-mail program to get Kenwood Yahoo group e-mails. Hopefully you wrote those down somewhere. If you entered the correct username and password, the Kenwood Yahoo Group's homepage will come up.

Once the home page comes up, look on the upper left and you will see a "Files" link, click on that and you will be taken into the Files section.

To log out of the Kenwood Yahoo Group's page, look at the upper left of the page and you will see your log in name. Click on that "once" and a drop down menu will appear. Click on "Sign out". That's all there is to it.

73
Mike

On 3/15/2013 5:53 PM, Rick wrote:
>
> I hate to admit it but I am dumb as a stick when it comes to these
> reflectors. At 68 years old I have a hard time just getting online. HI
> HI. I
> would love to know how to get to the group files section if you'd point me
> in the right direction.
>
> Thanks
>
> _____
>
> From: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> [mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of
> roberteleazer@... <mailto:roberteleazer%40rocketmail.com>
> Sent: Friday, March 15, 2013 3:29 PM

> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A
>
> They should be in the group files section but if you cannot find them
> contact me directly and I will e-mail them to you.
>
> Good Luck!
>
> Robert
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com> , "Rick" <rickb@...> wrote:
> >
> > Thanks! That makes sense. I don't have the service bulletins. Are there
> many
> > of them? Are they available ?
> >
> > I appreciate the assistance and advice.
> >
> > Rick
> >
> >
> >
> > _____
> >
> > From: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > [mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of
> > roberteleazer@...
> > Sent: Friday, March 15, 2013 8:39 AM
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Subject: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A
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> >
> >
> > I think that the most important aspect, aside from the actual
> shielding of
> > the tube, is that if the ground strap is not under the tube then it is
> > likely to contact somewhere it should not be.
> >
> > The TS-820 Service Bulletins say that the ground strap not being
> under the

> > tube shield can be a cause of an intermittant transmitter.
> >
> > Robert
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com> , "Rick" <rickb@> wrote:
> > >
> > > The manual says to be sure the shield is in place and the ground strap
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> > >
> > >
> > >
> > >
> > >
> > > _____
> > >
> > > From: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
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> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > [mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Kevin ODell
> > > Sent: Thursday, March 14, 2013 9:00 PM
> > > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Subject: Re: [TS-520_820_530_830] WTB Slip on tube shield for 12BY7A
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> > >
> > >
> > > I didn't know it was suppose to have one.....
> > >
> > > Sent from my iPhone
> > > Keep thy airspeed, lest the ground shall rise up and smite thy
> machine.
> > >
> > > On Mar 14, 2013, at 10:15 PM, Rick <rickb@
> > > <mailto:rickb%40tx.rr.com> > wrote:
> > >
> > > > The subject says it all. My TS-820 is missing the shield on the
> 12BY7A
> > > > driver. Please, contact me off list at: rsbtexas@

> > > <mailto:rsbtexas%40gmail.com> if you have one
> > > > or more to sell.
> > > >
> > > > Tnx and vy 73,
> > > >
> > > > Rick / K5IAR
> > > >
> > > > [Non-text portions of this message have been removed]
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41352. RE: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-16 00:15:25 UTC
From: Rick
Topic: 41336 Message: 41352

Great! I'll contact you off list to make the arrangements.

Thanks a million!

_____

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Bob
Sent: Friday, March 15, 2013 4:01 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A

They are pulls from the Hybrids I have parted, Slip on type...
I can take a picture if needed...
Bob
****

--- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> , "Rick" <rickb@...> wrote:
>
> Hi Bob.. are they the slip one type that do not require a special tube
> socket to hold them on. I wonder if you have a picture of them you could
> send?
>
> Thanks,
>
> Rick/K5IAR
>
>
>
>
>
> _____
>
> From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> [mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Bob
> Sent: Friday, March 15, 2013 7:45 AM
> To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A
>
>
>
>

>
> I have quite a few shields (silver or black)...
> Sell them for $3.00 each plus $2.50 to mail...
> Bob
> **********
>
> --- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com> , "Rick" <rickb@> wrote:
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> > The subject says it all. My TS-820 is missing the shield on the 12BY7A
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> >
> >
> >
> > Tnx and vy 73,
> >
> > Rick / K5IAR
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[Non-text portions of this message have been removed]

41353. Re: [TS-520_820_530_830] Re: 820S power transformer replacement

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-16 03:13:39 UTC
From: Kevin O'Dell N0IRW
Topic: 41318 Message: 41353

Thanks Robert,

I disconnected every output except the 12.6 volt. When I pluged it in and turned it on....no frying noises and no smoke.....it just sat there quietly.....I think I found part of the problem though.......it looks like the filter caps are wired wrong.....apparantly the last person to have this rig monkeyed around inside and didn't run the other cap to ground.....there is one cap lead that isn't connected to anything!..I'm gong to use the wiring layout that Ken has on the filter cap replacement instructions and get them hooked up correctly and see what happens on the HV side of things.....this will be after I check the transformer voltages......I do have a replacement transformer fi I find one of the windings smoked.

Thanks for the help......I'll let everyone know how things progress...

73,

Kevin O'Dell, N0IRW

On Mar 14, 2013, at 7:17 AM, roberteleazer@... wrote:

> Kevin:
>
> I suggest you first disconnect the power transformer outputs from everything - cut the wires if you have to and connect them to some terminal strips to make sure they are isolated. Then power up the rig and see what happens then. Measure the voltages at each output if there is no smoke. This will help you isolate what teh prpobelm is.
>
> I have been working on a TS-520 that has some big power supply problems. There was smoke comning from the rectifier board, and I replaced that with a rebuilt one and I am replacing all of the HV caps also - although I have yet to find what loks like a bad cap in the ones I have removed and tested.
>
> Good Luck!
>
> Robert
>
> --- In TS-520_820_530_830@yahoogroups.com, Kevin O'Dell N0IRW <n0irw@...> wrote:
> >
> > I came into possession of an 820S the other day. It didn't have the tubes in it, no final cage, no power plug, no fuse and only about 3 screws holding the case together.....but otherwise seemed clean. I got a power connector and built the power cable. Built a final cage out of roof flashing (LOTS of holes drilled). Got the 4 mm screws at the hardware store for the case. Got a new 12BY7A driver at a hamfest this past weekend. A matched pair of Taylor 6146B's will arrive tomorrow from RF Parts. 6 amp 3AG fuses will also arrive tomorrow from Mouser.....So, this afternoon with a 5 amp fuse in the holder I plugged it in and flipped the switch.....all the lights came on as did the display. It had

a LOUD 60 cycle hum in the audio and after about 45 seconds or so, there was a frying sound and some smoke started coming out of the rear. I powered down and unplugged. After waiting about 30 minutes, I pulled the covers and flipped it on its top....plugged back in and turned it on again...after the requisite 30 or 40 seconds the frying started and the smoke came out from under the windings of the power transformer...Upon closer inspection, the wires from the power plug have been hot before. So, I obviously have a problem in the power transformer. I have located a replacement (same part number) transformer and have ordered it. The next question is what is causing the transformer to fail.......bad caps, or what?? Also, what is the proceedure for changing out the transformer??

> >
> > thanks and 73,
> >
> > Kevin O'Dell, N0IRW
> >
>
>

[Non-text portions of this message have been removed]

41354. TS-820S - Low power on 160 Meters

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-16 04:18:02 UTC
From: Roger
Topic: 41354 Message: 41354

Hello All,

I have a TS-820S that I have been repairing and the one final issue that I have is low output power on 160 Meters. The radio tunes up fine on all other bands, putting out a good solid 100 Watts.

I have good level of ALC and the idling current seems fine on 160 Meters, but I cannot get any dip of IP when adjusting the plate control in tune or CW mode. Also, in CW mode I get the full 225 ma, but only about 25-50 watts out. It is almost like there is something amiss in the final tank circuit or something, but I can't seem to find the issue. (Or, perhaps this is just my wrong thinking...)

Any suggestions/ideas would be appreciated.

Thanks and 73,

Roger (AE3RT)

41355. Re: 820S power transformer replacement

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-16 13:05:32 UTC
From: roberteleazer@rocketmail.com
Topic: 41318 Message: 41355

Kevin:

I can believe that! I am working on a TS-520 that has serious power supply problems - as in smoke. A previous owner apparently had been troubleshooting it, cut all the power supply wires to isolate the problem, and then hooked them back up, using jumper wires. In the process he had connected the HV directly to one of the 100uf 500V caps with no rectifier in between the two. I spotted that right away and disconnected it, so that was not the source of the smoke.

I am in the process of replacing all of the power supply components, including the whole rectifier board (the source of the smoke), the resistors on the small HV board, and all of the HV caps. I am not going to power it back up until the caps are replaced - although after removing them I have found none that seem to be bad, they all hold voltage very well.

Good Luck to both of us!

Robert

--- In TS-520_820_530_830@yahoogroups.com, Kevin O'Dell N0IRW <n0irw@...> wrote:
>
> Thanks Robert,
>
> I disconnected every output except the 12.6 volt. When I pluged it in and turned it on....no frying noises and no smoke.....it just sat there quietly.....I think I found part of the problem though.......it looks like the filter caps are wired wrong.....apparantly the last person to have this rig monkeyed around inside and didn't run the other cap to ground.....there is one cap lead that isn't connected to anything!..I'm gong to use the wiring layout that Ken has on the filter cap replacement instructions and get them hooked up correctly and see what happens on the HV side of things.....this will be after I check the transformer voltages......I do have a replacement transformer fi I find one of the windings smoked.
>
> Thanks for the help......I'll let everyone know how things progress...
>
> 73,
>
> Kevin O'Dell, N0IRW
>
>
> On Mar 14, 2013, at 7:17 AM, roberteleazer@... wrote:
>
> > Kevin:
> >
> > I suggest you first disconnect the power transformer outputs from everything - cut the wires if you have to and connect them to some terminal strips to make sure they are isolated. Then power up the rig and see what happens then. Measure the voltages at each

output if there is no smoke. This will help you isolate what teh prpobelm is.
> >
> > I have been working on a TS-520 that has some big power supply problems. There was smoke comning from the rectifier board, and I replaced that with a rebuilt one and I am replacing all of the HV caps also - although I have yet to find what loks like a bad cap in the ones I have removed and tested.
> >
> > Good Luck!
> >
> > Robert
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Kevin O'Dell N0IRW <n0irw@> wrote:
> > >
> > > I came into possession of an 820S the other day. It didn't have the tubes in it, no final cage, no power plug, no fuse and only about 3 screws holding the case together.....but otherwise seemed clean. I got a power connector and built the power cable. Built a final cage out of roof flashing (LOTS of holes drilled). Got the 4 mm screws at the hardware store for the case. Got a new 12BY7A driver at a hamfest this past weekend. A matched pair of Taylor 6146B's will arrive tomorrow from RF Parts. 6 amp 3AG fuses will also arrive tomorrow from Mouser.....So, this afternoon with a 5 amp fuse in the holder I plugged it in and flipped the switch.....all the lights came on as did the display. It had a LOUD 60 cycle hum in the audio and after about 45 seconds or so, there was a frying sound and some smoke started coming out of the rear. I powered down and unplugged. After waiting about 30 minutes, I pulled the covers and flipped it on its top....plugged back in and turned it on again...after the requisite 30 or 40 seconds the frying started and the smoke came out from under the windings of the power transformer...Upon closer inspection, the wires from the power plug have been hot before. So, I obviously have a problem in the power transformer. I have located a replacement (same part number) transformer and have ordered it. The next question is what is causing the transformer to fail.....bad caps, or what?? Also, what is the proceedure for changing out the transformer??
> > >
> > > thanks and 73,
> > >
> > > Kevin O'Dell, N0IRW
> > >
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> >
>
>
>
> [Non-text portions of this message have been removed]
>

41356. RE: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-16 17:51:16 UTC
From: Rick
Topic: 41336 Message: 41356

Thanks a million, Mike. I was able to get right in with your detailed instructions. I downloaded and saved all the Service Bulletins, etc.

73,

Rick

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Mike
Sent: Friday, March 15, 2013 4:18 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A

Rick,

You can't get to the group's file section using your e-mail program. You have to log into the Kenwood Yahoo Group's home page. Copy the link below into your web browser's address bar.

http://groups.yahoo.com/group/TS-520_820_530_830/

You can't access the Files section until you log into the Yahoo Kenwood Group's homepage.

When the page comes up, look at the top left of the page, you will see the "Login" link. Click on that and when the login page comes up, enter your username and password then press enter. The username and password are the same ones you use with your e-mail program to get Kenwood Yahoo group e-mails. Hopefully you wrote those down somewhere. If you entered the correct username and password, the Kenwood Yahoo Group's homepage will come up.

Once the home page comes up, look on the upper left and you will see a "Files" link, click on that and you will be taken into the Files section.

To log out of the Kenwood Yahoo Group's page, look at the upper left of the page and you will see your log in name. Click on that "once" and a drop down menu will appear. Click on "Sign out". That's all there is to it.

73
Mike

On 3/15/2013 5:53 PM, Rick wrote:
>
> I hate to admit it but I am dumb as a stick when it comes to these
> reflectors. At 68 years old I have a hard time just getting online. HI

> HI. I
> would love to know how to get to the group files section if you'd point me
> in the right direction.
>
> Thanks
>
> _____
>
> From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> [mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of
> roberteleazer@... <mailto:roberteleazer%40rocketmail.com>
<mailto:roberteleazer%40rocketmail.com>
> Sent: Friday, March 15, 2013 3:29 PM
> To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A
>
> They should be in the group files section but if you cannot find them
> contact me directly and I will e-mail them to you.
>
> Good Luck!
>
> Robert
> --- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com> , "Rick" <rickb@...> wrote:
> >
> > Thanks! That makes sense. I don't have the service bulletins. Are there
> many
> > of them? Are they available ?
> >
> > I appreciate the assistance and advice.
> >
> > Rick
> >
> >
> >
> > _____
> >
> > From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
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<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of
> > roberteleazer@...
> > Sent: Friday, March 15, 2013 8:39 AM
> > To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Subject: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A
> >
> >
> >
> >
> >
> > I think that the most important aspect, aside from the actual
> shielding of
> > the tube, is that if the ground strap is not under the tube then it is
> > likely to contact somewhere it should not be.
> >
> > The TS-820 Service Bulletins say that the ground strap not being
> under the
> > tube shield can be a cause of an intermittant transmitter.
> >
> > Robert
> > --- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com> , "Rick" <rickb@> wrote:
> > >
> > > The manual says to be sure the shield is in place and the ground strap
> is
> > > under the shield. I can't remember the page, but it's in the service
> > manual.
> > >
> > >
> > >
> > >
> > >
> > > _____
> > >
> > > From: TS-520_820_530_830@yahoogroups.com
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> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Kevin ODell
> > > Sent: Thursday, March 14, 2013 9:00 PM
> > > To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Subject: Re: [TS-520_820_530_830] WTB Slip on tube shield for 12BY7A
> > >
> > >
> > >
> > >
> > >
> > > I didn't know it was suppose to have one.....
> > >
> > > Sent from my iPhone
> > > Keep thy airspeed, lest the ground shall rise up and smite thy
> machine.
> > >
> > > On Mar 14, 2013, at 10:15 PM, Rick <rickb@
> > > <mailto:rickb%40tx.rr.com> > wrote:
> > >
> > > > The subject says it all. My TS-820 is missing the shield on the
> 12BY7A
> > > > driver. Please, contact me off list at: rsbtexas@
> > > <mailto:rsbtexas%40gmail.com> if you have one
> > > > or more to sell.
> > > >
> > > > Tnx and vy 73,
> > > >
> > > > Rick / K5IAR
> > > >
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41357. Re: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-16 18:19:32 UTC
From: Mike
Topic: 41336 Message: 41357

You're welcome Rick.

The procedure I gave you is also how to change your membership settings.

If, for example, you no longer wish to receive group email postings and response via e-mail. You use the same Yahoo Kenwood Group log in procedures stated in my previous response.

After logging in and the Kenwood Group's homepage comes up, look at the top of the page and you will see a link titled "Edit Membership". Click on that link and when the Edit Membership page comes up, scroll down to the bottom of the page and click on the radio button titled "Web Only". Next, click on the bottom right icon titled "Save Changes". From then on you will no longer receive Group e-mails, you will have to log onto the Kenwood group's home page to view and respond to posts and submit responses.

I've seen a lot of group members who appear to have problems unsubscribing using the "Unsubscribe" link at the bottom of "every" group e-mail. If the link isn't working, for what ever reason, simply use the procedure outlined above and it will do the same thing, stop group e-mails from the group server from being sent to the member's e-mail address. This is assuming the member(s) only wants to stop receiving group e-mails but remain a group member.

Use CAUTION when using the edit membership page, once you have made the changes you want, click ONLY on the "Save Changes" icon on the bottom right of the page. Do NOT click on "Leave Group". If you click on the "Leave Group icon, you will asked if you want to leave the group and if you click Yes then you will no longer be a group member and you will have to reapply for group membership to participate in group posts and response.

73
Mike
W5RKL

On 3/16/2013 12:51 PM, Rick wrote:
>
> Thanks a million, Mike. I was able to get right in with your detailed
> instructions. I downloaded and saved all the Service Bulletins, etc.
>
> 73,
>
> Rick
>
> -----
>

> From: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> [mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Mike
> Sent: Friday, March 15, 2013 4:18 PM
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: Re: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A
>
> Rick,
>
> You can't get to the group's file section using your e-mail program. You
> have to log into the Kenwood Yahoo Group's home page. Copy the link
> below into your web browser's address bar.
>
> http://groups.yahoo.com/group/TS-520_820_530_830/
>
> You can't access the Files section until you log into the Yahoo Kenwood
> Group's homepage.
>
> When the page comes up, look at the top left of the page, you will see
> the "Login" link. Click on that and when the login page comes up, enter
> your username and password then press enter. The username and password
> are the same ones you use with your e-mail program to get Kenwood Yahoo
> group e-mails. Hopefully you wrote those down somewhere. If you entered
> the correct username and password, the Kenwood Yahoo Group's homepage
> will come up.
>
> Once the home page comes up, look on the upper left and you will see a
> "Files" link, click on that and you will be taken into the Files section.
>
> To log out of the Kenwood Yahoo Group's page, look at the upper left of
> the page and you will see your log in name. Click on that "once" and a
> drop down menu will appear. Click on "Sign out". That's all there is
> to it.
>
> 73
> Mike
>
> On 3/15/2013 5:53 PM, Rick wrote:
> >
> > I hate to admit it but I am dumb as a stick when it comes to these
> > reflectors. At 68 years old I have a hard time just getting online. HI
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> > Thanks
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> > <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of
> > roberteleazer@... <mailto:roberteleazer%40rocketmail.com>
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> > Sent: Friday, March 15, 2013 3:29 PM
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> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Subject: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A
> >
> > They should be in the group files section but if you cannot find them
> > contact me directly and I will e-mail them to you.
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> > Good Luck!
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> > Robert
> > --- In TS-520_820_530_830@yahoogroups.com
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> > <mailto:TS-520_820_530_830%40yahoogroups.com> , "Rick" <rickb@...>
> wrote:
> > >
> > > Thanks! That makes sense. I don't have the service bulletins. Are
> there
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> > > of them? Are they available ?
> > >
> > > I appreciate the assistance and advice.
> > >
> > > Rick
> > >
> > >
> > >
> > > _____
> > >
> > > From: TS-520_820_530_830@yahoogroups.com
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> > > Subject: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A
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> > > I think that the most important aspect, aside from the actual
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> > > The TS-820 Service Bulletins say that the ground strap not being
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> > > Robert
> > > --- In TS-520_820_530_830@yahoogroups.com
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> > > <mailto:TS-520_820_530_830%40yahoogroups.com> , "Rick" <rickb@> wrote:
> > > >
> > > > The manual says to be sure the shield is in place and the ground
> strap
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> > > > under the shield. I can't remember the page, but it's in the service
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> > > >
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> > > > Sent: Thursday, March 14, 2013 9:00 PM
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> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > Subject: Re: [TS-520_820_530_830] WTB Slip on tube shield for 12BY7A
> > > >
> > > >
> > > >
> > > >
> > > >
> > > > I didn't know it was suppose to have one.....
> > > >
> > > > Sent from my iPhone
> > > > Keep thy airspeed, lest the ground shall rise up and smite thy
> > machine.
> > > >
> > > > On Mar 14, 2013, at 10:15 PM, Rick <rickb@
> > > > <mailto:rickb%40tx.rr.com> > wrote:
> > > >
> > > > > The subject says it all. My TS-820 is missing the shield on the
> > 12BY7A
> > > > > driver. Please, contact me off list at: rsbtexas@
> > > > <mailto:rsbtexas%40gmail.com> if you have one
> > > > > or more to sell.
> > > > >
> > > > > Tnx and vy 73,
> > > > >
> > > > > Rick / K5IAR
> > > > >
> > > > > [Non-text portions of this message have been removed]
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41358. Re: TS-820S - Low power on 160 Meters

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-16 18:21:11 UTC
From: Roger
Topic: 41354 Message: 41358

Some additional information:

1) There is a dip in IP when adjusting the load control, which is very, very slight (almost unnoticable; I missed it earlier).

2) The dip occurs with the plate indicator counterclockwise, below the end of the band for the 3.5 MHz range, not in the 1.8 MHz range on the panel scale.

3) You get max power with the load control completely counterclockwise.

4) As noted before, IP stays right at 200 to 210 mA (after dipping and no matter where the load control is positioned). HV appears to be right around 800 Volts on the panel meter.

4) The max power is right at 50 Watts when carefully tuned for the dip in IP and in CW mode.

5) I checked the ALC/Drive alignment as instructed in the manual and everything was pretty much right on.

Please let me know any thoughts, suggestions, etc...

Thanks and 73,

Roger (AE3RT)

--- In TS-520_820_530_830@yahoogroups.com, "Roger" <rc143dr@...> wrote:
>
> Hello All,
>
> I have a TS-820S that I have been repairing and the one final issue that I have is low output power on 160 Meters. The radio tunes up fine on all other bands, putting out a good solid 100 Watts.
>
> I have good level of ALC and the idling current seems fine on 160 Meters, but I cannot get any dip of IP when adjusting the plate control in tune or CW mode. Also, in CW mode I get the full 225 ma, but only about 25-50 watts out. It is almost like there is something amiss in the final tank circuit or something, but I can't seem to find the issue. (Or, perhaps this is just my wrong thinking...)
>
> Any suggestions/ideas would be appreciated.
>
> Thanks and 73,
>
> Roger (AE3RT)
>

41359. RE: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-16 23:27:20 UTC
From: Rick
Topic: 41336 Message: 41359

Thanks, Mike.

rick

You're welcome Rick.

The procedure I gave you is also how to change your membership settings.

If, for example, you no longer wish to receive group email postings and response via e-mail. You use the same Yahoo Kenwood Group log in procedures stated in my previous response.

After logging in and the Kenwood Group's homepage comes up, look at the top of the page and you will see a link titled "Edit Membership". Click on that link and when the Edit Membership page comes up, scroll down to the bottom of the page and click on the radio button titled "Web Only". Next, click on the bottom right icon titled "Save Changes". From then on you will no longer receive Group e-mails, you will have to log onto the Kenwood group's home page to view and respond to posts and submit responses.

I've seen a lot of group members who appear to have problems unsubscribing using the "Unsubscribe" link at the bottom of "every" group e-mail. If the link isn't working, for what ever reason, simply use the procedure outlined above and it will do the same thing, stop group e-mails from the group server from being sent to the member's e-mail address. This is assuming the member(s) only wants to stop receiving group e-mails but remain a group member.

Use CAUTION when using the edit membership page, once you have made the changes you want, click ONLY on the "Save Changes" icon on the bottom right of the page. Do NOT click on "Leave Group". If you click on the "Leave Group icon, you will asked if you want to leave the group and if you click Yes then you will no longer be a group member and you will have to reapply for group membership to participate in group posts and response.

73
Mike
W5RKL

On 3/16/2013 12:51 PM, Rick wrote:
>
> Thanks a million, Mike. I was able to get right in with your detailed
> instructions. I downloaded and saved all the Service Bulletins, etc.
>
> 73,
>

> Rick
>
> _____
>
> From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> [mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Mike
> Sent: Friday, March 15, 2013 4:18 PM
> To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: Re: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A
>
> Rick,
>
> You can't get to the group's file section using your e-mail program. You
> have to log into the Kenwood Yahoo Group's home page. Copy the link
> below into your web browser's address bar.
>
> http://groups.yahoo.com/group/TS-520_820_530_830/
>
> You can't access the Files section until you log into the Yahoo Kenwood
> Group's homepage.
>
> When the page comes up, look at the top left of the page, you will see
> the "Login" link. Click on that and when the login page comes up, enter
> your username and password then press enter. The username and password
> are the same ones you use with your e-mail program to get Kenwood Yahoo
> group e-mails. Hopefully you wrote those down somewhere. If you entered
> the correct username and password, the Kenwood Yahoo Group's homepage
> will come up.
>
> Once the home page comes up, look on the upper left and you will see a
> "Files" link, click on that and you will be taken into the Files section.
>
> To log out of the Kenwood Yahoo Group's page, look at the upper left of
> the page and you will see your log in name. Click on that "once" and a
> drop down menu will appear. Click on "Sign out". That's all there is
> to it.
>
> 73
> Mike
>
> On 3/15/2013 5:53 PM, Rick wrote:
> >
> > I hate to admit it but I am dumb as a stick when it comes to these
> > reflectors. At 68 years old I have a hard time just getting online. HI

> > HI. I
> > would love to know how to get to the group files section if you'd
> point me
> > in the right direction.
> >
> > Thanks
> >
> > _____
> >
> > From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > [mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of
> > roberteleazer@... <mailto:roberteleazer%40rocketmail.com>
<mailto:roberteleazer%40rocketmail.com>
> <mailto:roberteleazer%40rocketmail.com>
> <mailto:roberteleazer%40rocketmail.com>
> > Sent: Friday, March 15, 2013 3:29 PM
> > To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Subject: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A
> >
> > They should be in the group files section but if you cannot find them
> > contact me directly and I will e-mail them to you.
> >
> > Good Luck!
> >
> > Robert
> > --- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com> , "Rick" <rickb@...>
> wrote:
> > >
> > > Thanks! That makes sense. I don't have the service bulletins. Are
> there
> > many
> > > of them? Are they available ?
> > >

> > > I appreciate the assistance and advice.
> > >
> > > Rick
> > >
> > >
> > >
> > > _____
> > >
> > > From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > [mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of
> > > roberteleazer@...
> > > Sent: Friday, March 15, 2013 8:39 AM
> > > To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Subject: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A
> > >
> > >
> > >
> > >
> > >
> > > I think that the most important aspect, aside from the actual
> > shielding of
> > > the tube, is that if the ground strap is not under the tube then it is
> > > likely to contact somewhere it should not be.
> > >
> > > The TS-820 Service Bulletins say that the ground strap not being
> > under the
> > > tube shield can be a cause of an intermittant transmitter.
> > >
> > > Robert
> > > --- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>

> > > <mailto:TS-520_820_530_830%40yahoogroups.com> , "Rick" <rickb@> wrote:
> > > >
> > > > The manual says to be sure the shield is in place and the ground
> strap
> > is
> > > > under the shield. I can't remember the page, but it's in the service
> > > manual.
> > > >
> > > >
> > > >
> > > >
> > > >
> > > > _____
> > > >
> > > > From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > [mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Kevin
> ODell
> > > > Sent: Thursday, March 14, 2013 9:00 PM
> > > > To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > Subject: Re: [TS-520_820_530_830] WTB Slip on tube shield for 12BY7A
> > > >
> > > >
> > > >
> > > >
> > > >
> > > > I didn't know it was suppose to have one.....
> > > >
> > > > Sent from my iPhone
> > > > Keep thy airspeed, lest the ground shall rise up and smite thy
> > machine.
> > > >
> > > > On Mar 14, 2013, at 10:15 PM, Rick <rickb@

> > > > <mailto:rickb%40tx.rr.com> > wrote:
> > > >
> > > > > The subject says it all. My TS-820 is missing the shield on the
> > 12BY7A
> > > > > driver. Please, contact me off list at: rsbtexas@
> > > > <mailto:rsbtexas%40gmail.com> if you have one
> > > > > or more to sell.
> > > > >
> > > > > Tnx and vy 73,
> > > > >
> > > > > Rick / K5IAR
> > > > >
> > > > > [Non-text portions of this message have been removed]
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> > > > >
> > > >
> > > > [Non-text portions of this message have been removed]
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41360. Re: [TS-520_820_530_830] TS-830S Paper Feast!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-17 00:34:57 UTC
From: Young Kim
Topic: 41320 Message: 41360

Hello Joe,
I received the filter board. But by mistake, did not know that the PCB is different between CW and SSB, Now it is mixed, so I do not know which is for CW.
Could you let me know how to recognize CW from SSB?
Thanks.
Young

From: Young Kim <ykpwr45@yahoo.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wednesday, March 13, 2013 11:58 AM
Subject: Re: [TS-520_820_530_830] TS-830S Paper Feast!

Joe,
Thanks for information.
Best 73's
Young

From: "mailto:k7mks%40comcast.netmailto:k7mks%40comcast.net>
To: TS-520 820 530 830 <mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Wednesday, March 13, 2013 10:33 AM
Subject: Re: [TS-520_820_530_830] TS-830S Paper Feast!

Hi Young

I m sorry but it has been spoken fo r

I tru t all is well with you and y our family.

73 joe k7mks

.

----- Original Message -----

From: "Young Kim" <mailto:ykpwr45%40yahoo.com>
To: "TS-520 820 530 830" <mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Tuesday, March 12, 2013 9:27:46 PM
Subject: Re: [TS-520_820_530_830] TS-830S Paper Feast!

Joe,
May I have one?
Young Kim
K6hm

From: " mailto:k7mks%40comcast.net mailto:k7mks%40comcast.net >

To: TS-520 530 < mailto:TS-520_820_530_830%40yahoogroups.com >
Sent: Tuesday, March 12, 2013 9:15 PM
Subject: [TS-520_820_530_830] TS-830S Paper Feast!

A 11 ounce grab envelope 1/2" thick of 8 1/2 x 11sheets w/ TS-830 hints, emails, update info, etc. If you are into 830s then this is for you. Cover my postage and it is yours. Give me your ZIP so I can figure postage. Pls reply direct.

Joe k7mks

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[Non-text portions of this message have been removed]

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41361. Re: [TS-520_820_530_830] TS-830S Paper Feast!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-17 07:39:03 UTC
From: k7mks@...
Topic: 41320 Message: 41361

Young: I think this email regarding a filter b oard was supposed t o go to anot her person.

7 3 jo e k7mks

----- Original Message -----

From: "Young Kim" <ykpwr45@...>
To: "TS-520 820 530 830" <TS-520_820_530_830@yahoogroups.com>
Sent: Saturday, March 16, 2013 5:34:57 PM
Subject: Re: [TS-520_820_530_830] TS-830S Paper Feast!

Hello Joe,
I received the filter board. But by mistake, did not know that the PCB is different between CW and SSB, Now it is mixed, so I do not know which is for CW.
Could you let me know how to recognize CW from SSB?
Thanks.
Young

From: Young Kim < ykpwr45@... >
To: " TS-520_820_530_830@yahoogroups.com TS-520_820_530_830@yahoogroups.com >
Sent: Wednesday, March 13, 2013 11:58 AM
Subject: Re: [TS-520_820_530_830] TS-830S Paper Feast!

Joe,
Thanks for information.
Best 73's
Young

From: "mailto:k7mks%40comcast.netmailto:k7mks%40comcast.net>
To: TS-520 820 530 830 <mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Wednesday, March 13, 2013 10:33 AM
Subject: Re: [TS-520_820_530_830] TS-830S Paper Feast!

Hi Young

I m sorry but it has been spoken fo r

I tru t all is well with you and y our family.

73 joe k7mks

.

----- Original Message -----

From: "Young Kim" <mailto:ykpwr45%40yahoo.com>
To: "TS-520 820 530 830" <mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Tuesday, March 12, 2013 9:27:46 PM
Subject: Re: [TS-520_820_530_830] TS-830S Paper Feast!

Joe,
May I have one?
Young Kim
K6hm

_____
From: " mailto:k7mks%40comcast.net mailto:k7mks%40comcast.net >
To: TS-520 530 < mailto:TS-520_820_530_830%40yahoogroups.com >
Sent: Tuesday, March 12, 2013 9:15 PM
Subject: [TS-520_820_530_830] TS-830S Paper Feast!

A 11 ounce grab envelope 1/2" thick of 8 1/2 x 11sheets w/ TS-830 hints, emails, update info, etc. If you are into 830s then this is for you. Cover my postage and it is yours. Give me your ZIP so I can figure postage. Pls reply direct.

Joe k7mks

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41362. TS-520S - Losing output power & receive during tune procedure

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-17 11:54:30 UTC
From: cl5ltd
Topic: 41362 Message: 41362

I have just purchased a TS-520S radio and when it has been working it operates very well with excellent signal & audio reports. MY first boat anchor!

However there is an intermittant fault which is occuring anytime from power on to after several hours of operation without warning.

It seems to occur mainly If I have moved frequency or changed bands and retuning. when I go through the tune procedure and am adjusting the drive control to bring output into the ALC range, as I adjust the drive control, the output abruptly dissapears and when I come out of send mode, the receive is virtually gone as well.

This is occuring on all bands but not all the time. It can run exactly as expected with several band changes & tune ups.

A power on /off cycle brings the radio back to life. It will receive fine for hours but ss soon as I go to tune or transmit, the same problem occurs.

I created a 1 minute youtubde clip to demonstrate what is occuring
http://www.youtube.com/watch?v=xtAjPDeFAWU

Has anyone in the group experienced this type of fault?
Any suggestions of what the first steps are to identify and resolve this fault?

A local experienced boat anchor operators first thought was power supply area. He suggested put the question to the collective wisdom of the group and gather feedback - suggestions as to most likely causes and initial checks to make

73 VK5LTD

41363. Re: [TS-520_820_530_830] TS-520S - Losing output power & receive during tune procedure

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-17 16:09:12 UTC
From: Mark Gilger
Topic: 41362 Message: 41363

In the Tune position and meter in ALC you want to
peak the drive for max meter reading. The meter
ALC comes into play when your transmitting on
SSB. You want to keep the modulation average
within the ALC range on the meter.

Here is a good write up on the subject:

http://www.k4eaa.com/tune-up.htm

Good luck,
Mark

At 07:54 AM 3/17/2013, cl5ltd wrote:
>
>
>I have just purchased a TS-520S radio and when
>it has been working it operates very well with
>excellent signal & audio reports. MY first boat anchor!
>
>However there is an intermittant fault which is
>occuring anytime from power on to after several
>hours of operation without warning.
>
>It seems to occur mainly If I have moved
>frequency or changed bands and retuning. when I
>go through the tune procedure and am adjusting
>the drive control to bring output into the ALC
>range, as I adjust the drive control, the output
>abruptly dissapears and when I come out of send
>mode, the receive is virtually gone as well.
>
>This is occuring on all bands but not all the
>time. It can run exactly as expected with several band changes & tune ups.
>
>A power on /off cycle brings the radio back to
>life. It will receive fine for hours but ss soon
>as I go to tune or transmit, the same problem occurs.
>
>I created a 1 minute youtubde clip to demonstrate what is occuring
><http://www.youtube.com/watch?v=xtAjPDeFAWU>http://www.youtube.com/watch?v=xtAjPDeFAWU
>
>Has anyone in the group experienced this type of fault?
>Any suggestions of what the first steps are to
>identify and resolve this fault?

>
>A local experienced boat anchor operators first
>thought was power supply area. He suggested put
>the question to the collective wisdom of the
>group and gather feedback - suggestions as to
>most likely causes and initial checks to make
>
>73 VK5LTD
>
>

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41364. Re: TS-520S - Losing output power & receive during tune procedure

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-17 17:25:08 UTC
From: roberteleazer@rocketmail.com
Topic: 41362 Message: 41364

The fact that the problem seems to occur just after you have changed frequency on one band or switched to another band tends to make me suspect the VFO.

The Kenwood Hybrids have a endemic problem with VFOs's now that they have gotten old. They get dirty inside and you will hit a spot where the the tuning cap either shorts out or does not connect to the circuit, which causes the VFO to either go dead or jump 500 KHZ. If teh VFO goes dead then the rig will neither transmit nor receive.

The only sure fire way to fix this is to yank the VFO, take the can off, clean the tuning cap with an electronic-compatible cleaner and then lube the pivot points with something like LPS-1.

Now, it is possible that dirty contacts in a switch or loose contacts on a board connector will cause this as well, but I do not see an obvious connection to the act of changing frequency with those problems.

Another thing you might do is go over to the Group files section and look at the TS-520 Service bulletions for a clue to the problem.

Good Luck!

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "cl5ltd" <christopherlarwood@...> wrote:
>
> I have just purchased a TS-520S radio and when it has been working it operates very well with excellent signal & audio reports. MY first boat anchor!
>
> However there is an intermittant fault which is occuring anytime from power on to after several hours of operation without warning.
>
> It seems to occur mainly If I have moved frequency or changed bands and retuning. when I go through the tune procedure and am adjusting the drive control to bring output into the ALC range, as I adjust the drive control, the output abruptly dissapears and when I come out of send mode, the receive is virtually gone as well.
>
> This is occuring on all bands but not all the time. It can run exactly as expected with several band changes & tune ups.
>
> A power on /off cycle brings the radio back to life. It will receive fine for hours but ss soon as I go to tune or transmit, the same problem occurs.
>
> I created a 1 minute youtubde clip to demonstrate what is occuring
> http://www.youtube.com/watch?v=xtAjPDeFAWU
>
>

> Has anyone in the group experienced this type of fault?
> Any suggestions of what the first steps are to identify and resolve this fault?
>
> A local experienced boat anchor operators first thought was power supply area. He suggested put the question to the collective wisdom of the group and gather feedback - suggestions as to most likely causes and initial checks to make
>
> 73 VK5LTD
>

41365. Re: [TS-520_820_530_830] TS-830S Paper Feast!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-17 17:25:43 UTC
From: Young Kim
Topic: 41320 Message: 41365

Joe,
I am sorry, I made a mistake when sending. The guy's name was also Joe.
Have a nice weekend.
Young

From: "k7mks@..." <k7mks@...>
To: TS-520 820 530 830 <TS-520_820_530_830@yahoogroups.com>
Sent: Sunday, March 17, 2013 12:39 AM
Subject: Re: [TS-520_820_530_830] TS-830S Paper Feast!

Young: I think this email regarding a filter b oard was supposed t o go to anot her person.

7 3 jo e k7mks

----- Original Message -----

From: "Young Kim" <ykpwr45@...>
To: "TS-520 820 530 830" <TS-520_820_530_830@yahoogroups.com>
Sent: Saturday, March 16, 2013 5:34:57 PM
Subject: Re: [TS-520_820_530_830] TS-830S Paper Feast!

Hello Joe,
I received the filter board. But by mistake, did not know that the PCB is different between CW and SSB, Now it is mixed, so I do not know which is for CW.
Could you let me know how to recognize CW from SSB?
Thanks.
Young

From: Young Kim < ykpwr45@... >
To: " TS-520_820_530_830@yahoogroups.com TS-520_820_530_830@yahoogroups.com >
Sent: Wednesday, March 13, 2013 11:58 AM
Subject: Re: [TS-520_820_530_830] TS-830S Paper Feast!

Joe,
Thanks for information.
Best 73's
Young

From: "mailto:k7mks%40comcast.netmailto:k7mks%40comcast.net>
To: TS-520 820 530 830 <mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Wednesday, March 13, 2013 10:33 AM
Subject: Re: [TS-520_820_530_830] TS-830S Paper Feast!

Hi Young

I m sorry but it has been spoken fo r

I tru t all is well with you and y our family.

73 joe k7mks

.

----- Original Message -----

From: "Young Kim" <mailto:ykpwr45%40yahoo.com>
To: "TS-520 820 530 830" <mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Tuesday, March 12, 2013 9:27:46 PM
Subject: Re: [TS-520_820_530_830] TS-830S Paper Feast!

Joe,
May I have one?
Young Kim
K6hm

_____
From: " mailto:k7mks%40comcast.net mailto:k7mks%40comcast.net >
To: TS-520 530 < mailto:TS-520_820_530_830%40yahoogroups.com >
Sent: Tuesday, March 12, 2013 9:15 PM
Subject: [TS-520_820_530_830] TS-830S Paper Feast!

A 11 ounce grab envelope 1/2" thick of 8 1/2 x 11sheets w/ TS-830 hints, emails, update info, etc. If you are into 830s then this is for you. Cover my postage and it is yours. Give me your ZIP so I can figure postage. Pls reply direct.

Joe k7mks

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41366. Re: TS-520S - Losing output power & receive during tune procedure

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-17 18:23:55 UTC
From: k5hfg
Topic: 41362 Message: 41366

Christopher,

When you tune up per, Kenwood manual, you first peak your drive for max ALC reading. If it is out of the ALC range on the meter you can adjust it with the carrier control. After that you should not need to touch the drive knob again unless you change to great a freq. jump or change band. I watched the video. Give it a try without changing drive setting after it is tuned. Dip the plate with the plate control and then adjust Ip with the load control. I want to know what happens when you do it that way. Always monitor your Ip when operating your 520 and keep Ip below 225 a and you will enjoy years of fine radio operation.

73 Don K5HFG

41367. KENWOOD HYBRID USER NET (March 17th, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-17 18:28:52 UTC
From: mvgilger
Topic: 41367 Message: 41367

The Saturday's net on 40 meter we had 21 stations checking with good band conditions. There were 3 new stations checking in. Out of those, there was:

6 running TS-520(x)
1 running TS-530(x)
7 running TS-820(x)
0 running TS-830S

I was running my TS-940s. The rest were running non hybrids of one model or another.

Today was the first time since the net started up that there were more TS-820's check in than any other radio. Pretty good to have 7 of those check in.

The Sunday's net on 20 meter we had 8 stations checking in under poor band conditions. Out of those, there was:

4 running TS-520(x)
1 running TS-530(x)
0 running TS-820(x)
3 running TS-830S

I was running my TS-940s. The rest were running non hybrids of one model or another.

We have been having several people checking in regularly with their TS-430, TS-440, and TS-940's, which of course is not a hybrid, although over 30+ years old. Everyone is welcome as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a net control station, please send me an email. Currently it's just myself, WB2KNR and WB0SGA. I would like to get several more. If we do, we can alternate so everyone might be on a 3-4 week rotation. It's a lot of fun and a good way to make sure you station is optimized.

For anyone that has not heard, we have a new web site that WB4HFN is hosting. He currently has a very nice site for Drake, Collins and Heathkit and now Kenwood Hybrids. Good quality manuals plus sale flyers and brochures will be found here, along with user supplied information for all Hybrids.

His URL is:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754 check-ins, Sunday total 563 check-ins

November 2012, Saturday's, net total = 47, Sundays total = 20
December 2012, Saturday's, net total = 74, Sunday's total = 70
January 2013, Saturday's, net total = 93, Sunday's total = 87
February 2013, Saturday's net total = 103, Sundays total = 87

March 2013, Saturday's, net total = 89, Sunday's total =26 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

41368. Re: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-17 19:05:40 UTC
From: John Davidson
Topic: 41336 Message: 41368

From: Rick <rickb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, March 15, 2013 6:53 PM
Subject: RE: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A

I hate to admit it but I am dumb as a stick when it comes to these
reflectors. At 68 years old I have a hard time just getting online. HI HI. I
would love to know how to get to the group files section if you'd point me
in the right direction.

Thanks

From: mailto:TS-520_820_530_830%40yahoogroups.com
[mailto:mailto:TS-520_820_530_830%40yahoogroups.com] On Behalf Of
mailto:roberteleazer%40rocketmail.com
Sent: Friday, March 15, 2013 3:29 PM
To: mailto:TS-520_820_530_830%40yahoogroups.com
Subject: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A

They should be in the group files section but if you cannot find them
contact me directly and I will e-mail them to you.

Good Luck!

Robert
--- In mailto:TS-520_820_530_830%40yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> , "Rick" <rickb@...> wrote:
>
> Thanks! That makes sense. I don't have the service bulletins. Are there
many
> of them? Are they available ?
>
> I appreciate the assistance and advice.
>
> Rick
>
>
>
> ---
>
> From: mailto:TS-520_820_530_830%40yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> [mailto:mailto:TS-520_820_530_830%40yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of

> roberteleazer@...
> Sent: Friday, March 15, 2013 8:39 AM
> To: mailto:TS-520_820_530_830%40yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: [TS-520_820_530_830] Re: WTB Slip on tube shield for 12BY7A
>
>
>
>
>
> I think that the most important aspect, aside from the actual shielding of
> the tube, is that if the ground strap is not under the tube then it is
> likely to contact somewhere it should not be.
>
> The TS-820 Service Bulletins say that the ground strap not being under the
> tube shield can be a cause of an intermittant transmitter.
>
> Robert
> --- In mailto:TS-520_820_530_830%40yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com> , "Rick" <rickb@> wrote:
> >
> > The manual says to be sure the shield is in place and the ground strap
is
> > under the shield. I can't remember the page, but it's in the service
> manual.
> > >
> > >
> > >
> > >
> > >
> > > _____
> > >
> > > From: mailto:TS-520_820_530_830%40yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > [mailto:mailto:TS-520_820_530_830%40yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Kevin ODell
> > > Sent: Thursday, March 14, 2013 9:00 PM
> > > To: mailto:TS-520_820_530_830%40yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Subject: Re: [TS-520_820_530_830] WTB Slip on tube shield for 12BY7A
> > >
> > >
> > >
> > >
> > >
> > > I didn't know it was suppose to have one.....

> >
> > Sent from my iPhone
> > Keep thy airspeed, lest the ground shall rise up and smite thy machine.
> >
> > On Mar 14, 2013, at 10:15 PM, Rick <rickb@
> > <mailto:rickb%40tx.rr.com> > wrote:
> >
> > > The subject says it all. My TS-820 is missing the shield on the 12BY7A
> > > driver. Please, contact me off list at: rsbtexas@
> > <mailto:rsbtexas%40gmail.com> if you have one
> > > or more to sell.
> > >
> > > Tnx and vy 73,
> > >
> > > Rick / K5IAR
> > >
> > > [Non-text portions of this message have been removed]
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41369. Walt N9WB

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-18 04:43:44 UTC
From: n6wk_skcc3
Topic: 41369 Message: 41369

Has anyone heard from Walt in a while? I have sent him a couple of Emails and get NO reply!

Thanks,
Gordon
N6WK

41370. Kenwood TRIO TS515

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-18 08:25:48 UTC
From: Behiels JeanPierre
Topic: 41370 Message: 41370

Hi Kenwood usergroup members;

Any idee where I could find a set of capacitors and tubes for a KENWOOD TRIO 515 ?
All infomation around will be mutch appreciated.

Kindly regards Jean ON4AEF.

[Non-text portions of this message have been removed]

41371. RE: [TS-520_820_530_830] Walt N9WB

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-18 11:56:45 UTC
From: Jay Jackson
Topic: 41369 Message: 41371

I think he's having computer problems. When I saw him the other day he said something about a computer issue.

73,

Jay

KA9QIG

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of n6wk_skcc3
Sent: Monday, March 18, 2013 00:44
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Walt N9WB

Has anyone heard from Walt in a while? I have sent him a couple of Emails and get NO reply!

Thanks,
Gordon
N6WK

The information contained in this email and any attachments is confidential and may be subject to copyright or other intellectual property protection. If you are not the intended recipient, you are not authorized to use or disclose this information, and we request that you notify us by reply mail or telephone and delete the original message from your mail system.

[Non-text portions of this message have been removed]

41372. TS-520SE, split and burnt resistors

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-18 15:19:30 UTC
From: w9mvm
Topic: 41372 Message: 41372

GM ALL, I am working on a TS-520SE. At the base of each of the 6146 tubes there "were" 2 each resistors wound and soldered. They were split and I cannot see the color codes on any of the four (total). Can anyone tell me the values of these guys?? I have new 6146's and have replaced the final cage componets. Best 73s, MIKE

41373. Re: [TS-520_820_530_830] Kenwood TRIO TS515

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-18 16:05:30 UTC
From: Charles Rodecap
Topic: 41370 Message: 41373

Yes Try HAYSEED HAM FEST He has original style for Drakes and others.
You may have to describe the values and style but he may have them or can get them.

Charlie
--- On Mon, 3/18/13, Behiels JeanPierre <on4aef@...> wrote:

From: Behiels JeanPierre <on4aef@...>
Subject: [TS-520_820_530_830] Kenwood TRIO TS515
To: TS-520_820_530_830@yahoogroups.com
Date: Monday, March 18, 2013, 4:25 AM

Hi Kenwood usergroup members;

Any idee where I could find a set of capacitors and tubes for a KENWOOD TRIO 515 ?

All infomation around will be mutch appreciated.

Kindly regards Jean ON4AEF.

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[Non-text portions of this message have been removed]

41374. Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-18 17:02:34 UTC
From: Joseph Stiles
Topic: 41372 Message: 41374

Mike,

More than likely they are: 2(two)   10 ohm 1watt 5% ....cathode resistors

2(two)   100 ohm 1/2 watt 1%.....screen resistors

Injury to these resistors is not uncommon, especially if rig has been really abused, usually from prolonged tune-up times...QRO mods., etc.
Take a look at the plate choke...the round thingy between the final tubes...the fine wire winding should be relatively "copper" colored. IF, it's dark or,
burned looking this indicates severe overload and there may be other damage other than the above mentioned resistors.

Check also the 470 ohm 1 watt resistor on the rectifier board also.
I also suspect that the final tubes may also have suffered damage....suggest that you obtain a known good set...along with a know good driver.

73 Joe
WB7UQU

From: w9mvm <w9mvm@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, March 18, 2013 8:19 AM
Subject: [TS-520_820_530_830] TS-520SE, split and burnt resistors

GM ALL, I am working on a TS-520SE. At the base of each of the 6146 tubes there "were" 2 each resistors wound and soldered. They were split and I cannot see the color codes on any of the four (total). Can anyone tell me the values of these guys?? I have new 6146's and have replaced the final cage componets. Best 73s, MIKE

[Non-text portions of this message have been removed]

41375. Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-18 18:42:13 UTC
From: Mike
Topic: 41372 Message: 41375

Mike,

It appears you do not have the 520 service manual. You should not attempt to service the 520 without the service manual. The values of the resistor in question are listed in the service manual plus shown on the service manual's schematic.

You can download the manuals, operator and service manuals, for the 520/520S/520SE at the following link

www.n6wk.com/kenwood/

The TS-520SE is basically the same as the TS-520S except the 520SE does not have the ability to operate from 13.6VDC using the DC to DC converter. Therefore, the service manual for the TS-520S will work for the TS-520SE.

73
Mike

On 3/18/2013 10:19 AM, w9mvm wrote:
>
> GM ALL, I am working on a TS-520SE. At the base of each of the 6146
> tubes there "were" 2 each resistors wound and soldered. They were
> split and I cannot see the color codes on any of the four (total). Can
> anyone tell me the values of these guys?? I have new 6146's and have
> replaced the final cage componets. Best 73s, MIKE
>
>

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41376. Re: TS-520S - Losing output power & receive during tune procedure

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-18 21:02:24 UTC
From: kb9wwq
Topic: 41362 Message: 41376

Hi Christopher,
After viewing your video clip, I am not seeing where you actually tune up the radio. All I saw was that you adjusted the load control until you had zero ALC deflection. There are lots of tune-up procedures to be found in the files section, but I think your radio may also have the symptoms of dirty relay contacts. I would suggest that you clean both of the relays if the loss of receive sensitivity continues after you get the tune-up mastered. Good luck, the radio almost looks like it just came out of the box.

+jay, kb9wwq

--- In TS-520_820_530_830@yahoogroups.com, "cl5ltd" <christopherlarwood@...> wrote:
>
> I have just purchased a TS-520S radio and when it has been working it operates very well with excellent signal & audio reports. MY first boat anchor!
>
> However there is an intermittant fault which is occuring anytime from power on to after several hours of operation without warning.
>
> It seems to occur mainly If I have moved frequency or changed bands and retuning. when I go through the tune procedure and am adjusting the drive control to bring output into the ALC range, as I adjust the drive control, the output abruptly dissapears and when I come out of send mode, the receive is virtually gone as well.
>
> This is occuring on all bands but not all the time. It can run exactly as expected with several band changes & tune ups.
>
> A power on /off cycle brings the radio back to life. It will receive fine for hours but ss soon as I go to tune or transmit, the same problem occurs.
>
> I created a 1 minute youtubde clip to demonstrate what is occuring
> http://www.youtube.com/watch?v=xtAjPDeFAWU
>
>
> Has anyone in the group experienced this type of fault?
> Any suggestions of what the first steps are to identify and resolve this fault?
>
> A local experienced boat anchor operators first thought was power supply area. He suggested put the question to the collective wisdom of the group and gather feedback - suggestions as to most likely causes and initial checks to make
>
> 73 VK5LTD
>

41377. Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-18 20:59:00 UTC
From: michael Miller
Topic: 41372 Message: 41377

Hi MIKE and THANKS. I do have the TS-520 service Man. BUT, it does NOT show that 2 each resistors are "twisted" to make one resistor of a certain value. So, these being TU I could not guess why this was done or if someone had done this at a later time for whatever reason. Thanks for your reply on my project.

BEST 73s and GODS BLESSINGS, MIKE W9MVM

>_____
> From: Mike <w5rkl@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Monday, March 18, 2013 2:42 PM
>Subject: Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors
>
>
>
>
>Mike,
>
>It appears you do not have the 520 service manual. You should not
>attempt to service the 520 without the service manual. The values of the
>resistor in question are listed in the service manual plus shown on the
>service manual's schematic.
>
>You can download the manuals, operator and service manuals, for the
>520/520S/520SE at the following link
>
>www.n6wk.com/kenwood/
>
>The TS-520SE is basically the same as the TS-520S except the 520SE does
>not have the ability to operate from 13.6VDC using the DC to DC
>converter. Therefore, the service manual for the TS-520S will work for
>the TS-520SE.
>
>73
>Mike
>
>On 3/18/2013 10:19 AM, w9mvm wrote:
>>
>> GM ALL, I am working on a TS-520SE. At the base of each of the 6146
>> tubes there "were" 2 each resistors wound and soldered. They were
>> split and I cannot see the color codes on any of the four (total). Can
>> anyone tell me the values of these guys?? I have new 6146's and have
>> replaced the final cage componets. Best 73s, MIKE
>>
>>

>
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41378. Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-18 17:20:03 UTC
From: michael Miller
Topic: 41372 Message: 41378

Hi Joseph, THANKS, I have a new driver, and replaced the 470ohm res. on the rectifier bd. I have a new set of 6146's and used a final cage "repair kit ie; 2 caps & RF Choke. Just wasn't certain about the resistors I wrote about. I bought this TS520SE at an estate sale. NO TRANSMIT. Good cond. except, that. I have a great TS-520 and is my primary HF radio. Although I did buy a new ALINCO DX-SR8 just 3 weeks from Gigaparts to use QRP CW and digital modes (new too me). Thank you,again

BEST 73s and GODS BLESSINGS, MIKE W9MVM

>_____
> From: Joseph Stiles <stilesjoseph@...>
>To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
>Sent: Monday, March 18, 2013 1:02 PM
>Subject: Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors
>
>
>
>
>Mike,
>
>More than likely they are: 2(two)   10 ohm 1watt 5% ....cathode resistors
>
>   2(two)   100 ohm 1/2 watt 1%.....screen resistors
>
>   Injury to these resistors is not uncommon, especially if rig has been really abused, usually from prolonged tune-up times...QRO mods., etc.
>Take a look at the plate choke...the round thingy between the final tubes...the fine wire winding should be relatively "copper" colored. IF, it's dark or,
>burned looking this indicates severe overload and there may be other damage other than the above mentioned resistors.
>
>   Check also the 470 ohm 1 watt resistor on the rectifier board also.
>   I also suspect that the final tubes may also have suffered damage....suggest that you obtain a known good set...along with a know good driver.
>
>
>73 Joe
>WB7UQU
>
>_____
>From: w9mvm <mailto:w9mvm%40yahoo.com>
>To: mailto:TS-520_820_530_830%40yahoogroups.com
>Sent: Monday, March 18, 2013 8:19 AM
>Subject: [TS-520_820_530_830] TS-520SE, split and burnt resistors

>
>
>
>GM ALL, I am working on a TS-520SE. At the base of each of the 6146 tubes there "were" 2 each resistors wound and soldered. They were split and I cannot see the color codes on any of the four (total). Can anyone tell me the values of these guys?? I have new 6146's and have replaced the final cage componets. Best 73s, MIKE
>
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>

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41379. Re: TS-520S - Losing output power & receive during tune procedure

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-18 21:45:29 UTC
From: cl5ltd
Topic: 41362 Message: 41379

Jay, Good Pick Up !
I should have said I'm adjusting the DRIVE control - I don't actually touch the LOAD control at all. So it's while I'm adjusting the DRIVE control that output suddenly disappears and when I flick out of send, receive is nearly dead until I do a power cycle.

--- In TS-520_820_530_830@yahoogroups.com, "kb9wwq" <kb9wwq@...> wrote:
>
> Hi Christopher,
> After viewing your video clip, I am not seeing where you actually tune up the radio. All I saw was that you adjusted the load control until you had zero ALC deflection. There are lots of tune-up procedures to be found in the files section, but I think your radio may also have the symptoms of dirty relay contacts. I would suggest that you clean both of the relays if the loss of receive sensitivity continues after you get the tune-up mastered. Good luck, the radio almost looks like it just came out of the box.
>
> +jay, kb9wwq
>
>

41380. Re: TS-520S - Losing output power & receive during tune procedure

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-18 21:58:40 UTC
From: cl5ltd
Topic: 41362 Message: 41380

Thanks for the responses thus far. I have now followed the K4EAA procedure to the letter and the fault occurs just the same. I don't get as far as the CW tune due to the fault occuring.

So I'm confident with the tune up procedure. At first I suspected I was doing something incorrectly but this is not the case.

I should point out, this problem is mostly occuring during tune up process but HAS happened during a SSB QSO also without warning.

After a 10 minute warm up this morning, the fault presented as soon as I went to adjust the drive control. This is after an overnight shutdown. The the fault displayed as soon as power is adjusted in tuning or drawn during transmission. So after overnigth shutdown-overheating is not a factor

The fact that receive virtually shuts down and I need to do a power cycle to bring it back seems to point to a power transmission problem which requires power off/on to rectify.

When Using a dummy load, the fault presents just as with resonant antenna.

I'm by no means a radio tech person but understand fault finding is an process of elimination, observation, measurement and patience!

All I have done so far is make sure the valves are properly & firmly seated.

41382. Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-18 23:34:15 UTC
From: Joseph Stiles
Topic: 41372 Message: 41382

Mike,

  Glad I could help. One other note: use the same ohm & especially the same wattage rating as originals!
                                The 10 ohm resistors should be R's 2 & 3,   R's 5 & 6 should be the 100 ohm on the schematic
                                I sub metal film for these when I can.

73 Joe
WB7UQU

From: michael Miller <w9mvm@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, March 18, 2013 10:20 AM
Subject: Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors

Hi Joseph, THANKS, I have a new driver, and replaced the 470ohm res. on the rectifier bd. I have a new set of 6146's and used a final cage "repair kit ie; 2 caps & RF Choke. Just wasn't certain about the resistors I wrote about. I bought this TS520SE at an estate sale. NO TRANSMIT. Good cond. except, that. I have a great TS-520 and is my primary HF radio. Although I did buy a new ALINCO DX-SR8 just 3 weeks from Gigaparts to use QRP CW and digital modes (new too me). Thank you,again

BEST 73s and GODS BLESSINGS, MIKE W9MVM

>---
> From: Joseph Stiles <stilesjoseph@yahoo.com>
>To: "TS-520_820_530_830@yahoogroups.comTS-520_820_530_830@yahoogroups.com>
>Sent: Monday, March 18, 2013 1:02 PM
>Subject: Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors
>
>
>
>
>Mike,
>
>More than likely they are: 2(two)   10 ohm 1watt 5% ....cathode resistors
>
>   2(two)   100 ohm 1/2 watt 1%.....screen resistors
>
>   Injury to these resistors is not uncommon, especially if rig has been really abused, usually from prolonged tune-up times...QRO mods., etc.
>Take a look at the plate choke...the round thingy between the final tubes...the fine wire winding should be relatively "copper" colored. IF, it's dark or,

>burned looking this indicates severe overload and there may be other damage other than the above mentioned resistors.
>
> Check also the 470 ohm 1 watt resistor on the rectifier board also.
> I also suspect that the final tubes may also have suffered damage....suggest that you obtain a known good set...along with a know good driver.
>
>
>73 Joe
>WB7UQU
>
>_____
>From: w9mvm <mailto:w9mvm%40yahoo.com>
>To: mailto:TS-520_820_530_830%40yahoogroups.com
>Sent: Monday, March 18, 2013 8:19 AM
>Subject: [TS-520_820_530_830] TS-520SE, split and burnt resistors
>
>
>
>GM ALL, I am working on a TS-520SE. At the base of each of the 6146 tubes there "were" 2 each resistors wound and soldered. They were split and I cannot see the color codes on any of the four (total). Can anyone tell me the values of these guys?? I have new 6146's and have replaced the final cage componets. Best 73s, MIKE
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>
>

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41383. DRIVE/ALC

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-19 02:03:57 UTC
From: Rick
Topic: 41383 Message: 41383

When loading my TS-820 after a 5 minute warm up I get no indication of "Drive" on the meter when it's in the ALC position as it should be. The inline wattmeter shows about 30 or 40 watts and when I switch the meter to Ip I have indication on the meter and the transmitter dips as it should and loads to about 60 watts, however, the drive is a little low until it warms up about an hour. Anyone encountered this problem?

Thanks,

Rick / K5IAR

[Non-text portions of this message have been removed]

41384. Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-19 00:59:30 UTC
From: michael Miller
Topic: 41372 Message: 41384

GE JOE, Will be certain of that accuracy in replacement. And THANKS.

BEST 73s and GODS BLESSINGS, MIKE W9MVM

>_____
> From: Joseph Stiles <stilesjoseph@...>
>To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
>Sent: Monday, March 18, 2013 7:34 PM
>Subject: Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors
>
>
>
>
>Mike,
>
> Glad I could help. One other note: use the same ohm & especially the same wattage rating as originals!
>   The 10 ohm resistors should be R's 2 & 3,   R's 5 & 6 should be the 100 ohm on the schematic
>   I sub metal film for these when I can.
>
>
>73 Joe
>WB7UQU
>
>_____
>From: michael Miller <mailto:w9mvm%40yahoo.com>
>To:
"mailto:TS-520_820_530_830%40yahoogroups.commailto:TS-520_820_530_830%40yahoogroups.com>
>Sent: Monday, March 18, 2013 10:20 AM
>Subject: Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors
>
>
>
>Hi Joseph, THANKS, I have a new driver, and replaced the 470ohm res. on the rectifier bd. I have a new set of 6146's and used a final cage "repair kit ie; 2 caps & RF Choke. Just wasn't certain about the resistors I wrote about. I bought this TS520SE at an estate sale. NO TRANSMIT. Good cond. except, that. I have a great TS-520 and is my primary HF radio. Although I did buy a new ALINCO DX-SR8 just 3 weeks from Gigaparts to use QRP CW and digital modes (new too me). Thank you,again
>
>BEST 73s and GODS BLESSINGS, MIKE W9MVM
>
>>_____
>> From: Joseph Stiles <mailto:stilesjoseph%40yahoo.com>

>>To:
"mailto:TS-520_820_530_830%40yahoogroups.comTS-520mailto:_820_530_830%40yahoogroups.com>
>>Sent: Monday, March 18, 2013 1:02 PM
>>Subject: Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors
>>
>>
>>
>>
>>Mike,
>>
>>More than likely they are: 2(two)   10 ohm 1watt 5% ....cathode resistors
>>
>>   2(two)   100 ohm 1/2 watt 1%.....screen
resistors
>>
>>   Injury to these resistors is not uncommon, especially if rig has been
really abused, usually from prolonged tune-up times...QRO mods., etc.
>>Take a look at the plate choke...the round thingy between the final tubes...the fine wire
winding should be relatively "copper" colored. IF, it's dark or,
>>burned looking this indicates severe overload and there may be other damage other than
the above mentioned resistors.
>>
>>   Check also the 470 ohm 1 watt resistor on the rectifier board also.
>>   I also suspect that the final tubes may also have suffered damage....suggest that you
obtain a known good set...along with a know good driver.
>>
>>
>>73 Joe
>>WB7UQU
>>
>>_____
>>From: w9mvm <mailto:w9mvm%40yahoo.com>
>>To: mailto:TS-520_820_530_830%40yahoogroups.com
>>Sent: Monday, March 18, 2013 8:19 AM
>>Subject: [TS-520_820_530_830] TS-520SE, split and burnt resistors
>>
>>
>>
>>GM ALL, I am working on a TS-520SE. At the base of each of the 6146 tubes there "were" 2
each resistors wound and soldered. They were split and I cannot see the color codes on any
of the four (total). Can anyone tell me the values of these guys?? I have new 6146's and
have replaced the final cage componets. Best 73s, MIKE
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41385. Re: TS-820S - Low power on 160 Meters

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-19 01:48:26 UTC
From: Roger
Topic: 41354 Message: 41385

I ended up replacing L1, C1 and C2; they showed signs of damage/overheating. Also replaced L3 because of a defect in the way it was constructed. (I have a unrepairable TS-520S that gladly donated the parts.)The radio now tunes up on 160 Meters and puts out full power as it should.

I have a few additional questions for the group.

What is an normal acceptable range for the 800V, 210V and 300V in the TS-820S? My voltages seem a little high to me, but there does not appear to be any signs of modifications in the circuit.

Also, the idling plate current is around 70 ma with the adjustment turned the whole way down, which also seems a little high. Is that normal?

Thanks and 73,

Roger (AE3RT)

--- In TS-520_820_530_830@yahoogroups.com, "Roger" <rc143dr@...> wrote:
>
> Some additional information:
>
> 1) There is a dip in IP when adjusting the load control, which is very, very slight (almost unnoticable; I missed it earlier).
>
> 2) The dip occurs with the plate indicator counterclockwise, below the end of the band for the 3.5 MHz range, not in the 1.8 MHz range on the panel scale.
>
> 3) You get max power with the load control completely counterclockwise.
>
> 4) As noted before, IP stays right at 200 to 210 mA (after dipping and no matter where the load control is positioned). HV appears to be right around 800 Volts on the panel meter.
>
> 4) The max power is right at 50 Watts when carefully tuned for the dip in IP and in CW mode.
>
> 5) I checked the ALC/Drive alignment as instructed in the manual and everything was pretty much right on.
>
> Please let me know any thoughts, suggestions, etc...
>
> Thanks and 73,
>
> Roger (AE3RT)
>

> --- In TS-520_820_530_830@yahoogroups.com, "Roger" <rc143dr@> wrote:
> >
> > Hello All,
> >
> > I have a TS-820S that I have been repairing and the one final issue that I have is low output power on 160 Meters. The radio tunes up fine on all other bands, putting out a good solid 100 Watts.
> >
> > I have good level of ALC and the idling current seems fine on 160 Meters, but I cannot get any dip of IP when adjusting the plate control in tune or CW mode. Also, in CW mode I get the full 225 ma, but only about 25-50 watts out. It is almost like there is something amiss in the final tank circuit or something, but I can't seem to find the issue. (Or, perhaps this is just my wrong thinking...)
> >
> > Any suggestions/ideas would be appreciated.
> >
> > Thanks and 73,
> >
> > Roger (AE3RT)
> >
>

41386. Re: Help - ALC meter and S meter readings high

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-19 03:13:11 UTC
From: dchristensen70
Topic: 41285 Message: 41386

Surely someone out there can help this old ham? Might this be an adjustment of VR3 or VR4? The S-meter with the antenna attached to a dummy load reads an S-3 with the RF control fully clockwise. Any ideas Please? As I mentioned earlier the meter functions consistent with levels but reads high on the S-meter and the ALC function. IP and RF functions read correctly.

TNX
Dave

--- In TS-520_820_530_830@yahoogroups.com, "dchristensen70" <dkc2030@...> wrote:
>
> I have a TS-830S that has developed a problem with the ALC meter (and I think S meter) reading. With the radio in tune mode and the carrier control fully counter clockwise the ALC meter reads in the middle of the range. Advancing it even slightly (beyond the 8 o'clock position) pegs the meter making it hard to peak the drive. When tuned and transmitting in SSB the ALC meter pegs with almost no power being generated.
>
> I noticed the other night that S-meter readings appear to be quite high when compared with another radio - normal signals are 20-40 db over S9.
>
> This might have happened when I had a bad section of coax that was presenting a high SWR to the radio on transmit.
>
> The HV meter setting seems normal, the IP Bias on SSB transmit is normal (60 ma), the RF meter setting seems to track an external meter. Just the S-meter and ALC is off.
>
> Thanks and 73
>
> Dave - KD7UM
>

41387. Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-19 13:48:11 UTC
From: Mike
Topic: 41372 Message: 41387

Hi Mike,

Okay on having the service manual and schematic. As I said, one can't work on/repair/troubleshoot electronic equipment without the service manual and schematic. I see a lot of members asking questions about problems they are having and what course of action they should take. More often than not, the member does not have the service manual and schematic. That is why I mentioned you need the service manual and schematic before attempting to service your 520SE.

It's not important, at this point, what each resistor's value in each "twisted pair" is. You can determine that later (see example below). What you should be doing is focusing on the final amplifier's resistor values for R2 and R3 in the final amplifier which both are 10 ohm 1 watt resistors a piece, to fix the problem, assuming there are no other problems than the burnt out/open twisted pair of resistors. Since the resistors are burnt open, I would also consider one or both of the final tubes may not be up to par. But first, replace the cathode resistors with "correct" resistor values and power ratings as indicated on the schematic. If you don't have the correct value and power rated resistors on hand, order them. Don't go the "easy route", be lazy just to save a few pennies, order and install the "correct" part(s).

You wondered what the value of each resistor is in each of the "twisted pair" is. I suspect the value of each resistor is more than likely 20 ohms. That means the twisted pair of resistors are connected in "parallel". Looking at the schematic, which is what you should be doing, you will notice that the individual resistors are labeled "R2 and R2" with a value of 10 ohm at 1 watt "each".

What appears to have happened is a previous owner did not have any 10 ohm 1 watt resistors on hand so they simply connected two 20 ohm resistor together to achieve the 10 ohm resistance needed. You use the formula for pairs of parallel connected resistors which is:

RT = R1 x R2 / R1 + R2

or

20 x 20 / 20 + 20 = 10

Since you have 2 pairs of twisted resistors that total 10 ohms each pair, the total resistance is 5 ohms. Use the same formula by simply substituting 20 with 10, see below:

10 x 10 / 10 + 10 = 5

You can use the same formula for 3 or more resistors connected in parallel, simply divide up the resistors into "pairs". For example, if you have 3 resistors, 10, 20, and 30 ohms, connected in parallel. What will the total resistance be? It will be 5.454 ohms.

I divide up the resistors in pairs, first I use the 10 and 20 ohm resistors to achieve an answer which will be 6.666 ohms

10 x 20 / 10 + 20 = 6.666

The 6.666 "answer" to the first pair now becomes a resistor value I pair up with the last 30 ohm resistor which results in a total resistance of the 3 resistors in parallel of 5.454 ohms

6.666 x 30 / 6.666 + 30 = 5.454

73
Mike

On 3/18/2013 3:59 PM, michael Miller wrote:
>
> Hi MIKE and THANKS. I do have the TS-520 service Man. BUT, it does
> NOT show that 2 each resistors are "twisted" to make one resistor of a
> certain value. So, these being TU I could not guess why this was done
> or if someone had done this at a later time for whatever reason.
> Thanks for your reply on my project.
>
> BEST 73s and GODS BLESSINGS, MIKE W9MVM
>
> >_____
> > From: Mike <w5rkl@... <mailto:w5rkl%40yahoo.com>>
> >To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> >Sent: Monday, March 18, 2013 2:42 PM
> >Subject: Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors
> > >
> > >
> > >
> > >
> >Mike,
> > >
> >It appears you do not have the 520 service manual. You should not
> >attempt to service the 520 without the service manual. The values of the
> >resistor in question are listed in the service manual plus shown on the
> >service manual's schematic.
> > >
> >You can download the manuals, operator and service manuals, for the
> >520/520S/520SE at the following link
> > >
> >www.n6wk.com/kenwood/
> > >
> >The TS-520SE is basically the same as the TS-520S except the 520SE does
> >not have the ability to operate from 13.6VDC using the DC to DC

> >converter. Therefore, the service manual for the TS-520S will work for
> >the TS-520SE.
> >
> >73
> >Mike
> >
> >On 3/18/2013 10:19 AM, w9mvm wrote:
> >>
> >> GM ALL, I am working on a TS-520SE. At the base of each of the 6146
> >> tubes there "were" 2 each resistors wound and soldered. They were
> >> split and I cannot see the color codes on any of the four (total). Can
> >> anyone tell me the values of these guys?? I have new 6146's and have
> >> replaced the final cage componets. Best 73s, MIKE
> >>
> >>
> >
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41388. Re: [TS-520_820_530_830] DRIVE/ALC

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-19 14:23:47 UTC
From: Dave & Loraine
Topic: 41383 Message: 41388

Hi Rick,
MODE set to CW or TUNE?
Which band?
Dummy load?
CAR fully clockwise?
(please id your rig in title)
73 Dave f4eyk

[Non-text portions of this message have been removed]

41389. RE: [TS-520_820_530_830] DRIVE/ALC

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-19 15:52:45 UTC
From: Rick
Topic: 41383 Message: 41389

Hi Dave..

Mode switch is set to TUNE

Frequency is 14.275 MHz

Yes, this was all done into a dummy load, however, I tried it into my antenna and got the exact same results.

CAR control set at 12:00

I'm not sure you mean "..id your rig in title". It's a TS-820.

Thanks for any help you can offer.

Rick / K5IAR

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Dave & Loraine
Sent: Tuesday, March 19, 2013 8:24 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] DRIVE/ALC

Hi Rick,
MODE set to CW or TUNE?
Which band?
Dummy load?
CAR fully clockwise?
(please id your rig in title)
73 Dave f4eyk

[

[Non-text portions of this message have been removed]

41390. Power Transformers for Hybrids

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-19 16:29:34 UTC
From: Bob
Topic: 41390 Message: 41390

I have quite a few Power Transformers that need new homes...
All clean & functional with no burnt smells...
Normally sell them for $50 plus $12 to mail by Flat Rate Priority...
Will offer to group for $40.00 each, plus $12.00 to mail...
I can mail two transformers for $35.00 each & can mail 2 for $12.00...
Contact me privately off the group...
Bob

41391. VFO for Kenwood TS-830S.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-19 16:35:18 UTC
From: Mark
Topic: 41391 Message: 41391

Hello. My name is Mark(KI4OJG) with a vfo issue. I need to find a replacement internal VFO unit for a very nice TS-830S transceiver. The vfo unit pretty much locked up,But will rock back and forth. The manuals seem kind of vague about the inner workings of vfos. I would appreciate any advice,technical information or a replacement vfo source concerning this subject. This rig is too nice to give up on. Thanks DE KI4OJG.

41392. Transmit audio hum with hand held mic

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-19 18:37:05 UTC
From: John Donnelly
Topic: 41392 Message: 41392

A question for the group:

I've got a TS-830s gold medallion that has moderate hum on transmit. I'm using a hand held mic that I believe was made for a TS-520. It measures
500 ohms with a multimeter. The two pins for the keying switch on the mic are not connected to either mic element lead.

If I key the transmitter with the send switch, and the mic disconnected, the audio is clean. Will getting an MC-50 solve
this problem?

73's
Jack Donnelly

[Non-text portions of this message have been removed]

41393. Re: [TS-520_820_530_830] DRIVE/ALC

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-19 19:27:39 UTC
From: Dave & Loraine
Topic: 41383 Message: 41393

Thanks Rick. Adding "TS-820" in the Subject line allows quick sorting amongst lots of emails for different models.
Maybe Gordon / Mike can advise on this one.
73 dave f4eyk

[Non-text portions of this message have been removed]

41394. Re: [TS-520_820_530_830] Transmit audio hum with hand held mic

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-19 19:30:45 UTC
From: Joseph Stiles
Topic: 41392 Message: 41394

Jack,

I suggest that you confirm the wiring from the mic to the 4 pin plug. You can look at the rigs "operators manual" or go to: k4eaa.com
This web site belongs to Ken Kemski. There is lots of good info there, including proper wiring of microphones.

73 Joe
WB7UQU

From: John Donnelly <jack@ballgroundvideo.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, March 19, 2013 11:37 AM
Subject: [TS-520_820_530_830] Transmit audio hum with hand held mic

A question for the group:

I've got a TS-830s gold medallion that has moderate hum on transmit. I'm using a hand held mic that I believe was made for a TS-520. It measures
500 ohms with a multimeter. The two pins for the keying switch on the mic are not connected to either mic element lead.

If I key the transmitter with the send switch, and the mic disconnected, the audio is clean. Will getting an MC-50 solve
this problem?

73's
Jack Donnelly

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[Non-text portions of this message have been removed]

41395. Re: [TS-520_820_530_830] VFO for Kenwood TS-830S.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-19 19:38:57 UTC
From: Joseph Stiles
Topic: 41391 Message: 41395

Mark,

I have not seen a VFO fail as you described, unless of course, being dropped to otherwise wacked. Removal of the VFO is rather easy. You will need to remove the 4 allen screws on the front of the VFO....they are 3mm. SLOWLY...pull the VFO out. There will be 2 lights...one on either side... and a plug at the rear that will have to be removed. You can then inspect the gear train. I know of only one person that may have a replacement: Bob Mansker.....you can email him at: ke5ftf@... I have dealt with him numerous times...he is honest and, the prices fair.

73 Joe
WB7UQU

From: Mark <markywelder1@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, March 19, 2013 9:35 AM
Subject: [TS-520_820_530_830] VFO for Kenwood TS-830S.

Hello. My name is Mark(KI4OJG) with a vfo issue. I need to find a replacement internal VFO unit for a very nice TS-830S transceiver. The vfo unit pretty much locked up,But will rock back and forth. The manuals seem kind of vague about the inner workings of vfos. I would appreciate any advice,technical information or a replacement vfo source concerning this subject. This rig is too nice to give up on. Thanks DE KI4OJG.

[Non-text portions of this message have been removed]

41396. Re: VFO for Kenwood TS-830S.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-19 19:58:42 UTC
From: n6wk_skcc3
Topic: 41391 Message: 41396

I have a VFO for an 830 here.
Contact me OFF-List if interested in it.

73,
Gordon
N6WK

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Mark,
>
> Â I have not seen a VFO fail as you described, unless of course, being dropped to otherwise wacked. Removal of the VFO is rather easy. You will need to
> remove the 4 allen screws on the front of the VFO....they are 3mm. SLOWLY...pull the VFO out. There will be 2 lights...one on either side... and a plug at the
> rear that will have to be removed. You can then inspect the gear train. I know of only one person that may have a replacement:Â Bob Mansker.....you can
> email him at:Â ke5ftf@...Â Â Â Â I have dealt with him numerous times...he is honest and, the prices fair.
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: Mark <markywelder1@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tuesday, March 19, 2013 9:35 AM
> Subject: [TS-520_820_530_830] VFO for Kenwood TS-830S.
>
>
> Â
> Hello. My name is Mark(KI4OJG) with a vfo issue. I need to find a replacement internal VFO unit for a very nice TS-830S transceiver. The vfo unit pretty much locked up,But will rock back and forth. The manuals seem kind of vague about the inner workings of vfos. I would appreciate any advice,technical information or a replacement vfo source concerning this subject. This rig is too nice to give up on. Thanks DE KI4OJG.
>
>
>
>
> [Non-text portions of this message have been removed]

>

41397. Kenwood TS515

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-19 20:09:18 UTC
From: Behiels JeanPierre
Topic: 41397 Message: 41397

Hi Kenwood members;

I am looking for the interconnection cable between the TS-515 transceiver and his separated power supply PS-515
Especially the two connectors alone are allready a solution.
Somebody nows a possible solution for it,or any source where I could possible find a pair of connectors or a cable??

Regards Jean ON4AEF.

[Non-text portions of this message have been removed]

41398. Re: [TS-520_820_530_830] Re: VFO for Kenwood TS-830S.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-19 20:50:31 UTC
From: W LEWIS
Topic: 41391 Message: 41398

Gordon, Butch Lewis (KØPSA) here. Do you think Mark's VFO issue could be a dirty VR-4? You may recall that a couple of years ago I bought a very nice TS-530S with an unstable VFO. The original owner who sold me the radio thought it needed a new VFO. Your recommendation to me was perform step one in the adjustment section. The voltage bounced from under 8v to occasionally just over 11v. Just exercising VR-4 and setting the voltage and solved the problem. It has been stable ever since. Just a thought.
73s,
Butch Lewis

--- On Tue, 3/19/13, n6wk_skcc3 <n6wk@...> wrote:

From: n6wk_skcc3 <n6wk@...>
Subject: [TS-520_820_530_830] Re: VFO for Kenwood TS-830S.
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, March 19, 2013, 2:58 PM

I have a VFO for an 830 here.
Contact me OFF-List if interested in it.

73,
Gordon
N6WK

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Mark,
>
> Â I have not seen a VFO fail as you described, unless of course, being dropped to otherwise wacked. Removal of the VFO is rather easy. You will need to
> remove the 4 allen screws on the front of the VFO....they are 3mm. SLOWLY...pull the VFO out. There will be 2 lights...one on either side... and a plug at the
> rear that will have to be removed. You can then inspect the gear train. I know of only one person that may have a replacement:Â Bob Mansker.....you can
> email him at:Â ke5ftf@...Â Â Â Â I have dealt with him numerous times...he is honest and, the prices fair.
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: Mark <markywelder1@...>
> To: TS-520_820_530_830@yahoogroups.com

> Sent: Tuesday, March 19, 2013 9:35 AM
> Subject: [TS-520_820_530_830] VFO for Kenwood TS-830S.
>
>
> Â
> Hello. My name is Mark(KI4OJG) with a vfo issue. I need to find a replacement internal VFO unit for a very nice TS-830S transceiver. The vfo unit pretty much locked up,But will rock back and forth. The manuals seem kind of vague about the inner workings of vfos. I would appreciate any advice,technical information or a replacement vfo source concerning this subject. This rig is too nice to give up on. Thanks DE KI4OJG.
>
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

41399. Looking For

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-19 21:22:17 UTC
From: Joe
Topic: 41399 Message: 41399

I have a friend (WD6FFF - Jerry Durham) that has a TS-950SDX that he needs to ship to Clif at aVVid..problem is, he has no factory box and packing for the radio...and Clif won't accept the radio unless it is in a factory box.

So.....

Does anyone here have a 950SDX box that Jerry, can buy or borrow to get his radio down to Clif in Texas?

(BTW..Jerry is in Copperopolis, California)

Thanks!!

Joe Wolfe - WA6RKN
Reno, Nevada

41400. Re: VFO for Kenwood TS-830S.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-19 21:28:58 UTC
From: k5hfg
Topic: 41391 Message: 41400

That is the first thing I would do. While you have it out go over all the solder joints and clean it up. Works wonders. You can get a replacement if needed but unless they have been very badly treated they usually respond well to a cleaning and good check. Sound wisdom.....

--- In TS-520_820_530_830@yahoogroups.com, W LEWIS <nscb56a@...> wrote:
>
> Gordon, Butch Lewis (KÃ□PSA) here.Â Do you think Mark's VFO issue could be a dirty VR-4?Â You may recall that a couple of years ago I bought a very nice TS-530S with an unstable VFO.Â The original owner who sold me the radio thought it needed a new VFO.Â Your recommendation to me was perform step one in the adjustment section.Â The voltage bounced from under 8v to occasionally just over 11v.Â Just exercising VR-4 and setting the voltage and solved the problem.Â It has been stable ever since.Â Just a thought.
> 73s,
> Butch Lewis

41401. Re: [TS-520_820_530_830] Kenwood TS515

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-20 06:33:13 UTC
From: Charles Rodecap
Topic: 41397 Message: 41401

Hello Jean

I checked my TS-511S cable, these are TOCON brand connectors.
I could not find a model number.
I did find a possibility on E-BAY item number 160812987616.
Hope this is a help if not let us know and we will try again.

Charlie
KA9HDG

--- On Tue, 3/19/13, Behiels JeanPierre <on4aef@...> wrote:

From: Behiels JeanPierre <on4aef@...>
Subject: [TS-520_820_530_830] Kenwood TS515
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, March 19, 2013, 4:09 PM

Hi Kenwood members;

I am looking for the interconnection cable between the TS-515 transceiver and his separated power supply PS-515

Especially the two connectors alone are allready a solution.

Somebody nows a possible solution for it,or any source where I could possible find a pair of connectors or a cable??

Regards Jean ON4AEF.

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41402. Re: [TS-520_820_530_830] Kenwood TS515

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-20 07:23:59 UTC
From: Behiels JeanPierre
Topic: 41397 Message: 41402

Hi Charlie

I try to take a look at the item number but Ebay don't gives my any result around ??

Regards Jean.

----- Original Message -----
From: Charles Rodecap
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, March 20, 2013 7:33 AM
Subject: Re: [TS-520_820_530_830] Kenwood TS515

Hello Jean

I checked my TS-511S cable, these are TOCON brand connectors.
I could not find a model number.
I did find a possibility on E-BAY item number 160812987616.
Hope this is a help if not let us know and we will try again.

Charlie
KA9HDG

--- On Tue, 3/19/13, Behiels JeanPierre <on4aef@...> wrote:

From: Behiels JeanPierre <on4aef@...>
Subject: [TS-520_820_530_830] Kenwood TS515
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, March 19, 2013, 4:09 PM

Hi Kenwood members;

I am looking for the interconnection cable between the TS-515 transceiver and his separated power supply PS-515

Especially the two connectors alone are allready a solution.

Somebody nows a possible solution for it,or any source where I could possible find a pair of connectors or a cable??

Regards Jean ON4AEF.

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[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41403. Re: Transmit audio hum with hand held mic

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-20 09:05:18 UTC
From: wallydoc
Topic: 41392 Message: 41403

Jack:
I agree with going over the wiring on the mic.
Make sure the wiring is correct.
There are two different "grounds" for the mic, one for the element and one for the PTT.
Then check the mic wire. Possibly replace it.
I don't know the mic you are using but some mics need good grounding. Otherwise they act as RF feedback antennas.
I had a similar problem with a D104 on a 520, which is obviously not the mic you are using.
Wally
KC9INK

--- In TS-520_820_530_830@yahoogroups.com, John Donnelly <jack@...> wrote:
>
> A question for the group:
>
> I've got a TS-830s gold medallion that has moderate hum on transmit. I'm using a hand held mic that I believe was made for a TS-520. It measures
> 500 ohms with a multimeter. The two pins for the keying switch on the mic are not connected to either mic element lead.
>
> If I key the transmitter with the send switch, and the mic disconnected, the audio is clean. Will getting an MC-50 solve
> this problem?
>
> 73's
> Jack Donnelly
>
> [Non-text portions of this message have been removed]
>

41404. Re: [TS-520_820_530_830] Kenwood TS515

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-20 12:39:20 UTC
From: Charles Rodecap
Topic: 41397 Message: 41404

Good morning Jean

I used that item number and went right to it but no problem.
This listing is by W5CIA in US. Item number is 160812987616 copied from listing.
I have had problems looking into Irish and English Ebay, not sure why???
These look possibly what you need but the socket side is for chassis mount.

Charlie
KA9HDG

--- On Wed, 3/20/13, Behiels JeanPierre <on4aef@...> wrote:

From: Behiels JeanPierre <on4aef@telenet.be>
Subject: Re: [TS-520_820_530_830] Kenwood TS515
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, March 20, 2013, 3:23 AM

Hi Charlie

I try to take a look at the item number but Ebay don't gives my any result around ??

Regards Jean.

----- Original Message -----

From: Charles Rodecap

To: TS-520_820_530_830@yahoogroups.com

Sent: Wednesday, March 20, 2013 7:33 AM

Subject: Re: [TS-520_820_530_830] Kenwood TS515

Hello Jean

I checked my TS-511S cable, these are TOCON brand connectors.

I could not find a model number.

I did find a possibility on E-BAY item number 160812987616.

Hope this is a help if not let us know and we will try again.

Charlie

KA9HDG

--- On Tue, 3/19/13, Behiels JeanPierre <on4aef@...> wrote:

From: Behiels JeanPierre <on4aef@...>

Subject: [TS-520_820_530_830] Kenwood TS515

To: TS-520_820_530_830@yahoogroups.com

Date: Tuesday, March 19, 2013, 4:09 PM

Hi Kenwood members;

I am looking for the interconnection cable between the TS-515 transceiver and his separated power supply PS-515

Especially the two connectors alone are allready a solution.

Somebody nows a possible solution for it,or any source where I could possible find a pair of connectors or a cable??

Regards Jean ON4AEF.

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[Non-text portions of this message have been removed]

41405. Re: [TS-520_820_530_830] Re: Transmit audio hum with hand held mic

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-20 12:43:42 UTC
From: John Donnelly
Topic: 41392 Message: 41405

I've confirmed this is an original KW hand held that came with a 520. It is wired correctly and the grounds are isolated as they are supposed to be.
Is there a problem with impedance? The hand held is a 500 ohm unit and I believe the S-830 is a high impedance input.

Jack Donnelly KV4JX
Ball Ground Video Productions
308 Calusa Place

Ball Ground, GA 30107
Phone 678-592-9974www.ballgroundvideo.com

From: wallydoc <wallydoc@...m>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, March 20, 2013 5:05 AM
Subject: [TS-520_820_530_830] Re: Transmit audio hum with hand held mic

Jack:
I agree with going over the wiring on the mic.
Make sure the wiring is correct.
There are two different "grounds" for the mic, one for the element and one for the PTT.
Then check the mic wire. Possibly replace it.
I don't know the mic you are using but some mics need good grounding. Otherwise they act as RF feedback antennas.
I had a similar problem with a D104 on a 520, which is obviously not the mic you are using.
Wally
KC9INK

--- In mailto:TS-520_820_530_830%40yahoogroups.com, John Donnelly <jack@...> wrote:
>
> A question for the group:
>
> I've got a TS-830s gold medallion that has moderate hum on transmit. I'm using a hand held mic that I believe was made for a TS-520. It measures
> 500 ohms with a multimeter. The two pins for the keying switch on the mic are not connected to either mic element lead.
>
> If I key the transmitter with the send switch, and the mic disconnected, the audio is clean. Will getting an MC-50 solve
> this problem?
>
> 73's
> Jack Donnelly
>
> [Non-text portions of this message have been removed]

>

[Non-text portions of this message have been removed]

41406. Re: [TS-520_820_530_830] Re: Transmit audio hum with hand held mic

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-20 14:13:00 UTC
From: Peter Carr
Topic: 41392 Message: 41406

Hi to all. On the subject of mics, I put a Shure cartridge into a Motorola mic and added a 4-pin connector. It works well with my TS-520 but I found that background noise is noticeable. This includes shifting my grip on the mike or squeaks from the PTT switch. I tried a bit of plastic foam inside the mic case and that helped but not very much. Would anyone have a suggestion for better packing?
Thanks & 73.
Pete Carr WW3O

From: wallydoc <wallydoc@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, March 20, 2013 5:05 AM
Subject: [TS-520_820_530_830] Re: Transmit audio hum with hand held mic

Jack:
I agree with going over the wiring on the mic.
Make sure the wiring is correct.
There are two different "grounds" for the mic, one for the element and one for the PTT.
Then check the mic wire. Possibly replace it.
I don't know the mic you are using but some mics need good grounding. Otherwise they act as RF feedback antennas.
I had a similar problem with a D104 on a 520, which is obviously not the mic you are using.
Wally
KC9INK

--- In TS-520_820_530_830@yahoogroups.com, John Donnelly <jack@...> wrote:
>
> A question for the group:
>
> I've got a TS-830s gold medallion that has moderate hum on transmit. I'm using a hand held mic that I believe was made for a TS-520. It measures
> 500 ohms with a multimeter. The two pins for the keying switch on the mic are not connected to either mic element lead.
>
> If I key the transmitter with the send switch, and the mic disconnected, the audio is clean. Will getting an MC-50 solve
> this problem?
>
> 73's
> Jack Donnelly
>
> [Non-text portions of this message have been removed]
>

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41407. Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-20 13:37:20 UTC
From: michael Miller
Topic: 41372 Message: 41407

GM, I was out of town Tuesday so just this morning I'm catching up on my mail. Those "twisted" resistors were 1ea, 100 ohm & 10 ohm. While in the area of Johnson City, Tn. I obtained the correct "metal film" resistors. I have already obtained a "final cage" repair kit on line. They are 1ea. .001 10kv doorknob cap. 1ea .01 2kv cap. and a 6.8uH 500ma RF choke. A new driver, 2ea 6146s. I will continue, later. Good to hear from you.
BEST 73s and GODS BLESSINGS, MIKE W9MVM

>_____
> From: Mike <w5rkl@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Tuesday, March 19, 2013 9:48 AM
>Subject: Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors
>
>
>
>
>Hi Mike,
>
>Okay on having the service manual and schematic. As I said, one can't
>work on/repair/troubleshoot electronic equipment without the service
>manual and schematic. I see a lot of members asking questions about
>problems they are having and what course of action they should take.
>More often than not, the member does not have the service manual and
>schematic. That is why I mentioned you need the service manual and
>schematic before attempting to service your 520SE.
>
>It's not important, at this point, what each resistor's value in each
>"twisted pair" is. You can determine that later (see example below).
>What you should be doing is focusing on the final amplifier's resistor
>values for R2 and R3 in the final amplifier which both are 10 ohm 1 watt
>resistors a piece, to fix the problem, assuming there are no other
>problems than the burnt out/open twisted pair of resistors. Since the
>resistors are burnt open, I would also consider one or both of the final
>tubes may not be up to par. But first, replace the cathode resistors
>with "correct" resistor values and power ratings as indicated on the
>schematic. If you don't have the correct value and power rated resistors
>on hand, order them. Don't go the "easy route", be lazy just to save a
>few pennies, order and install the "correct" part(s).
>
>You wondered what the value of each resistor is in each of the "twisted
>pair" is. I suspect the value of each resistor is more than likely 20
>ohms. That means the twisted pair of resistors are connected in
>"parallel". Looking at the schematic, which is what you should be doing,
>you will notice that the individual resistors are labeled "R2 and R2"
>with a value of 10 ohm at 1 watt "each".

>
>What appears to have happened is a previous owner did not have any 10
>ohm 1 watt resistors on hand so they simply connected two 20 ohm
>resistor together to achieve the 10 ohm resistance needed. You use the
>formula for pairs of parallel connected resistors which is:
>
>RT = R1 x R2 / R1 + R2
>
>or
>
>20 x 20 / 20 + 20 = 10
>
>Since you have 2 pairs of twisted resistors that total 10 ohms each
>pair, the total resistance is 5 ohms. Use the same formula by simply
>substituting 20 with 10, see below:
>
>10 x 10 / 10 + 10 = 5
>
>You can use the same formula for 3 or more resistors connected in
>parallel, simply divide up the resistors into "pairs". For example, if
>you have 3 resistors, 10, 20, and 30 ohms, connected in parallel. What
>will the total resistance be? It will be 5.454 ohms.
>
>I divide up the resistors in pairs, first I use the 10 and 20 ohm
>resistors to achieve an answer which will be 6.666 ohms
>
>10 x 20 / 10 + 20 = 6.666
>
>The 6.666 "answer" to the first pair now becomes a resistor value I pair
>up with the last 30 ohm resistor which results in a total resistance of
>the 3 resistors in parallel of 5.454 ohms
>
>6.666 x 30 / 6.666 + 30 = 5.454
>
>73
>Mike
>
>On 3/18/2013 3:59 PM, michael Miller wrote:
>>
>> Hi MIKE and THANKS. I do have the TS-520 service Man. BUT, it does
>> NOT show that 2 each resistors are "twisted" to make one resistor of a
>> certain value. So, these being TU I could not guess why this was done
>> or if someone had done this at a later time for whatever reason.
>> Thanks for your reply on my project.
>>
>> BEST 73s and GODS BLESSINGS, MIKE W9MVM
>>
>> >_____
>> > From: Mike <mailto:w5rkl%40yahoo.com <mailto:w5rkl%40yahoo.com>>
>> >To: mailto:TS-520_820_530_830%40yahoogroups.com

>> <mailto:TS-520_820_530_830%40yahoogroups.com>
>> >Sent: Monday, March 18, 2013 2:42 PM
>> >Subject: Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors
>> >
>> >
>> >
>> >
>> >Mike,
>> >
>> >It appears you do not have the 520 service manual. You should not
>> >attempt to service the 520 without the service manual. The values of the
>> >resistor in question are listed in the service manual plus shown on the
>> >service manual's schematic.
>> >
>> >You can download the manuals, operator and service manuals, for the
>> >520/520S/520SE at the following link
>> >
>> >www.n6wk.com/kenwood/
>> >
>> >The TS-520SE is basically the same as the TS-520S except the 520SE does
>> >not have the ability to operate from 13.6VDC using the DC to DC
>> >converter. Therefore, the service manual for the TS-520S will work for
>> >the TS-520SE.
>> >
>> >73
>> >Mike
>> >
>> >On 3/18/2013 10:19 AM, w9mvm wrote:
>> >>
>> >> GM ALL, I am working on a TS-520SE. At the base of each of the 6146
>> >> tubes there "were" 2 each resistors wound and soldered. They were
>> >> split and I cannot see the color codes on any of the four (total). Can
>> >> anyone tell me the values of these guys?? I have new 6146's and have
>> >> replaced the final cage componets. Best 73s, MIKE
>> >>
>> >>
>> >
>> >[Non-text portions of this message have been removed]
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[Non-text portions of this message have been removed]

41408. Re: [TS-520SE}

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-20 14:37:43 UTC
From: michael Miller
Topic: 41372 Message: 41408

Hi Mike, I don't understand why previous owner combined a 100 ohm with a 10 ohm resistor where clearly there should have only been a 10ohm at both R3 & R4, only. The only place the drawing shows there should be an 100ohm is at R2 & R6. Any guess? Thanks.

BEST 73s and GODS BLESSINGS, MIKE W9MVM

>_____
> From: Mike <w5rkl@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Tuesday, March 19, 2013 9:48 AM
>Subject: Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors
>
>
>
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>Hi Mike,
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>Okay on having the service manual and schematic. As I said, one can't
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>problems they are having and what course of action they should take.
>More often than not, the member does not have the service manual and
>schematic. That is why I mentioned you need the service manual and
>schematic before attempting to service your 520SE.
>
>It's not important, at this point, what each resistor's value in each
>"twisted pair" is. You can determine that later (see example below).
>What you should be doing is focusing on the final amplifier's resistor
>values for R2 and R3 in the final amplifier which both are 10 ohm 1 watt
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>with a value of 10 ohm at 1 watt "each".
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>What appears to have happened is a previous owner did not have any 10
>ohm 1 watt resistors on hand so they simply connected two 20 ohm
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>or
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>You can use the same formula for 3 or more resistors connected in
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>I divide up the resistors in pairs, first I use the 10 and 20 ohm
>resistors to achieve an answer which will be 6.666 ohms
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>10 x 20 / 10 + 20 = 6.666
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>Mike
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>On 3/18/2013 3:59 PM, michael Miller wrote:
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>> or if someone had done this at a later time for whatever reason.
>> Thanks for your reply on my project.
>>
>> BEST 73s and GODS BLESSINGS, MIKE W9MVM
>>
>> >_____
>> > From: Mike <mailto:w5rkl%40yahoo.com <mailto:w5rkl%40yahoo.com>>
>> >To: mailto:TS-520_820_530_830%40yahoogroups.com
>> <mailto:TS-520_820_530_830%40yahoogroups.com>

>> >Sent: Monday, March 18, 2013 2:42 PM
>> >Subject: Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors
>> >
>> >
>> >
>> >
>> >Mike,
>> >
>> >It appears you do not have the 520 service manual. You should not
>> >attempt to service the 520 without the service manual. The values of the
>> >resistor in question are listed in the service manual plus shown on the
>> >service manual's schematic.
>> >
>> >You can download the manuals, operator and service manuals, for the
>> >520/520S/520SE at the following link
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>> >www.n6wk.com/kenwood/
>> >
>> >The TS-520SE is basically the same as the TS-520S except the 520SE does
>> >not have the ability to operate from 13.6VDC using the DC to DC
>> >converter. Therefore, the service manual for the TS-520S will work for
>> >the TS-520SE.
>> >
>> >73
>> >Mike
>> >
>> >On 3/18/2013 10:19 AM, w9mvm wrote:
>> >>
>> >> GM ALL, I am working on a TS-520SE. At the base of each of the 6146
>> >> tubes there "were" 2 each resistors wound and soldered. They were
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>> >> anyone tell me the values of these guys?? I have new 6146's and have
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41409. Re: *** SPAM ***Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-20 16:43:24 UTC
From: Mike
Topic: 41372 Message: 41409

Mike,

Connecting a 100 ohm and 10 ohm resistor in parallel results in a total resistance of 9.09 ohms (100 x 10 / 100 + 10 = 9.09). It appears a previous owner of your 520SE had no clue how to calculate resistors connected in parallel, especially if those "twisted" resistors were made up to be used in the final tube's cathode circuit.

A "10KV door knob" cap for a TS-520SE? Where did you buy this "final cage" repair kit and did you tell the seller you were referring to a Kenwood TS-520SE hybrid transmitter final amplifier? I have never seen a "10KV Door Knob" capacitor, from the factory or from a previous owner, mounted in the final amplifier of any Kenwood hybrid.

What makes you think you have to perform a "final cage repair" in your TS-520SE final amplifier? What troubleshooting steps did you take that produced results that clearly stated you need to replace all of these components, and to install a "non-standard, non-Kenwood design" 10KV .001 Door Knob Capacitor in your TS-520SE final amplifier?

73
Mike

On 3/20/2013 8:37 AM, michael Miller wrote:
>
>
>
> GM, I was out of town Tuesday so just this morning I'm catching up on
> my mail. Those "twisted" resistors were 1ea, 100 ohm & 10 ohm. While
> in the area of Johnson City, Tn. I obtained the correct "metal film"
> resistors. I have already obtained a "final cage" repair kit on line.
> They are 1ea. .001 10kv doorknob cap. 1ea .01 2kv cap. and a 6.8uH
> 500ma RF choke. A new driver, 2ea 6146s. I will continue, later. Good
> to hear from you.
> BEST 73s and GODS BLESSINGS, MIKE W9MVM
>
> >_____
> > From: Mike <w5rkl@yahoo.com <mailto:w5rkl%40yahoo.com>>
> >To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> >Sent: Tuesday, March 19, 2013 9:48 AM
> >Subject: Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors
> >
> >
> >

> >
> >Hi Mike,
> >
> >Okay on having the service manual and schematic. As I said, one can't
> >work on/repair/troubleshoot electronic equipment without the service
> >manual and schematic. I see a lot of members asking questions about
> >problems they are having and what course of action they should take.
> >More often than not, the member does not have the service manual and
> >schematic. That is why I mentioned you need the service manual and
> >schematic before attempting to service your 520SE.
> >
> >It's not important, at this point, what each resistor's value in each
> >"twisted pair" is. You can determine that later (see example below).
> >What you should be doing is focusing on the final amplifier's resistor
> >values for R2 and R3 in the final amplifier which both are 10 ohm 1 watt
> >resistors a piece, to fix the problem, assuming there are no other
> >problems than the burnt out/open twisted pair of resistors. Since the
> >resistors are burnt open, I would also consider one or both of the final
> >tubes may not be up to par. But first, replace the cathode resistors
> >with "correct" resistor values and power ratings as indicated on the
> >schematic. If you don't have the correct value and power rated resistors
> >on hand, order them. Don't go the "easy route", be lazy just to save a
> >few pennies, order and install the "correct" part(s).
> >
> >You wondered what the value of each resistor is in each of the "twisted
> >pair" is. I suspect the value of each resistor is more than likely 20
> >ohms. That means the twisted pair of resistors are connected in
> >"parallel". Looking at the schematic, which is what you should be doing,
> >you will notice that the individual resistors are labeled "R2 and R2"
> >with a value of 10 ohm at 1 watt "each".
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> >What appears to have happened is a previous owner did not have any 10
> >ohm 1 watt resistors on hand so they simply connected two 20 ohm
> >resistor together to achieve the 10 ohm resistance needed. You use the
> >formula for pairs of parallel connected resistors which is:
> >
> >RT = R1 x R2 / R1 + R2
> >
> >or
> >
> >20 x 20 / 20 + 20 = 10
> >
> >Since you have 2 pairs of twisted resistors that total 10 ohms each
> >pair, the total resistance is 5 ohms. Use the same formula by simply
> >substituting 20 with 10, see below:
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> >10 x 10 / 10 + 10 = 5
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> >You can use the same formula for 3 or more resistors connected in
> >parallel, simply divide up the resistors into "pairs". For example, if

> >you have 3 resistors, 10, 20, and 30 ohms, connected in parallel. What
> >will the total resistance be? It will be 5.454 ohms.
> >
> >I divide up the resistors in pairs, first I use the 10 and 20 ohm
> >resistors to achieve an answer which will be 6.666 ohms
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> >10 x 20 / 10 + 20 = 6.666
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> >The 6.666 "answer" to the first pair now becomes a resistor value I pair
> >up with the last 30 ohm resistor which results in a total resistance of
> >the 3 resistors in parallel of 5.454 ohms
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> >6.666 x 30 / 6.666 + 30 = 5.454
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> >On 3/18/2013 3:59 PM, michael Miller wrote:
> >>
> >> Hi MIKE and THANKS. I do have the TS-520 service Man. BUT, it does
> >> NOT show that 2 each resistors are "twisted" to make one resistor of a
> >> certain value. So, these being TU I could not guess why this was done
> >> or if someone had done this at a later time for whatever reason.
> >> Thanks for your reply on my project.
> >>
> >> BEST 73s and GODS BLESSINGS, MIKE W9MVM
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> >> > From: Mike <mailto:w5rkl%40yahoo.com <mailto:w5rkl%40yahoo.com>>
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41410. TS-820 RFC

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-21 15:58:27 UTC
From: Rick
Topic: 41410 Message: 41410

Does anyone happen to know the approximate impedance of L1 in the final cage? Mine measures .47 ohms.

Thanks,

Rick/K5IAR

[Non-text portions of this message have been removed]

41411. Re: TS-520S - Losing output power & receive during tune procedure

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-21 10:29:36 UTC
From: cl5ltd
Topic: 41362 Message: 41411

After a few more days of observation, the fault is evident more often than not and all output power was lost during a QSO today (30 mins from power on) - frustrating as I can't rely on the radio to transmit when I might need it.

Changing bands certainly has an immediate effect as you need to re tune and the power just drops as soon as drive is adjusted

As a receiver though, I am amazed at the quality & clarity of the audio - even without an external speaker it is rich and smooth

Any further thoughts?

41412. Re: *** SPAM ***Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-21 16:13:34 UTC
From: michael Miller
Topic: 41372 Message: 41412

GM MIKE, THANKS FOR YOUR HELP!! THE FINAL CAGE " REPAIR KIT" WAS OBTAINED ON EBAY FROM A POPULAR REPAIR PARTS SITE. ONLY 3EA COMPONETS, SO I ORDERED THEM AND INSTALLED THE NEW REPLACEMENTS. LOCATIONS WERE C7,C8, L1. THE REASON WAS LOW POWER ACROSS ALL FREQS. SITE IS; WWW.HYBRIDRESTORE.COM/FINAL-CAGE-REPAIR/. REPLACED THE 10 OHM RESISTORS AND THE 100 OHM RESISTORS, NOW TO REPLACE THE DRIVER AND THE 6146's and see the results.

BEST 73s and GODS BLESSINGS, MIKE W9MVM

>_____
> From: Mike <w5rkl@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Wednesday, March 20, 2013 12:43 PM
>Subject: Re: *** SPAM ***Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors
>
>
>
>
>Mike,
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>resistance of 9.09 ohms (100 x 10 / 100 + 10 = 9.09). It appears a
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>up to be used in the final tube's cathode circuit.
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>produced results that clearly stated you need to replace all of these
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>> my mail. Those "twisted" resistors were 1ea, 100 ohm & 10 ohm. While
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>> 500ma RF choke. A new driver, 2ea 6146s. I will continue, later. Good
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>> >To: mailto:TS-520_820_530_830%40yahoogroups.com
>> <mailto:TS-520_820_530_830%40yahoogroups.com>
>> >Sent: Tuesday, March 19, 2013 9:48 AM
>> >Subject: Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors
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>> >> >To: mailto:TS-520_820_530_830%40yahoogroups.com
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>> >> >Sent: Monday, March 18, 2013 2:42 PM

>> >> >Subject: Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors
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>> >> >Mike,
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41413. Re: [TS-520_820_530_830] Re: TS-520S - Losing output power & receive during tune procedure

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-21 16:39:32 UTC
From: Peter Carr
Topic: 41362 Message: 41413

Howdy from snowy Pennsylvania! My first guess is that the radio is loosing one or more voltages in the high voltage power supply. It may be the filament or plate but I'd bet it's one of those. If you operate the rig with the top cover removed and chat until it fails you can dim the room lights and look for glowing tubes on top of the Faraday shield of the driver or through the side vents of the HF cage. If the rig transmit fails and the tubes are lit then it's probably the HV.
Just be careful working around the rig in operation with the top removed!
Later,
73,
Pete WW3O

From: cl5ltd <christopherlarwood@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, March 21, 2013 6:29 AM
Subject: [TS-520_820_530_830] Re: TS-520S - Losing output power & receive during tune procedure

After a few more days of observation, the fault is evident more often than not and all output power was lost during a QSO today (30 mins from power on) - frustrating as I can't rely on the radio to transmit when I might need it.

Changing bands certainly has an immediate effect as you need to re tune and the power just drops as soon as drive is adjusted

As a receiver though, I am amazed at the quality & clarity of the audio - even without an external speaker it is rich and smooth

Any further thoughts?

[Non-text portions of this message have been removed]

41414. Drive at the high end of 75 meters.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-21 17:14:32 UTC
From: Peter
Topic: 41414 Message: 41414

Hi to all.
I have a TS-520 that works very well except at the high end of 75 meters. The normal drive level is indicated on the meter in normal tune-up up to about 3.75 MHz. From there on up the needle will drop off gradually to zero at about 3.82 MHz. All the other bands show normal drive levels at both ends. Power output is normal when the drive is tuned up.
I just obtained this rig from QTH.com and it is excellent in every respect except this. I've changed driver tubes and the trouble is there with both of them. It appears that the coil pack associated with 75 meters needs adjusted. I have the operating and service manuals but they have no guidance about this.
Would anyone have an idea how to resolve this problem?
Thanks & 73,
Pete WW3O

41415. Re: TS-520S - Losing output power & receive during tune procedure

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-21 17:50:20 UTC
From: roberteleazer@rocketmail.com
Topic: 41362 Message: 41415

Does this occur right after you let up on the transmit key?

If so, it's probably a relay.

Robert

--- In TS-520_820_530_830@yahoogroups.com, "cl5ltd" <christopherlarwood@...> wrote:
>
> After a few more days of observation, the fault is evident more often than not and all output power was lost during a QSO today (30 mins from power on) - frustrating as I can't rely on the radio to transmit when I might need it.
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> Changing bands certainly has an immediate effect as you need to re tune and the power just drops as soon as drive is adjusted
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> As a receiver though, I am amazed at the quality & clarity of the audio - even without an external speaker it is rich and smooth
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> Any further thoughts?
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41416. RE: [TS-520_820_530_830] TS-820 RFC

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-21 19:02:23 UTC
From: Rick
Topic: 41410 Message: 41416

Please, forgive my error. It was brought to my attention I had misstated what I wanted to know. I, of course, meant "DC resistance", not impedance. Some days my brain refuses to cooperate with me. HI

Thanks,

Rick/K5IAR

_____

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Rick
Sent: Thursday, March 21, 2013 9:58 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] TS-820 RFC

Does anyone happen to know the approximate impedance of L1 in the final cage? Mine measures .47 ohms.

Thanks,

Rick/K5IAR

-.-'---

[Non-text portions of this message have been removed]

41417. Re: *** SPAM ***Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-21 19:38:51 UTC
From: Mike
Topic: 41372 Message: 41417

Hi Mike,

I mean on disrespect but replacing the original components in the final amplifier with the parts from the final cage repair kit (C7, C8, and L1) you purchased on eBay, followed by replacing final tube cathode resistors (2 x 10 ohms 1 watt) followed by replacing the final tube screen resistors (2 x 100 ohm 1/2 watt), followed by replacing the driver and both final tubes, all in one fell swoop without any testing done between component replacement. Unfortunately, you cannot, with any certainty, say which components in the kit, the driver tube, or both final tubes, were actually the source of your problem.

This is where proper troubleshooting technique play a big role in tracking down the source of a problem and why replacing multiple components in a "Willy Nilly" or "shot gun" approach without performing any troubleshooting is a bad idea.

73
Mike

On 3/21/2013 11:13 AM, michael Miller wrote:
>
> GM MIKE, THANKS FOR YOUR HELP!! THE FINAL CAGE " REPAIR KIT" WAS
> OBTAINED ON EBAY FROM A POPULAR REPAIR PARTS SITE. ONLY 3EA
> COMPONETS, SO I ORDERED THEM AND INSTALLED THE NEW REPLACEMENTS.
> LOCATIONS WERE C7,C8, L1. THE REASON WAS LOW POWER ACROSS ALL FREQS.
> SITE IS; WWW.HYBRIDRESTORE.COM/FINAL-CAGE-REPAIR/. REPLACED THE 10 OHM
> RESISTORS AND THE 100 OHM RESISTORS, NOW TO REPLACE THE DRIVER AND THE
> 6146's and see the results.
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> BEST 73s and GODS BLESSINGS, MIKE W9MVM
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> > From: Mike <w5rkl@... <mailto:w5rkl%40yahoo.com>>
> >To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> >Sent: Wednesday, March 20, 2013 12:43 PM
> >Subject: Re: *** SPAM ***Re: [TS-520_820_530_830] TS-520SE, split and
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> >Mike,
> >

> >Connecting a 100 ohm and 10 ohm resistor in parallel results in a total
> >resistance of 9.09 ohms (100 x 10 / 100 + 10 = 9.09). It appears a
> >previous owner of your 520SE had no clue how to calculate resistors
> >connected in parallel, especially if those "twisted" resistors were made
> >up to be used in the final tube's cathode circuit.
> >
> >A "10KV door knob" cap for a TS-520SE? Where did you buy this "final
> >cage" repair kit and did you tell the seller you were referring to a
> >Kenwood TS-520SE hybrid transmitter final amplifier? I have never seen a
> >"10KV Door Knob" capacitor, from the factory or from a previous owner,
> >mounted in the final amplifier of any Kenwood hybrid.
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> >TS-520SE final amplifier? What troubleshooting steps did you take that
> >produced results that clearly stated you need to replace all of these
> >components, and to install a "non-standard, non-Kenwood design" 10KV
> >.001 Door Knob Capacitor in your TS-520SE final amplifier?
> >
> >73
> >Mike
> >
> >On 3/20/2013 8:37 AM, michael Miller wrote:
> >>
> >>
> >>
> >> GM, I was out of town Tuesday so just this morning I'm catching up on
> >> my mail. Those "twisted" resistors were 1ea, 100 ohm & 10 ohm. While
> >> in the area of Johnson City, Tn. I obtained the correct "metal film"
> >> resistors. I have already obtained a "final cage" repair kit on line.
> >> They are 1ea. .001 10kv doorknob cap. 1ea .01 2kv cap. and a 6.8uH
> >> 500ma RF choke. A new driver, 2ea 6146s. I will continue, later. Good
> >> to hear from you.
> >> BEST 73s and GODS BLESSINGS, MIKE W9MVM
> >>
> >> >_____
> >> > From: Mike <mailto:w5rkl%40yahoo.com <mailto:w5rkl%40yahoo.com>>
> >> >To: mailto:TS-520_820_530_830%40yahoogroups.com
> >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> >> >Sent: Tuesday, March 19, 2013 9:48 AM
> >> >Subject: Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors
> >> >
> >> >
> >> >
> >> >
> >> >Hi Mike,
> >> >
> >> >Okay on having the service manual and schematic. As I said, one can't
> >> >work on/repair/troubleshoot electronic equipment without the service
> >> >manual and schematic. I see a lot of members asking questions about
> >> >problems they are having and what course of action they should take.

> >> >More often than not, the member does not have the service manual and
> >> >schematic. That is why I mentioned you need the service manual and
> >> >schematic before attempting to service your 520SE.
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> >> >"twisted pair" is. You can determine that later (see example below).
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> >> >values for R2 and R3 in the final amplifier which both are 10 ohm
> 1 watt
> >> >resistors a piece, to fix the problem, assuming there are no other
> >> >problems than the burnt out/open twisted pair of resistors. Since the
> >> >resistors are burnt open, I would also consider one or both of the
> final
> >> >tubes may not be up to par. But first, replace the cathode resistors
> >> >with "correct" resistor values and power ratings as indicated on the
> >> >schematic. If you don't have the correct value and power rated
> resistors
> >> >on hand, order them. Don't go the "easy route", be lazy just to save a
> >> >few pennies, order and install the "correct" part(s).
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> "twisted
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> >> >You can use the same formula for 3 or more resistors connected in
> >> >parallel, simply divide up the resistors into "pairs". For example, if
> >> >you have 3 resistors, 10, 20, and 30 ohms, connected in parallel. What
> >> >will the total resistance be? It will be 5.454 ohms.

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> >> >The 6.666 "answer" to the first pair now becomes a resistor value
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> >> >up with the last 30 ohm resistor which results in a total
> resistance of
> >> >the 3 resistors in parallel of 5.454 ohms
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> >> >6.666 x 30 / 6.666 + 30 = 5.454
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> >> >73
> >> >Mike
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> >> >On 3/18/2013 3:59 PM, michael Miller wrote:
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> >> >> Hi MIKE and THANKS. I do have the TS-520 service Man. BUT, it does
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> >> >> certain value. So, these being TU I could not guess why this was
> done
> >> >> or if someone had done this at a later time for whatever reason.
> >> >> Thanks for your reply on my project.
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> >> >> BEST 73s and GODS BLESSINGS, MIKE W9MVM
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> >> >> >Sent: Monday, March 18, 2013 2:42 PM
> >> >> >Subject: Re: [TS-520_820_530_830] TS-520SE, split and burnt
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> >> >> >
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> >> >> >Mike,
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> >> >> >It appears you do not have the 520 service manual. You should not
> >> >> >attempt to service the 520 without the service manual. The values
> >> of the
> >> >> >resistor in question are listed in the service manual plus shown
> >> on the
> >> >> >service manual's schematic.
> >> >> >
> >> >> >You can download the manuals, operator and service manuals, for the

> >> >> >520/520S/520SE at the following link
> >> >> >
> >> >> >www.n6wk.com/kenwood/
> >> >> >
> >> >> >The TS-520SE is basically the same as the TS-520S except the 520SE
> >> does
> >> >> >not have the ability to operate from 13.6VDC using the DC to DC
> >> >> >converter. Therefore, the service manual for the TS-520S will
> work for
> >> >> >the TS-520SE.
> >> >> >
> >> >> >73
> >> >> >Mike
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> >> >> >On 3/18/2013 10:19 AM, w9mvm wrote:
> >> >> >>
> >> >> >> GM ALL, I am working on a TS-520SE. At the base of each of
> the 6146
> >> >> >> tubes there "were" 2 each resistors wound and soldered. They were
> >> >> >> split and I cannot see the color codes on any of the four
> >> (total). Can
> >> >> >> anyone tell me the values of these guys?? I have new 6146's
> and have
> >> >> >> replaced the final cage componets. Best 73s, MIKE
> >> >> >>
> >> >> >>
> >> >> >
> >> >> >[Non-text portions of this message have been removed]
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41418. 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-21 20:51:30 UTC
From: Rick
Topic: 468 Message: 41418

Where can I get the best deal (quality and money wise) on a couple of 6146B tubes?

Thanks,

Rick/K5IAR

[Non-text portions of this message have been removed]

41419. Re: [TS-520_820_530_830] 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-21 21:27:08 UTC
From: Bob
Topic: 468 Message: 41419

Ebay for sure. There's a set of tubes (incl. 12BY7) for $63;
See Ebay Item #: 190705524288

Another source is RF Parts (rfparts.com). I got a set of Taylor 6146B's, been quite happy with 'em so far ($49.00/pair)...

http://www.rfparts.com/old_site/6146w.html

73,

Bob, KD5MHQ

--- On Thu, 3/21/13, Rick <rickb@...> wrote:

Where can I get the best deal (quality and money wise) on a couple of 6146B
tubes?

Thanks,

Rick/K5IAR

41420. Re: [TS-520_820_530_830] 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-21 21:28:02 UTC
From: Mike
Topic: 468 Message: 41420

RF Parts sells them at various prices. They have a limited warranty of 1 year (see their website at the following link)

http://www.rfparts.com/old_site/6146w.html

I buy all my tubes from

www.vacuumtubes.net

They sell a 6146B for $32 and like all the other tube vendors, they test every tube before they sent it to you. Also, like the other vendors, they offer a warranty on their tubes. I have never received a bad 6146 from vacuumtubes. I purchased 3 pairs of 6146s from vacuumtubes.net 3 years ago and they ALL are still producing full output.

If you go to vacuumtubes.net's website click on the "Price list" link then select "6000 through 7999" link and scroll down to the 6146B 6146B/8298/8298A. Note the next line is a "Chinese" tube, 6146-CH for $20.00.

73
Mike

On 3/21/2013 3:51 PM, Rick wrote:
>
> Where can I get the best deal (quality and money wise) on a couple of
> 6146B
> tubes?
>
> Thanks,
>
> Rick/K5IAR
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

41421. Re: [TS-520_820_530_830] 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-21 21:52:39 UTC
From: Kevin O'Dell N0IRW
Topic: 468 Message: 41421

Matched pair of Taylor 6146B's for $49.00 from RF Parts...plus shipping....total is about $60.....I just bought a pair.....

Kevin O'Dell, N0IRW
On Mar 21, 2013, at 3:51 PM, Rick wrote:

> Where can I get the best deal (quality and money wise) on a couple of 6146B
> tubes?
>
> Thanks,
>
> Rick/K5IAR
>
> [Non-text portions of this message have been removed]
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[Non-text portions of this message have been removed]

41422. Re: *** SPAM ***Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-21 20:49:09 UTC
From: michael Miller
Topic: 41372 Message: 41422

Hi Mike, I know what you are saying is correct. I enjoy you email directions. One question. Is it necessary to go through the neutralization procedures if installing used 6146's if the the used tubes check-good.?? or only installing new 6146's?? Thanks.

BEST 73s and GODS BLESSINGS, MIKE W9MVM

>_____
> From: Mike <w5rkl@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Thursday, March 21, 2013 3:38 PM
>Subject: Re: *** SPAM ***Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors
>
>
>
>
>Hi Mike,
>
>I mean on disrespect but replacing the original components in the final
>amplifier with the parts from the final cage repair kit (C7, C8, and L1)
>you purchased on eBay, followed by replacing final tube cathode
>resistors (2 x 10 ohms 1 watt) followed by replacing the final tube
>screen resistors (2 x 100 ohm 1/2 watt), followed by replacing the
>driver and both final tubes, all in one fell swoop without any testing
>done between component replacement. Unfortunately, you cannot, with any
>certainty, say which components in the kit, the driver tube, or both
>final tubes, were actually the source of your problem.
>
>This is where proper troubleshooting technique play a big role in
>tracking down the source of a problem and why replacing multiple
>components in a "Willy Nilly" or "shot gun" approach without performing
>any troubleshooting is a bad idea.
>
>73
>Mike
>
>On 3/21/2013 11:13 AM, michael Miller wrote:
>>
>> GM MIKE, THANKS FOR YOUR HELP!! THE FINAL CAGE " REPAIR KIT" WAS
>> OBTAINED ON EBAY FROM A POPULAR REPAIR PARTS SITE. ONLY 3EA
>> COMPONETS, SO I ORDERED THEM AND INSTALLED THE NEW REPLACEMENTS.
>> LOCATIONS WERE C7,C8, L1. THE REASON WAS LOW POWER ACROSS ALL FREQS.
>> SITE IS; WWW.HYBRIDRESTORE.COM/FINAL-CAGE-REPAIR/. REPLACED THE 10 OHM
>> RESISTORS AND THE 100 OHM RESISTORS, NOW TO REPLACE THE DRIVER AND THE
>> 6146's and see the results.

>>
>> BEST 73s and GODS BLESSINGS, MIKE W9MVM
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>> >_____
>> > From: Mike <mailto:w5rkl%40yahoo.com <mailto:w5rkl%40yahoo.com>>
>> >To: mailto:TS-520_820_530_830%40yahoogroups.com
>> <mailto:TS-520_820_530_830%40yahoogroups.com>
>> >Sent: Wednesday, March 20, 2013 12:43 PM
>> >Subject: Re: *** SPAM ***Re: [TS-520_820_530_830] TS-520SE, split and
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>> >
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>> >> >> >Subject: Re: [TS-520_820_530_830] TS-520SE, split and burnt
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41423. Help TS-830S S-meter and ALC readings high on meter - 9 Volt regulator issues

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-21 22:32:29 UTC
From: dchristensen70
Topic: 41423 Message: 41423

I posted this earlier but forgot to include the radio type.

I have a TS-830S that has developed a problem with the ALC meter (and I think the S meter) reading. With the radio in tune mode and the carrier control fully counter clockwise the ALC meter reads in the middle of the range. Advancing it even slightly (beyond the 8 o'clock position) pegs the meter making it hard to peak the drive. When tuned and transmitting in SSB the ALC meter pegs with almost no power being generated.

I noticed the other night that S-meter readings appear to be quite high when compared with another radio - The TS-830 is tracking with other radios but reading several S-units higher.

This might have happened when I had a bad section of coax that was presenting a high SWR to the radio on transmit.

The HV meter setting seems normal, the IP Bias on SSB transmit is reading normal (60ma), the RF meter setting seems to track an external power meter. Just the S-meter and ALC is off.

More information: The voltage reading at TP6 on the audio board was reading 10.46 volts when I first checked it. With VR4 all the way counter clockwise the lowest voltage I can get is 9.958 Volts and it slowly creeps up with power over time. When I shut the rig off it was reading 9.968 Volts and still slowly climbing.

The 3.6 Volt reading on pin 5 of the AF connector was a bit high (3.9 V) but I have adjusted the setting to 3.62 volts and it fluctuates a bit up and down but stays within 0.05 volts of this setting

The S-meter with nothing attached to the antenna reads S3.5. Terminated to a 50 Ohm dummy lod it reads S-8-9 with the AGC in Slow position. When the AGC switch is off it reads S3.5.

I think I have a 9 volt regulator circuit is goofy and perhaps the over sensitive ALC settings on tuneup/transmission are also related.

Thanks and 73

Dave - KD7UM

41424. Re: *** SPAM ***Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-21 22:37:29 UTC
From: Joseph Stiles
Topic: 41372 Message: 41424

Mike/ w9mvm,

  If I may answer in the other Mikes place. When the final amplifier tubes are changed, always neutralize! On another note: checking the 6146 series or, other RF output tubes for that matter, on a "tube checker" will not assure that the tube(s) will function correctly/adequately in the "real" RF environment. The best way...in my humble opinion..is to check them on the "tester" and put 'em...neutralize..and see how they function.

73 Joe
WB7UQU

From: michael Miller <w9mvm@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Thursday, March 21, 2013 1:49 PM
Subject: Re: *** SPAM ***Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors

Hi Mike, I know what you are saying is correct. I enjoy you email directions. One question. Is it necessary to go through the neutralization procedures if installing used 6146's if the the used tubes check-good.?? or only installing new 6146's?? Thanks.

BEST 73s and GODS BLESSINGS, MIKE W9MVM

>---
> From: Mike <w5rkl@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Thursday, March 21, 2013 3:38 PM
>Subject: Re: *** SPAM ***Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors
>
>
>
>
>Hi Mike,
>
>I mean on disrespect but replacing the original components in the final
>amplifier with the parts from the final cage repair kit (C7, C8, and L1)
>you purchased on eBay, followed by replacing final tube cathode
>resistors (2 x 10 ohms 1 watt) followed by replacing the final tube
>screen resistors (2 x 100 ohm 1/2 watt), followed by replacing the
>driver and both final tubes, all in one fell swoop without any testing
>done between component replacement. Unfortunately, you cannot, with any
>certainty, say which components in the kit, the driver tube, or both
>final tubes, were actually the source of your problem.
>

>This is where proper troubleshooting technique play a big role in
>tracking down the source of a problem and why replacing multiple
>components in a "Willy Nilly" or "shot gun" approach without performing
>any troubleshooting is a bad idea.
>
>73
>Mike
>
>On 3/21/2013 11:13 AM, michael Miller wrote:
>>
>> GM MIKE, THANKS FOR YOUR HELP!! THE FINAL CAGE " REPAIR KIT" WAS
>> OBTAINED ON EBAY FROM A POPULAR REPAIR PARTS SITE. ONLY 3EA
>> COMPONETS, SO I ORDERED THEM AND INSTALLED THE NEW REPLACEMENTS.
>> LOCATIONS WERE C7,C8, L1. THE REASON WAS LOW POWER ACROSS ALL FREQS.
>> SITE IS; WWW.HYBRIDRESTORE.COM/FINAL-CAGE-REPAIR/. REPLACED THE 10 OHM
>> RESISTORS AND THE 100 OHM RESISTORS, NOW TO REPLACE THE DRIVER AND THE
>> 6146's and see the results.
>>
>> BEST 73s and GODS BLESSINGS, MIKE W9MVM
>>
>> >_________________________________
>> > From: Mike <mailto:w5rkl%40yahoo.com <mailto:w5rkl%40yahoo.com>>
>> >To: mailto:TS-520_820_530_830%40yahoogroups.com
>> <mailto:TS-520_820_530_830%40yahoogroups.com>
>> >Sent: Wednesday, March 20, 2013 12:43 PM
>> >Subject: Re: *** SPAM ***Re: [TS-520_820_530_830] TS-520SE, split and
>> burnt resistors
>> >
>> >
>> >
>> >
>> >Mike,
>> >
>> >Connecting a 100 ohm and 10 ohm resistor in parallel results in a total
>> >resistance of 9.09 ohms (100 x 10 / 100 + 10 = 9.09). It appears a
>> >previous owner of your 520SE had no clue how to calculate resistors
>> >connected in parallel, especially if those "twisted" resistors were made
>> >up to be used in the final tube's cathode circuit.
>> >
>> >A "10KV door knob" cap for a TS-520SE? Where did you buy this "final
>> >cage" repair kit and did you tell the seller you were referring to a
>> >Kenwood TS-520SE hybrid transmitter final amplifier? I have never seen a
>> >"10KV Door Knob" capacitor, from the factory or from a previous owner,
>> >mounted in the final amplifier of any Kenwood hybrid.
>> >
>> >What makes you think you have to perform a "final cage repair" in your
>> >TS-520SE final amplifier? What troubleshooting steps did you take that
>> >produced results that clearly stated you need to replace all of these
>> >components, and to install a "non-standard, non-Kenwood design" 10KV
>> >.001 Door Knob Capacitor in your TS-520SE final amplifier?

>> >
>> >73
>> >Mike
>> >
>> >On 3/20/2013 8:37 AM, michael Miller wrote:
>> >>
>> >>
>> >>
>> >> GM, I was out of town Tuesday so just this morning I'm catching up on
>> >> my mail. Those "twisted" resistors were 1ea, 100 ohm & 10 ohm. While
>> >> in the area of Johnson City, Tn. I obtained the correct "metal film"
>> >> resistors. I have already obtained a "final cage" repair kit on line.
>> >> They are 1ea. .001 10kv doorknob cap. 1ea .01 2kv cap. and a 6.8uH
>> >> 500ma RF choke. A new driver, 2ea 6146s. I will continue, later. Good
>> >> to hear from you.
>> >> BEST 73s and GODS BLESSINGS, MIKE W9MVM
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>> >> >_____
>> >> > From: Mike <mailto:w5rkl%40yahoo.com <mailto:w5rkl%40yahoo.com>>
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>> >> >Sent: Tuesday, March 19, 2013 9:48 AM
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>> >> >Hi Mike,
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>> >> >Okay on having the service manual and schematic. As I said, one can't
>> >> >work on/repair/troubleshoot electronic equipment without the service
>> >> >manual and schematic. I see a lot of members asking questions about
>> >> >problems they are having and what course of action they should take.
>> >> >More often than not, the member does not have the service manual and
>> >> >schematic. That is why I mentioned you need the service manual and
>> >> >schematic before attempting to service your 520SE.
>> >> >
>> >> >It's not important, at this point, what each resistor's value in each
>> >> >"twisted pair" is. You can determine that later (see example below).
>> >> >What you should be doing is focusing on the final amplifier's resistor
>> >> >values for R2 and R3 in the final amplifier which both are 10 ohm
>> 1 watt
>> >> >resistors a piece, to fix the problem, assuming there are no other
>> >> >problems than the burnt out/open twisted pair of resistors. Since the
>> >> >resistors are burnt open, I would also consider one or both of the
>> final
>> >> >tubes may not be up to par. But first, replace the cathode resistors
>> >> >with "correct" resistor values and power ratings as indicated on the
>> >> >schematic. If you don't have the correct value and power rated
>> resistors

>> >> >on hand, order them. Don't go the "easy route", be lazy just to save a
>> >> >few pennies, order and install the "correct" part(s).
>> >> >
>> >> >You wondered what the value of each resistor is in each of the
>> "twisted
>> >> >pair" is. I suspect the value of each resistor is more than likely 20
>> >> >ohms. That means the twisted pair of resistors are connected in
>> >> >"parallel". Looking at the schematic, which is what you should be
>> doing,
>> >> >you will notice that the individual resistors are labeled "R2 and R2"
>> >> >with a value of 10 ohm at 1 watt "each".
>> >> >
>> >> >What appears to have happened is a previous owner did not have any 10
>> >> >ohm 1 watt resistors on hand so they simply connected two 20 ohm
>> >> >resistor together to achieve the 10 ohm resistance needed. You use the
>> >> >formula for pairs of parallel connected resistors which is:
>> >> >
>> >> >RT = R1 x R2 / R1 + R2
>> >> >
>> >> >or
>> >> >
>> >> >20 x 20 / 20 + 20 = 10
>> >> >
>> >> >Since you have 2 pairs of twisted resistors that total 10 ohms each
>> >> >pair, the total resistance is 5 ohms. Use the same formula by simply
>> >> >substituting 20 with 10, see below:
>> >> >
>> >> >10 x 10 / 10 + 10 = 5
>> >> >
>> >> >You can use the same formula for 3 or more resistors connected in
>> >> >parallel, simply divide up the resistors into "pairs". For example, if
>> >> >you have 3 resistors, 10, 20, and 30 ohms, connected in parallel. What
>> >> >will the total resistance be? It will be 5.454 ohms.
>> >> >
>> >> >I divide up the resistors in pairs, first I use the 10 and 20 ohm
>> >> >resistors to achieve an answer which will be 6.666 ohms
>> >> >
>> >> >10 x 20 / 10 + 20 = 6.666
>> >> >
>> >> >The 6.666 "answer" to the first pair now becomes a resistor value
>> I pair
>> >> >up with the last 30 ohm resistor which results in a total
>> resistance of
>> >> >the 3 resistors in parallel of 5.454 ohms
>> >> >
>> >> >6.666 x 30 / 6.666 + 30 = 5.454
>> >> >
>> >> >73
>> >> >Mike
>> >> >

>> >> >On 3/18/2013 3:59 PM, michael Miller wrote:
>> >> >>
>> >> >> Hi MIKE and THANKS. I do have the TS-520 service Man. BUT, it does
>> >> >> NOT show that 2 each resistors are "twisted" to make one
>> resistor of a
>> >> >> certain value. So, these being TU I could not guess why this was
>> done
>> >> >> or if someone had done this at a later time for whatever reason.
>> >> >> Thanks for your reply on my project.
>> >> >>
>> >> >> BEST 73s and GODS BLESSINGS, MIKE W9MVM
>> >> >>
>> >> >> >_____
>> >> >> > From: Mike <mailto:w5rkl%40yahoo.com <mailto:w5rkl%40yahoo.com>>
>> >> >> >To: mailto:TS-520_820_530_830%40yahoogroups.com
>> >> >> <mailto:TS-520_820_530_830%40yahoogroups.com>
>> >> >> >Sent: Monday, March 18, 2013 2:42 PM
>> >> >> >Subject: Re: [TS-520_820_530_830] TS-520SE, split and burnt
>> resistors
>> >> >> >
>> >> >> >
>> >> >> >
>> >> >> >
>> >> >> >Mike,
>> >> >> >
>> >> >> >It appears you do not have the 520 service manual. You should not
>> >> >> >attempt to service the 520 without the service manual. The values
>> >> of the
>> >> >> >resistor in question are listed in the service manual plus shown
>> >> on the
>> >> >> >service manual's schematic.
>> >> >> >
>> >> >> >You can download the manuals, operator and service manuals, for the
>> >> >> >520/520S/520SE at the following link
>> >> >> >
>> >> >> >www.n6wk.com/kenwood/
>> >> >> >
>> >> >> >The TS-520SE is basically the same as the TS-520S except the 520SE
>> >> does
>> >> >> >not have the ability to operate from 13.6VDC using the DC to DC
>> >> >> >converter. Therefore, the service manual for the TS-520S will
>> work for
>> >> >> >the TS-520SE.
>> >> >> >
>> >> >> >73
>> >> >> >Mike
>> >> >> >
>> >> >> >On 3/18/2013 10:19 AM, w9mvm wrote:
>> >> >> >>
>> >> >> >> GM ALL, I am working on a TS-520SE. At the base of each of

>> the 6146
>> >> >> >> tubes there "were" 2 each resistors wound and soldered. They were
>> >> >> >> split and I cannot see the color codes on any of the four
>> >> (total). Can
>> >> >> >> anyone tell me the values of these guys?? I have new 6146's
>> and have
>> >> >> >> replaced the final cage componets. Best 73s, MIKE
>> >> >> >>
>> >> >> >>
>> >> >> >
>> >> >> >[Non-text portions of this message have been removed]
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>> >> >> [Non-text portions of this message have been removed]
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41425. Re: 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-21 23:35:56 UTC
From: David
Topic: 468 Message: 41425

The Taylor tubes are made in China, like most of the others on Ebay etc. I tried a pair for my 830S, and was very disappointed. They did not make much power.

I called RF parts, and I will say that they took them back without any grief. The fellow I talked to recommended trying a pair of Phillips 6146W tubes of which they had a limited supply. They cost about $10.00 more than the Taylor tubes, and are fantastic. I can get full rated power out while drawing a minimum amount of current.

Well worth the extra money! If they have any more, I would buy a pair.

Also having a matched pair is not that important because you will be running them in parallel, not push-pull.

David - KE6YX

--- In TS-520_820_530_830@yahoogroups.com, Bob <bob4analog@...> wrote:
>
>
>
> Ebay for sure. There's a set of tubes (incl. 12BY7) for $63;
> See Ebay Item #: 190705524288
>
> Another source is RF Parts (rfparts.com). I got a set of Taylor 6146B's, been quite happy with 'em so far ($49.00/pair)...
>
> http://www.rfparts.com/old_site/6146w.html
>
> 73,
>
>
> Bob, KD5MHQ
>
> --- On Thu, 3/21/13, Rick <rickb@...> wrote:
>
> Where can I get the best deal (quality and money wise) on a couple of 6146B
> tubes?
>
> Thanks,
>
> Rick/K5IAR
>

41426. Re: 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-21 23:47:54 UTC
From: james27613
Topic: 468 Message: 41426

hi Rick,

New old stock JAN Military circa 1987 RCA Made in USA
tubes for final and the driver.

http://www.surplussales.com/Tubes-Sock-Acc/TubeSpecials.html

6146W $22 each 12BY7A $10

you don't need a matched pair in the Kenwoods
and the driver don't need to be changed when you
change the finals unless it is going bad or has failed.

73 james ke4drn

41427. Re: [TS-520_820_530_830] 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-22 00:21:07 UTC
From: John Donnelly
Topic: 468 Message: 41427

Another vote for EBAY three tube sets, the 12BY7 driver and two 6146Bs. I bought a set for my TS-520 and they were NOS as advertised and excellent quality
GE tubes in the boxes.

Jack Donnelly KV4JX
Ball Ground Video Productions
308 Calusa Place

Ball Ground, GA 30107
Phone 678-592-9974www.ballgroundvideo.com

From: Bob <bob4analog@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, March 21, 2013 5:27 PM
Subject: Re: [TS-520_820_530_830] 6146B

Ebay for sure. There's a set of tubes (incl. 12BY7) for $63;
See Ebay Item #: 190705524288

Another source is RF Parts (rfparts.com). I got a set of Taylor 6146B's, been quite happy with 'em so far ($49.00/pair)...

http://www.rfparts.com/old_site/6146w.html

73,

Bob, KD5MHQ

--- On Thu, 3/21/13, Rick <mailto:rickb%40tx.rr.com> wrote:

Where can I get the best deal (quality and money wise) on a couple of 6146B
tubes?

Thanks,

Rick/K5IAR

[Non-text portions of this message have been removed]

41428. Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-22 00:37:00 UTC
From: michael Miller
Topic: 41372 Message: 41428

Hi Joe & Mike, Just wanted you both too know-my Kenwood TS-520SE is up and running GREAT!! Thank you both for all of your info. and help.This group is very fine, for sure. I have a new ALINCO DX-SR8T which is a great radio (3 weeks "old" now) But, my TS-520 is my primary HF rig and now adding this TS-520SE along with it.

BEST 73s and GODS BLESSINGS, MIKE W9MVM

>_____
> From: Joseph Stiles <stilesjoseph@...>
>To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
>Sent: Thursday, March 21, 2013 6:37 PM
>Subject: Re: *** SPAM ***Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors
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>73 Joe
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>_____
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>>> 1 watt
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>>> >> >problems than the burnt out/open twisted pair of resistors. Since the
>>> >> >resistors are burnt open, I would also consider one or both of the
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>>> >> >tubes may not be up to par. But first, replace the cathode resistors
>>> >> >with "correct" resistor values and power ratings as indicated on the
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>>> >> >On 3/18/2013 3:59 PM, michael Miller wrote:
>>> >> >>
>>> >> >> Hi MIKE and THANKS. I do have the TS-520 service Man. BUT, it does
>>> >> >> NOT show that 2 each resistors are "twisted" to make one
>>> resistor of a
>>> >> >> certain value. So, these being TU I could not guess why this was
>>> done
>>> >> >> or if someone had done this at a later time for whatever reason.
>>> >> >> Thanks for your reply on my project.
>>> >> >>
>>> >> >> BEST 73s and GODS BLESSINGS, MIKE W9MVM
>>> >> >>
>>> >> >> >_____
>>> >> >> > From: Mike <mailto:w5rkl%40yahoo.com <mailto:w5rkl%40yahoo.com>>
>>> >> >> >To: mailto:TS-520_820_530_830%40yahoogroups.com
>>> >> >> <mailto:TS-520_820_530_830%40yahoogroups.com>
>>> >> >> >Sent: Monday, March 18, 2013 2:42 PM
>>> >> >> >Subject: Re: [TS-520_820_530_830] TS-520SE, split and burnt
>>> resistors
>>> >> >> >
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>>> >> >> >
>>> >> >> >
>>> >> >> >Mike,
>>> >> >> >
>>> >> >> >It appears you do not have the 520 service manual. You should not
>>> >> >> >attempt to service the 520 without the service manual. The values
>>> >> of the
>>> >> >> >resistor in question are listed in the service manual plus shown

>>> >> on the
>>> >> >> >service manual's schematic.
>>> >> >> >
>>> >> >> >You can download the manuals, operator and service manuals, for the
>>> >> >> >520/520S/520SE at the following link
>>> >> >> >
>>> >> >> >www.n6wk.com/kenwood/
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>>> >> >> >The TS-520SE is basically the same as the TS-520S except the 520SE
>>> >> does
>>> >> >> >not have the ability to operate from 13.6VDC using the DC to DC
>>> >> >> >converter. Therefore, the service manual for the TS-520S will
>>> work for
>>> >> >> >the TS-520SE.
>>> >> >> >
>>> >> >> >73
>>> >> >> >Mike
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>>> >> >> >On 3/18/2013 10:19 AM, w9mvm wrote:
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>>> >> >> >> GM ALL, I am working on a TS-520SE. At the base of each of
>>> the 6146
>>> >> >> >> tubes there "were" 2 each resistors wound and soldered. They were
>>> >> >> >> split and I cannot see the color codes on any of the four
>>> >> (total). Can
>>> >> >> >> anyone tell me the values of these guys?? I have new 6146's
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>>> >> >> >> replaced the final cage componets. Best 73s, MIKE
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41429. *Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-21 22:40:49 UTC
From: michael Miller
Topic: 41372 Message: 41429

Hi Joe, and I THANK YOU Sir for helping me. Will do.

BEST 73s and GODS BLESSINGS, MIKE W9MVM

>_____
> From: Joseph Stiles <stilesjoseph@...>
>To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
>Sent: Thursday, March 21, 2013 6:37 PM
>Subject: Re: *** SPAM ***Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors
>
>
>
>
>Mike/ w9mvm,
>
> If I may answer in the other Mikes place. When the final amplifier tubes are changed, always neutralize! On another note: checking the 6146 series or, other RF output
>tubes for that matter, on a "tube checker" will not assure that the tube(s) will function correctly/adequately in the "real" RF environment. The best way...in my humble
>opinion..is to check them on the "tester" and put 'em...neutralize..and see how they function.
>
>
>73 Joe
>WB7UQU
>
>_____
>From: michael Miller <mailto:w9mvm%40yahoo.com>
>To:
"mailto:TS-520_820_530_830%40yahoogroups.commailto:TS-520_820_530_830%40yahoogroups.com>
>Sent: Thursday, March 21, 2013 1:49 PM
>Subject: Re: *** SPAM ***Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors
>
>
>
>
>Hi Mike, I know what you are saying is correct. I enjoy you email directions. One question. Is it necessary to go through the neutralization procedures if installing used 6146's if the the used tubes check-good.?? or only installing new 6146's?? Thanks.
>
>BEST 73s and GODS BLESSINGS, MIKE W9MVM
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>>Hi Mike,
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>>I mean on disrespect but replacing the original components in the final
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>>resistors (2 x 10 ohms 1 watt) followed by replacing the final tube
>>screen resistors (2 x 100 ohm 1/2 watt), followed by replacing the
>>driver and both final tubes, all in one fell swoop without any testing
>>done between component replacement. Unfortunately, you cannot, with any
>>certainty, say which components in the kit, the driver tube, or both
>>final tubes, were actually the source of your problem.
>>
>>This is where proper troubleshooting technique play a big role in
>>tracking down the source of a problem and why replacing multiple
>>components in a "Willy Nilly" or "shot gun" approach without performing
>>any troubleshooting is a bad idea.
>>
>>73
>>Mike
>>
>>On 3/21/2013 11:13 AM, michael Miller wrote:
>>>
>>> GM MIKE, THANKS FOR YOUR HELP!! THE FINAL CAGE " REPAIR KIT" WAS
>>> OBTAINED ON EBAY FROM A POPULAR REPAIR PARTS SITE. ONLY 3EA
>>> COMPONETS, SO I ORDERED THEM AND INSTALLED THE NEW REPLACEMENTS.
>>> LOCATIONS WERE C7,C8, L1. THE REASON WAS LOW POWER ACROSS ALL FREQS.
>>> SITE IS; WWW.HYBRIDRESTORE.COM/FINAL-CAGE-REPAIR/. REPLACED THE 10 OHM
>>> RESISTORS AND THE 100 OHM RESISTORS, NOW TO REPLACE THE DRIVER AND THE
>>> 6146's and see the results.
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>>> BEST 73s and GODS BLESSINGS, MIKE W9MVM
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>>> >previous owner of your 520SE had no clue how to calculate resistors
>>> >connected in parallel, especially if those "twisted" resistors were made
>>> >up to be used in the final tube's cathode circuit.
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>>> >A "10KV door knob" cap for a TS-520SE? Where did you buy this "final
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>>> >> my mail. Those "twisted" resistors were 1ea, 100 ohm & 10 ohm. While
>>> >> in the area of Johnson City, Tn. I obtained the correct "metal film"
>>> >> resistors. I have already obtained a "final cage" repair kit on line.
>>> >> They are 1ea. .001 10kv doorknob cap. 1ea .01 2kv cap. and a 6.8uH
>>> >> 500ma RF choke. A new driver, 2ea 6146s. I will continue, later. Good
>>> >> to hear from you.
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>>> >> >manual and schematic. I see a lot of members asking questions about

>>> >> >problems they are having and what course of action they should take.
>>> >> >More often than not, the member does not have the service manual and
>>> >> >schematic. That is why I mentioned you need the service manual and
>>> >> >schematic before attempting to service your 520SE.
>>> >> >
>>> >> >It's not important, at this point, what each resistor's value in each
>>> >> >"twisted pair" is. You can determine that later (see example below).
>>> >> >What you should be doing is focusing on the final amplifier's resistor
>>> >> >values for R2 and R3 in the final amplifier which both are 10 ohm
>>> 1 watt
>>> >> >resistors a piece, to fix the problem, assuming there are no other
>>> >> >problems than the burnt out/open twisted pair of resistors. Since the
>>> >> >resistors are burnt open, I would also consider one or both of the
>>> final
>>> >> >tubes may not be up to par. But first, replace the cathode resistors
>>> >> >with "correct" resistor values and power ratings as indicated on the
>>> >> >schematic. If you don't have the correct value and power rated
>>> resistors
>>> >> >on hand, order them. Don't go the "easy route", be lazy just to save a
>>> >> >few pennies, order and install the "correct" part(s).
>>> >> >
>>> >> >You wondered what the value of each resistor is in each of the
>>> "twisted
>>> >> >pair" is. I suspect the value of each resistor is more than likely 20
>>> >> >ohms. That means the twisted pair of resistors are connected in
>>> >> >"parallel". Looking at the schematic, which is what you should be
>>> doing,
>>> >> >you will notice that the individual resistors are labeled "R2 and R2"
>>> >> >with a value of 10 ohm at 1 watt "each".
>>> >> >
>>> >> >What appears to have happened is a previous owner did not have any 10
>>> >> >ohm 1 watt resistors on hand so they simply connected two 20 ohm
>>> >> >resistor together to achieve the 10 ohm resistance needed. You use the
>>> >> >formula for pairs of parallel connected resistors which is:
>>> >> >
>>> >> >RT = R1 x R2 / R1 + R2
>>> >> >
>>> >> >or
>>> >> >
>>> >> >20 x 20 / 20 + 20 = 10
>>> >> >
>>> >> >Since you have 2 pairs of twisted resistors that total 10 ohms each
>>> >> >pair, the total resistance is 5 ohms. Use the same formula by simply
>>> >> >substituting 20 with 10, see below:
>>> >> >
>>> >> >10 x 10 / 10 + 10 = 5
>>> >> >
>>> >> >You can use the same formula for 3 or more resistors connected in
>>> >> >parallel, simply divide up the resistors into "pairs". For example, if
>>> >> >you have 3 resistors, 10, 20, and 30 ohms, connected in parallel. What

>>> >> >will the total resistance be? It will be 5.454 ohms.
>>> >> >
>>> >> >I divide up the resistors in pairs, first I use the 10 and 20 ohm
>>> >> >resistors to achieve an answer which will be 6.666 ohms
>>> >> >
>>> >> >10 x 20 / 10 + 20 = 6.666
>>> >> >
>>> >> >The 6.666 "answer" to the first pair now becomes a resistor value
>>> I pair
>>> >> >up with the last 30 ohm resistor which results in a total
>>> resistance of
>>> >> >the 3 resistors in parallel of 5.454 ohms
>>> >> >
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41430. Re: *** SPAM ***Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-22 02:09:48 UTC
From: Mike
Topic: 41372 Message: 41430

Mike,

Yes, I recommend you perform the neutralization procedures found in the service manual, regardless whether the tubes are NEW or USED.Neutralizationrequirement is not about whether the tube(s) are NEW or USED.You might take some time and read Tom Ranch, W8JI, website on "Neutralization" (see the following link). While this link is primary focused on ground grid amplifiers, it does provide significant insight in amplifier neutralization.

http://w8ji.com/neutralizing__amplifier.htm

A ham license does not automatically convey electronic knowledgeand experience. Electronic knowledge, troubleshooting and repair experience is something you learn by "studying"and putting what you have learned into practice.

I don't know what your electronic knowledge, troubleshooting, and repair skill level is. Attempting to service a sophisticated transceiver such as a Kenwood hybridfor example, without any electronic knowledge, troubleshooting and repair skills, is the same as jumping into the deepest end of the swimming pool, not knowing how to swim! If you skills in those areas are slim to none then may I recommend you pick up an older edition of the ARRL handbook, anyedition between 50s and 70s is a good choice, (many can be found onebay at cheap prices) and start learning basic electronics. Basic Electronics does NOT become obsolete because of age. A resistor passing current in 1950 will do the same thing in 2013! Don't jump ahead to the advance subjects, learn the basics FIRST. Another book I highly recommend is "The Basic Radio Course" by John T. Frye. This book is out of print but can quite often be found on the web. I found my copy at a used book store, in hard copy, for $2.00. Your local library may have it.

73
Mike

On 3/21/2013 3:49 PM, michael Miller wrote:
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> any 10
> >> >> >ohm 1 watt resistors on hand so they simply connected two 20 ohm
> >> >> >resistor together to achieve the 10 ohm resistance needed. You
> use the
> >> >> >formula for pairs of parallel connected resistors which is:
> >> >> >
> >> >> >RT = R1 x R2 / R1 + R2
> >> >> >
> >> >> >or
> >> >> >
> >> >> >20 x 20 / 20 + 20 = 10
> >> >> >
> >> >> >Since you have 2 pairs of twisted resistors that total 10 ohms each
> >> >> >pair, the total resistance is 5 ohms. Use the same formula by
> simply
> >> >> >substituting 20 with 10, see below:
> >> >> >
> >> >> >10 x 10 / 10 + 10 = 5
> >> >> >
> >> >> >You can use the same formula for 3 or more resistors connected in
> >> >> >parallel, simply divide up the resistors into "pairs". For
> example, if
> >> >> >you have 3 resistors, 10, 20, and 30 ohms, connected in
> parallel. What
> >> >> >will the total resistance be? It will be 5.454 ohms.
> >> >> >
> >> >> >I divide up the resistors in pairs, first I use the 10 and 20 ohm
> >> >> >resistors to achieve an answer which will be 6.666 ohms
> >> >> >
> >> >> >10 x 20 / 10 + 20 = 6.666
> >> >> >
> >> >> >The 6.666 "answer" to the first pair now becomes a resistor value
> >> I pair
> >> >> >up with the last 30 ohm resistor which results in a total
> >> resistance of
> >> >> >the 3 resistors in parallel of 5.454 ohms
> >> >> >
> >> >> >6.666 x 30 / 6.666 + 30 = 5.454
> >> >> >
> >> >> >73
> >> >> >Mike
> >> >> >
> >> >> >On 3/18/2013 3:59 PM, michael Miller wrote:

> >> >> >>
> >> >> >> Hi MIKE and THANKS. I do have the TS-520 service Man. BUT, it
> does
> >> >> >> NOT show that 2 each resistors are "twisted" to make one
> >> resistor of a
> >> >> >> certain value. So, these being TU I could not guess why this was
> >> done
> >> >> >> or if someone had done this at a later time for whatever reason.
> >> >> >> Thanks for your reply on my project.
> >> >> >>
> >> >> >> BEST 73s and GODS BLESSINGS, MIKE W9MVM
> >> >> >>
> >> >> >> >_____
> >> >> >> > From: Mike <mailto:w5rkl%40yahoo.com
> <mailto:w5rkl%40yahoo.com>>
> >> >> >> >To: mailto:TS-520_820_530_830%40yahoogroups.com
> >> >> >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> >> >> >> >Sent: Monday, March 18, 2013 2:42 PM
> >> >> >> >Subject: Re: [TS-520_820_530_830] TS-520SE, split and burnt
> >> resistors
> >> >> >> >
> >> >> >> >
> >> >> >> >
> >> >> >> >
> >> >> >> >Mike,
> >> >> >> >
> >> >> >> >It appears you do not have the 520 service manual. You
> should not
> >> >> >> >attempt to service the 520 without the service manual. The
> values
> >> >> of the
> >> >> >> >resistor in question are listed in the service manual plus shown
> >> >> on the
> >> >> >> >service manual's schematic.
> >> >> >> >
> >> >> >> >You can download the manuals, operator and service manuals,
> for the
> >> >> >> >520/520S/520SE at the following link
> >> >> >> >
> >> >> >> >www.n6wk.com/kenwood/
> >> >> >> >
> >> >> >> >The TS-520SE is basically the same as the TS-520S except the
> 520SE
> >> >> does
> >> >> >> >not have the ability to operate from 13.6VDC using the DC to DC
> >> >> >> >converter. Therefore, the service manual for the TS-520S will
> >> work for
> >> >> >> >the TS-520SE.
> >> >> >> >
> >> >> >> >73

> >> >> >> >Mike
> >> >> >> >
> >> >> >> >On 3/18/2013 10:19 AM, w9mvm wrote:
> >> >> >> >>
> >> >> >> >> GM ALL, I am working on a TS-520SE. At the base of each of
> >> the 6146
> >> >> >> >> tubes there "were" 2 each resistors wound and soldered.
> They were
> >> >> >> >> split and I cannot see the color codes on any of the four
> >> >> (total). Can
> >> >> >> >> anyone tell me the values of these guys?? I have new 6146's
> >> and have
> >> >> >> >> replaced the final cage componets. Best 73s, MIKE
> >> >> >> >>
> >> >> >> >>
> >> >> >> >
> >> >> >> >[Non-text portions of this message have been removed]
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> >> >> >> >
> >> >> >> >
> >> >> >>
> >> >> >> [Non-text portions of this message have been removed]
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> >> >> >>
> >> >> >
> >> >> >[Non-text portions of this message have been removed]
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> >> >> [Non-text portions of this message have been removed]
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41431. Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-22 02:53:53 UTC
From: Joseph Stiles
Topic: 41372 Message: 41431

Mike/w9mvm,

   Glad you got it back up and working & happy that I could help you out

73 Joe
WB7UQU

From: michael Miller <w9mvm@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Thursday, March 21, 2013 5:37 PM
Subject: Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors

Hi Joe & Mike, Just wanted you both too know-my Kenwood TS-520SE is up and running GREAT!! Thank you both for all of your info. and help.This group is very fine, for sure. I have a new ALINCO DX-SR8T which is a great radio (3 weeks "old" now) But, my TS-520 is my primary HF rig and now adding this TS-520SE along with it.

BEST 73s and GODS BLESSINGS, MIKE W9MVM

>---
> From: Joseph Stiles <stilesjoseph@...>
>To: "TS-520_820_530_830@yahoogroups.comTS-520_820_530_830@yahoogroups.com>
>Sent: Thursday, March 21, 2013 6:37 PM
>Subject: Re: *** SPAM ***Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors
>
>
>
>
>Mike/ w9mvm,
>
> If I may answer in the other Mikes place. When the final amplifier tubes are changed, always neutralize! On another note: checking the 6146 series or, other RF output
>tubes for that matter, on a "tube checker" will not assure that the tube(s) will function correctly/adequately in the "real" RF environment. The best way...in my humble
>opinion..is to check them on the "tester" and put 'em...neutralize..and see how they function.
>
>
>73 Joe
>WB7UQU
>
>---
>From: michael Miller <mailto:w9mvm%40yahoo.com>
>To:
"mailto:TS-520_820_530_830%40yahoogroups.commailto:TS-520_820_530_830%40yahoogroups.com>

>Sent: Thursday, March 21, 2013 1:49 PM
>Subject: Re: *** SPAM ***Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors
>
>
>
>
>Hi Mike, I know what you are saying is correct. I enjoy you email directions. One question. Is it necessary to go through the neutralization procedures if installing used 6146's if the the used tubes check-good.?? or only installing new 6146's?? Thanks.
>
>BEST 73s and GODS BLESSINGS, MIKE W9MVM
>
>>_________________________________
>> From: Mike <mailto:w5rkl%40yahoo.com>
>>To: mailto:TS-520_820_530_830%40yahoogroups.com
>>Sent: Thursday, March 21, 2013 3:38 PM
>>Subject: Re: *** SPAM ***Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors
>>
>>
>>
>>
>>Hi Mike,
>>
>>I mean on disrespect but replacing the original components in the final
>>amplifier with the parts from the final cage repair kit (C7, C8, and L1)
>>you purchased on eBay, followed by replacing final tube cathode
>>resistors (2 x 10 ohms 1 watt) followed by replacing the final tube
>>screen resistors (2 x 100 ohm 1/2 watt), followed by replacing the
>>driver and both final tubes, all in one fell swoop without any testing
>>done between component replacement. Unfortunately, you cannot, with any
>>certainty, say which components in the kit, the driver tube, or both
>>final tubes, were actually the source of your problem.
>>
>>This is where proper troubleshooting technique play a big role in
>>tracking down the source of a problem and why replacing multiple
>>components in a "Willy Nilly" or "shot gun" approach without performing
>>any troubleshooting is a bad idea.
>>
>>73
>>Mike
>>
>>On 3/21/2013 11:13 AM, michael Miller wrote:
>>>
>>> GM MIKE, THANKS FOR YOUR HELP!! THE FINAL CAGE " REPAIR KIT" WAS
>>> OBTAINED ON EBAY FROM A POPULAR REPAIR PARTS SITE. ONLY 3EA
>>> COMPONETS, SO I ORDERED THEM AND INSTALLED THE NEW REPLACEMENTS.
>>> LOCATIONS WERE C7,C8, L1. THE REASON WAS LOW POWER ACROSS ALL FREQS.
>>> SITE IS; WWW.HYBRIDRESTORE.COM/FINAL-CAGE-REPAIR/. REPLACED THE 10 OHM
>>> RESISTORS AND THE 100 OHM RESISTORS, NOW TO REPLACE THE DRIVER AND THE
>>> 6146's and see the results.

>>>
>>> BEST 73s and GODS BLESSINGS, MIKE W9MVM
>>>
>>> >_____
>>> > From: Mike <mailto:w5rkl%40yahoo.com <mailto:w5rkl%40yahoo.com>>
>>> >To: mailto:TS-520_820_530_830%40yahoogroups.com
>>> <mailto:TS-520_820_530_830%40yahoogroups.com>
>>> >Sent: Wednesday, March 20, 2013 12:43 PM
>>> >Subject: Re: *** SPAM ***Re: [TS-520_820_530_830] TS-520SE, split and
>>> burnt resistors
>>> >
>>> >
>>> >
>>> >
>>> >Mike,
>>> >
>>> >Connecting a 100 ohm and 10 ohm resistor in parallel results in a total
>>> >resistance of 9.09 ohms (100 x 10 / 100 + 10 = 9.09). It appears a
>>> >previous owner of your 520SE had no clue how to calculate resistors
>>> >connected in parallel, especially if those "twisted" resistors were made
>>> >up to be used in the final tube's cathode circuit.
>>> >
>>> >A "10KV door knob" cap for a TS-520SE? Where did you buy this "final
>>> >cage" repair kit and did you tell the seller you were referring to a
>>> >Kenwood TS-520SE hybrid transmitter final amplifier? I have never seen a
>>> >"10KV Door Knob" capacitor, from the factory or from a previous owner,
>>> >mounted in the final amplifier of any Kenwood hybrid.
>>> >
>>> >What makes you think you have to perform a "final cage repair" in your
>>> >TS-520SE final amplifier? What troubleshooting steps did you take that
>>> >produced results that clearly stated you need to replace all of these
>>> >components, and to install a "non-standard, non-Kenwood design" 10KV
>>> >.001 Door Knob Capacitor in your TS-520SE final amplifier?
>>> >
>>> >73
>>> >Mike
>>> >
>>> >On 3/20/2013 8:37 AM, michael Miller wrote:
>>> >>
>>> >>
>>> >>
>>> >> GM, I was out of town Tuesday so just this morning I'm catching up on
>>> >> my mail. Those "twisted" resistors were 1ea, 100 ohm & 10 ohm. While
>>> >> in the area of Johnson City, Tn. I obtained the correct "metal film"
>>> >> resistors. I have already obtained a "final cage" repair kit on line.
>>> >> They are 1ea. .001 10kv doorknob cap. 1ea .01 2kv cap. and a 6.8uH
>>> >> 500ma RF choke. A new driver, 2ea 6146s. I will continue, later. Good
>>> >> to hear from you.
>>> >> BEST 73s and GODS BLESSINGS, MIKE W9MVM
>>> >>

>>> >> >_____
>>> >> > From: Mike <mailto:w5rkl%40yahoo.com <mailto:w5rkl%40yahoo.com>>
>>> >> >To: mailto:TS-520_820_530_830%40yahoogroups.com
>>> >> <mailto:TS-520_820_530_830%40yahoogroups.com>
>>> >> >Sent: Tuesday, March 19, 2013 9:48 AM
>>> >> >Subject: Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors
>>> >> >
>>> >> >
>>> >> >
>>> >> >
>>> >> >Hi Mike,
>>> >> >
>>> >> >Okay on having the service manual and schematic. As I said, one can't
>>> >> >work on/repair/troubleshoot electronic equipment without the service
>>> >> >manual and schematic. I see a lot of members asking questions about
>>> >> >problems they are having and what course of action they should take.
>>> >> >More often than not, the member does not have the service manual and
>>> >> >schematic. That is why I mentioned you need the service manual and
>>> >> >schematic before attempting to service your 520SE.
>>> >> >
>>> >> >It's not important, at this point, what each resistor's value in each
>>> >> >"twisted pair" is. You can determine that later (see example below).
>>> >> >What you should be doing is focusing on the final amplifier's resistor
>>> >> >values for R2 and R3 in the final amplifier which both are 10 ohm
>>> 1 watt
>>> >> >resistors a piece, to fix the problem, assuming there are no other
>>> >> >problems than the burnt out/open twisted pair of resistors. Since the
>>> >> >resistors are burnt open, I would also consider one or both of the
>>> final
>>> >> >tubes may not be up to par. But first, replace the cathode resistors
>>> >> >with "correct" resistor values and power ratings as indicated on the
>>> >> >schematic. If you don't have the correct value and power rated
>>> resistors
>>> >> >on hand, order them. Don't go the "easy route", be lazy just to save a
>>> >> >few pennies, order and install the "correct" part(s).
>>> >> >
>>> >> >You wondered what the value of each resistor is in each of the
>>> "twisted
>>> >> >pair" is. I suspect the value of each resistor is more than likely 20
>>> >> >ohms. That means the twisted pair of resistors are connected in
>>> >> >"parallel". Looking at the schematic, which is what you should be
>>> doing,
>>> >> >you will notice that the individual resistors are labeled "R2 and R2"
>>> >> >with a value of 10 ohm at 1 watt "each".
>>> >> >
>>> >> >What appears to have happened is a previous owner did not have any 10
>>> >> >ohm 1 watt resistors on hand so they simply connected two 20 ohm
>>> >> >resistor together to achieve the 10 ohm resistance needed. You use the
>>> >> >formula for pairs of parallel connected resistors which is:
>>> >> >

>>> >> >RT = R1 x R2 / R1 + R2
>>> >> >
>>> >> >or
>>> >> >
>>> >> >20 x 20 / 20 + 20 = 10
>>> >> >
>>> >> >Since you have 2 pairs of twisted resistors that total 10 ohms each
>>> >> >pair, the total resistance is 5 ohms. Use the same formula by simply
>>> >> >substituting 20 with 10, see below:
>>> >> >
>>> >> >10 x 10 / 10 + 10 = 5
>>> >> >
>>> >> >You can use the same formula for 3 or more resistors connected in
>>> >> >parallel, simply divide up the resistors into "pairs". For example, if
>>> >> >you have 3 resistors, 10, 20, and 30 ohms, connected in parallel. What
>>> >> >will the total resistance be? It will be 5.454 ohms.
>>> >> >
>>> >> >I divide up the resistors in pairs, first I use the 10 and 20 ohm
>>> >> >resistors to achieve an answer which will be 6.666 ohms
>>> >> >
>>> >> >10 x 20 / 10 + 20 = 6.666
>>> >> >
>>> >> >The 6.666 "answer" to the first pair now becomes a resistor value
>>> I pair
>>> >> >up with the last 30 ohm resistor which results in a total
>>> resistance of
>>> >> >the 3 resistors in parallel of 5.454 ohms
>>> >> >
>>> >> >6.666 x 30 / 6.666 + 30 = 5.454
>>> >> >
>>> >> >73
>>> >> >Mike
>>> >> >
>>> >> >On 3/18/2013 3:59 PM, michael Miller wrote:
>>> >> >>
>>> >> >> Hi MIKE and THANKS. I do have the TS-520 service Man. BUT, it does
>>> >> >> NOT show that 2 each resistors are "twisted" to make one
>>> resistor of a
>>> >> >> certain value. So, these being TU I could not guess why this was
>>> done
>>> >> >> or if someone had done this at a later time for whatever reason.
>>> >> >> Thanks for your reply on my project.
>>> >> >>
>>> >> >> BEST 73s and GODS BLESSINGS, MIKE W9MVM
>>> >> >>
>>> >> >> >_____
>>> >> >> > From: Mike <mailto:w5rkl%40yahoo.com <mailto:w5rkl%40yahoo.com>>
>>> >> >> >To: mailto:TS-520_820_530_830%40yahoogroups.com
>>> >> >> <mailto:TS-520_820_530_830%40yahoogroups.com>
>>> >> >> >Sent: Monday, March 18, 2013 2:42 PM

>>> >> >> >Subject: Re: [TS-520_820_530_830] TS-520SE, split and burnt
>>> resistors
>>> >> >> >
>>> >> >> >
>>> >> >> >
>>> >> >> >
>>> >> >> >Mike,
>>> >> >> >
>>> >> >> >It appears you do not have the 520 service manual. You should not
>>> >> >> >attempt to service the 520 without the service manual. The values
>>> >> of the
>>> >> >> >resistor in question are listed in the service manual plus shown
>>> >> on the
>>> >> >> >service manual's schematic.
>>> >> >> >
>>> >> >> >You can download the manuals, operator and service manuals, for the
>>> >> >> >520/520S/520SE at the following link
>>> >> >> >
>>> >> >> >www.n6wk.com/kenwood/
>>> >> >> >
>>> >> >> >The TS-520SE is basically the same as the TS-520S except the 520SE
>>> >> does
>>> >> >> >not have the ability to operate from 13.6VDC using the DC to DC
>>> >> >> >converter. Therefore, the service manual for the TS-520S will
>>> work for
>>> >> >> >the TS-520SE.
>>> >> >> >
>>> >> >> >73
>>> >> >> >Mike
>>> >> >> >
>>> >> >> >On 3/18/2013 10:19 AM, w9mvm wrote:
>>> >> >> >>
>>> >> >> >> GM ALL, I am working on a TS-520SE. At the base of each of
>>> the 6146
>>> >> >> >> tubes there "were" 2 each resistors wound and soldered. They were
>>> >> >> >> split and I cannot see the color codes on any of the four
>>> >> (total). Can
>>> >> >> >> anyone tell me the values of these guys?? I have new 6146's
>>> and have
>>> >> >> >> replaced the final cage componets. Best 73s, MIKE
>>> >> >> >>
>>> >> >> >>
>>> >> >> >
>>> >> >> >[Non-text portions of this message have been removed]
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41432. TRIO KENWOOD TS-515 technical manual (service manual)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-22 09:25:47 UTC
From: Behiels JeanPierre
Topic: 41432 Message: 41432

Hi Kenwwod members;

Is there anybody who could supply me a copy (a pdf file is already OK for me) of the service manual of the above transceiver.
The user manual is free of charge to find on the net but the service manual is no available ?
I suppose there is still a service manual published in the past ?
I found the service manual for the TS-510 but TS-515 seems to be rare.
I hope someone could help me with my request.

Best regards Jean ON4AEF.

[Non-text portions of this message have been removed]

41433. Re: [TS-520_820_530_830] TS-520SE, split and burnt resistors

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-22 11:46:41 UTC
From: Mike
Topic: 41372 Message: 41433

Glad to see the 520SE is working. I had a 520SE with the DG-5 many years ago. Have fun.

73
Mike

On 3/21/2013 7:37 PM, michael Miller wrote:
>
> Hi Joe & Mike, Just wanted you both too know-my Kenwood TS-520SE is up
> and running GREAT!! Thank you both for all of your info. and help.This
> group is very fine, for sure. I have a new ALINCO DX-SR8T which is a
> great radio (3 weeks "old" now) But, my TS-520 is my primary HF rig
> and now adding this TS-520SE along with it.
>
> BEST 73s and GODS BLESSINGS, MIKE W9MVM
>

[Non-text portions of this message have been removed]

41434. Re: Transmit audio hum with hand held mic

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-22 13:37:01 UTC
From: wallydoc
Topic: 41392 Message: 41434

Jack:
Then the problem is elsewhere.
If a mic is the wrong impedance it just does not work, wrong impedance is not associated with hum.
500 ohm is actually a medium value for a mic impedance, 50K ohm is high. 500 ohm mics work well with the hybrids however, I bought a Karioke mic at Goodwill for $2 and it works fine (500ohms). Low impedance mics need a preamp that really just changes the impedance.
I would try another mic first, then look the unit.
Check the connections on the mick jack on the unit on the back of the front panel, maybe one is loose or broken.
If its just hummmmmm, could it be 60Hz from the power supply?
You could check the mic pins with a scope to see if there is some 60 cps on the pins (or anywhere else). Otherwise it could be anywhere in the transmit chain, but could start in the power unit low voltage supply. I think this is the 14V (16V?) supply. Maybe the electrolytic caps are bad in the LOW volt supply. That would be a cheap and easy fix, these are smaller, easily available caps. I think there are pins on one power board that are marked 14AC and 14DC. If there is 60HZ on the DC pins you need to fix it.
I am not familiar with the mic, is it plastic or metal?
If it's metal Make sure the metal case is well grounded.
But metal cases just act like antennas for RF but the RF does not sound like 60Hz hum.
Wally
KC9INK

--- In TS-520_820_530_830@yahoogroups.com, John Donnelly <jack@...> wrote:
>
> I've confirmed this is an original KW hand held that came with a 520.Â It is wired correctly and the grounds are isolated as they are supposed to be.
> Is there a problem with impedance?Â The hand held is a 500 ohm unit and I believe the S-830 is a high impedance input.
>
> Jack DonnellyÂ Â Â Â Â Â Â Â KV4JX
> Ball Ground Video Productions
> 308 Calusa Place
>
> Ball Ground, GA 30107
> Phone 678-592-9974www.ballgroundvideo.com
>
>
> _____
> From: wallydoc <wallydoc@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, March 20, 2013 5:05 AM
> Subject: [TS-520_820_530_830] Re: Transmit audio hum with hand held mic
>
> Â

>
> Jack:
> I agree with going over the wiring on the mic.
> Make sure the wiring is correct.
> There are two different "grounds" for the mic, one for the element and one for the PTT.
> Then check the mic wire. Possibly replace it.
> I don't know the mic you are using but some mics need good grounding. Otherwise they act as RF feedback antennas.
> I had a similar problem with a D104 on a 520, which is obviously not the mic you are using.
> Wally
> KC9INK
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, John Donnelly <jack@> wrote:
> >
> > A question for the group:
> >
> > I've got a TS-830s gold medallion that has moderate hum on transmit.Â I'm using a hand held mic that I believe was made for a TS-520.Â It measures
> > 500 ohms with a multimeter.Â The two pins for the keying switch on the micÂ are not connected to either mic element lead.
> >
> > If I key the transmitter with the send switch, and the mic disconnected, the audio is clean. Will getting an MC-50 solve
> > this problem?
> >
> > 73's
> > Jack Donnelly
> >
> > [Non-text portions of this message have been removed]
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>
>
> [Non-text portions of this message have been removed]
>

41435. Re: Transmit audio hum with hand held mic

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-22 13:38:59 UTC
From: wallydoc
Topic: 41392 Message: 41435

--- In TS-520_820_530_830@yahoogroups.com, Peter Carr <wb3bqo@...> wrote:
>
> Hi to all. On the subject of mics, I put a Shure cartridge into a Motorola mic and added a 4-pin connector. It works well with my TS-520 but I found that background noise is noticeable. This includes shifting my grip on the mike or squeaks from the PTT switch. I tried a bit of plastic foam inside the mic case and that helped but not very much. Would anyone have a suggestion for better packing?
> Thanks & 73.
> Pete Carr WW3O
>
>
>
>
> _____
> From: wallydoc <wallydoc@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, March 20, 2013 5:05 AM
> Subject: [TS-520_820_530_830] Re: Transmit audio hum with hand held mic
>
>
> Â
> Jack:
> I agree with going over the wiring on the mic.
> Make sure the wiring is correct.
> There are two different "grounds" for the mic, one for the element and one for the PTT.
> Then check the mic wire. Possibly replace it.
> I don't know the mic you are using but some mics need good grounding. Otherwise they act as RF feedback antennas.
> I had a similar problem with a D104 on a 520, which is obviously not the mic you are using.
> Wally
> KC9INK
>
> --- In TS-520_820_530_830@yahoogroups.com, John Donnelly <jack@> wrote:
> >
> > A question for the group:
> >
> > I've got a TS-830s gold medallion that has moderate hum on transmit.Â I'm using a hand held mic that I believe was made for a TS-520.Â It measures
> > 500 ohms with a multimeter.Â The two pins for the keying switch on the micÂ are not connected to either mic element lead.
> >
> > If I key the transmitter with the send switch, and the mic disconnected, the audio is clean. Will getting an MC-50 solve
> > this problem?

> >
> > 73's
> > Jack Donnelly
> >
> > [Non-text portions of this message have been removed]
> >
>
>
>
>
> [Non-text portions of this message have been removed]
>

41436. 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-22 14:58:50 UTC
From: Rick
Topic: 468 Message: 41436

Thanks to everyone who answered my post for a good deal on 6146B tubes. I got a number of public and private replies. It appears RF Parts is the most popular. Of course, American made is a must.

Thanks again and 73,

Rick/K5IAR

[Non-text portions of this message have been removed]

41437. Re: Transmit audio hum with hand held mic

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-22 14:01:32 UTC
From: wallydoc
Topic: 41392 Message: 41437

Pete:
Cartridges and mics are much different in their pick up pattern. D 104 mics will pick up anything in the room, for example. If your Shure cartridge is from a Base mic, the kind with a metal stand, it will do the same. Cardiod patterns are mostly dictated by the enclosure.
Mostly hand mics and hence their cartridges, are designed for mobile use where you have lots of noise and need to hold the mic up to your mouth.
If you are interested in experimenting and like the Motorola enclosure, you could go to a local CB shop and buy old CB mics for a buck each and try their cartridges (maybe they will give them away). Some are surprisingly good.
For handling noise you could try sound deadening material, perhaps parts of a paper egg carton. Sound deadener material used to have lead in it, I don't know what is currently available. Maybe left over refrigerator magnets would work. You can cut them to fit.
You could evaluate the sound deadening of a material by putting it in front of a small speaker and seeing if it deadens the sound.
Wally
KC9INK

--- In TS-520_820_530_830@yahoogroups.com, Peter Carr <wb3bqo@...> wrote:
>
> Hi to all. On the subject of mics, I put a Shure cartridge into a Motorola mic and added a 4-pin connector. It works well with my TS-520 but I found that background noise is noticeable. This includes shifting my grip on the mike or squeaks from the PTT switch. I tried a bit of plastic foam inside the mic case and that helped but not very much. Would anyone have a suggestion for better packing?
> Thanks & 73.
> Pete Carr WW3O
>
>
>
>
> _____
> From: wallydoc <wallydoc@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, March 20, 2013 5:05 AM
> Subject: [TS-520_820_530_830] Re: Transmit audio hum with hand held mic
>
>
> Â
> Jack:
> I agree with going over the wiring on the mic.
> Make sure the wiring is correct.
> There are two different "grounds" for the mic, one for the element and one for the PTT.
> Then check the mic wire. Possibly replace it.
> I don't know the mic you are using but some mics need good grounding. Otherwise they act

as RF feedback antennas.
> I had a similar problem with a D104 on a 520, which is obviously not the mic you are using.
> Wally
> KC9INK
>
> --- In TS-520_820_530_830@yahoogroups.com, John Donnelly <jack@> wrote:
> >
> > A question for the group:
> >
> > I've got a TS-830s gold medallion that has moderate hum on transmit.Â I'm using a hand held mic that I believe was made for a TS-520.Â It measures
> > 500 ohms with a multimeter.Â The two pins for the keying switch on the micÂ are not connected to either mic element lead.
> >
> > If I key the transmitter with the send switch, and the mic disconnected, the audio is clean. Will getting an MC-50 solve
> > this problem?
> >
> > 73's
> > Jack Donnelly
> >
> > [Non-text portions of this message have been removed]
> >
>
>
>
>
> [Non-text portions of this message have been removed]
>

41438. Re: [TS-520_820_530_830] TRIO KENWOOD TS-515 technical manual (service manual)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-22 14:33:24 UTC
From: kshitij mathur
Topic: 41432 Message: 41438

Can anyone tell me where I can find PS 511S - to test my TS 511S which never came on air for want of an appropriate power supply- I am ready to buy it if it is in operational condition- kindly tell me the reasonable price which I can afford
73
VU2CDW
--- On Fri, 22/3/13, Behiels JeanPierre <on4aef@telenet.be> wrote:

From: Behiels JeanPierre <on4aef@...>
Subject: [TS-520_820_530_830] TRIO KENWOOD TS-515 technical manual (service manual)
To: TS-520_820_530_830@yahoogroups.com
Date: Friday, 22 March, 2013, 2:55 PM

Hi Kenwwod members;

Is there anybody who could supply me a copy (a pdf file is already OK for me) of the service manual of the above transceiver.

The user manual is free of charge to find on the net but the service manual is no available ?

I suppose there is still a service manual published in the past ?

I found the service manual for the TS-510 but TS-515 seems to be rare.

I hope someone could help me with my request.

Best regards Jean ON4AEF.

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41439. Re: TS-820 RFC

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-22 14:37:04 UTC
From: wallydoc
Topic: 41410 Message: 41439

Rick
I think you are referring to the little choke. I think it is about 6.8 micro henries. The exact value is not critical. You could use anything close, perhaps even several times the value. I once made one up by winding 6 six turns of enameled wire through a very small toroid. It works.
You just measured the DC resistance of the wire, not the ferro magnetic effect of the core (on RF).
If the big upright choke is the issue, it must be rewound by hand, none available. This is a pain. This is again not critical and using the same size magnet wire for the same distance(rather than counting the turns) on the ceramic tube will work fine. Mark the ceramic form before removing the old wire.
I think Ken http://www.n6wk.com still sells a rebuild kit that includes the little choke and new high voltage caps and I did use one of his kits. They are good and the price is OK. You can spend lots more time finding the parts and pay a little less. If you are working on the final, this is a good thing to do while you are in there.
I think he discusses the issue on his website. It is worthwhile reading.
If the little choke blew you may have cap trouble that caused it.
Also the little choke can arc to the metal base of the final tubes and is mounted very close to them. The orignal S2001 tubes had plastic bases.
Wally
KC9INK

--- In TS-520_820_530_830@yahoogroups.com, "Rick" <rickb@...> wrote:
>
> Does anyone happen to know the approximate impedance of L1 in the final
> cage? Mine measures .47 ohms.
>
>
>
> Thanks,
>
> Rick/K5IAR
>
>
>
> [Non-text portions of this message have been removed]
>

41440. Re: 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-22 15:04:27 UTC
From: roberteleazer@rocketmail.com
Topic: 468 Message: 41440

Rick:

Before you crank her up I strongly recommend you go to ebay and buy a used but tested good set of 6146's or 6146A's. They will work in the set but might not put out the same power. And the same for a couple of 12BY7A's.

There is no reason to fry a good set of 6146B's while you learn to operate the radio and do troubleshooting. In my TS-820S, which was received with many problems, I pulled the 6146B's, not trusting them anyway, and proceeded to install a used set of S2001A's. I wore them down with many Tune and transmit cycles and eventually killed them when a connector came loose while I was fixing another problem. Once I got it all working properly, I put the 6146B's that came with it and all was well. In the process I went through a couple of cheap used 12BY7A's as well.

Another option is to pick up a cheap set of 6883B's (e.g. $20 for the pair). They are 6146B's with 12V filaments. It is simple to rewire the filaments for 12V. I may try that with the TS-520 I am repairing now.

Good Luck!

Robert

--- In TS-520_820_530_830@yahoogroups.com, "Rick" <rickb@...> wrote:
>
> Thanks to everyone who answered my post for a good deal on 6146B tubes. I
> got a number of public and private replies. It appears RF Parts is the most
> popular. Of course, American made is a must.
>
>
>
> Thanks again and 73,
>
> Rick/K5IAR
>
>
>
> [Non-text portions of this message have been removed]
>

41441. RE: [TS-520_820_530_830] Re: TS-820 RFC

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-22 16:11:54 UTC
From: Rick
Topic: 41410 Message: 41441

Hi Wally,

Thanks for the tips. I ordered a final rebuild kit the other day. It should be here next week. I don't feel the little choke (L1) will cure the problems I am having, but I was in there and it was charred black from over heating too many times, so, I decided to replace it along with the other items in the kit. I'm sure the finals are weak or they tested weak on my old Hickock. I can still get full power after an hour or so warm up on all bands but 160 and it is dead. Probably a VFO issue.

Thanks again,

Rick/K5IAR

Rick
I think you are referring to the little choke. I think it is about 6.8 micro henries. The exact value is not critical. You could use anything close, perhaps even several times the value. I once made one up by winding 6 six turns of enameled wire through a very small toroid. It works.
You just measured the DC resistance of the wire, not the ferro magnetic effect of the core (on RF).
If the big upright choke is the issue, it must be rewound by hand, none available. This is a pain. This is again not critical and using the same size magnet wire for the same distance(rather than counting the turns) on the ceramic tube will work fine. Mark the ceramic form before removing the old wire.
I think Ken http://www.n6wk.com still sells a rebuild kit that includes the little choke and new high voltage caps and I did use one of his kits. They are good and the price is OK. You can spend lots more time finding the parts and pay a little less. If you are working on the final, this is a good thing to do while you are in there.
I think he discusses the issue on his website. It is worthwhile reading.
If the little choke blew you may have cap trouble that caused it.
Also the little choke can arc to the metal base of the final tubes and is mounted very close to them. The orignal S2001 tubes had plastic bases.
Wally
KC9INK

[Non-text portions of this message have been removed]

41442. RE: [TS-520_820_530_830] Re: 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-22 16:20:16 UTC
From: Rick
Topic: 468 Message: 41442

Thanks for the advice, Robert. I have many old 6146's, S2001A's and 12BY7A's that I've been using during repair. I am very familiar with the 820 as it is almost identical to my TS-520 I have been using for many, many years. This one has been sitting for a number of years in a controlled environment. Most of the problems have been solved by exercising the controls, switches and cleaning the plugs and sockets on the boards. I had to replace Q25 in the processor to get it going and a couple of electrolytic capacitors, but other than that it's been mostly cleaning.

Thanks again!

Rick/K5IAR

Rick:

Before you crank her up I strongly recommend you go to ebay and buy a used but tested good set of 6146's or 6146A's. They will work in the set but might not put out the same power. And the same for a couple of 12BY7A's.

There is no reason to fry a good set of 6146B's while you learn to operate the radio and do troubleshooting. In my TS-820S, which was received with many problems, I pulled the 6146B's, not trusting them anyway, and proceeded to install a used set of S2001A's. I wore them down with many Tune and transmit cycles and eventually killed them when a connector came loose while I was fixing another problem. Once I got it all working properly, I put the 6146B's that came with it and all was well. In the process I went through a couple of cheap used 12BY7A's as well.

Another option is to pick up a cheap set of 6883B's (e.g. $20 for the pair). They are 6146B's with 12V filaments. It is simple to rewire the filaments for 12V. I may try that with the TS-520 I am repairing now.

Good Luck!

Robert

[Non-text portions of this message have been removed]

41443. Re: [TS-520_820_530_830] Re: TS-820 RFC

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-22 16:14:04 UTC
From: Mike
Topic: 41410 Message: 41443

If the 820 works on all bands but is dead on 160, the problem is not
the VFO. More than likely the problem is caused by a failure in the
160 meter VCO, Q2 on the VCO board, in the PLL Unit.

The VFO is not controlled by nor is it's output and frequency
switched and changed by the band switch. The VFO output is
applied to the PLL Unit at PLL-1 pin 2 (VFO signal) and
pin 1 (GND).

I would check the 160 meter VCO for the source of your problem
on 160.

73
Mike

On 3/22/2013 11:11 AM, Rick wrote:
>
> Hi Wally,
>
> Thanks for the tips. I ordered a final rebuild kit the other day. It
> should
> be here next week. I don't feel the little choke (L1) will cure the
> problems
> I am having, but I was in there and it was charred black from over heating
> too many times, so, I decided to replace it along with the other items in
> the kit. I'm sure the finals are weak or they tested weak on my old
> Hickock.
> I can still get full power after an hour or so warm up on all bands
> but 160
> and it is dead. Probably a VFO issue.
>
> Thanks again,
>
> Rick/K5IAR
>
> Rick
> I think you are referring to the little choke. I think it is about 6.8
> micro
> henries. The exact value is not critical. You could use anything close,
> perhaps even several times the value. I once made one up by winding 6 six
> turns of enameled wire through a very small toroid. It works.
> You just measured the DC resistance of the wire, not the ferro magnetic
> effect of the core (on RF).
> If the big upright choke is the issue, it must be rewound by hand, none
> available. This is a pain. This is again not critical and using the same
> size magnet wire for the same distance(rather than counting the turns) on

> the ceramic tube will work fine. Mark the ceramic form before removing the
> old wire.
> I think Ken http://www.n6wk.com still sells a rebuild kit that
> includes the
> little choke and new high voltage caps and I did use one of his kits. They
> are good and the price is OK. You can spend lots more time finding the
> parts
> and pay a little less. If you are working on the final, this is a good
> thing
> to do while you are in there.
> I think he discusses the issue on his website. It is worthwhile reading.
> If the little choke blew you may have cap trouble that caused it.
> Also the little choke can arc to the metal base of the final tubes and is
> mounted very close to them. The orignal S2001 tubes had plastic bases.
> Wally
> KC9INK
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

41444. Re: TS-520S - Losing output power & receive during tune procedure

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-22 13:20:04 UTC
From: cl5ltd
Topic: 41362 Message: 41444

No, it occurs mainly while I am tuning the radio - moreso after changing bands and when I adjust the drive control while in send.

After the power output drops and I flick out of send, receive is also nearly dead - as though I have turned down rf gain or turned on the attenuator. A on/off power cycle brings back receive but same fault occurs when I try to do the tune process

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> Does this occur right after you let up on the transmit key?
>
> If so, it's probably a relay.
>
> Robert
>
>

41445. Re: Kenwood TS515

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-22 14:37:37 UTC
From: wx2fa
Topic: 41397 Message: 41445

Jean,

I had to make a cable for my TS-511S (US version of TS-515). The connectors are an old Cinch-Jones connector that is now produced by Molex (Beau Series). Mouser has both parts in stock.

Plug: Molex #38331-5612, Mouser# 538-38331-5612
Socket: Molex #38331-8012, Mouser# 538-38331-8012

Regards,
Frank WX2FA

--- In TS-520_820_530_830@yahoogroups.com, "Behiels JeanPierre" <on4aef@...> wrote:
>
> Hi Kenwood members;
>
> I am looking for the interconnection cable between the TS-515 transceiver and his separated power supply PS-515
> Especially the two connectors alone are allready a solution.
> Somebody nows a possible solution for it,or any source where I could possible find a pair of connectors or a cable??
>
> Regards Jean ON4AEF.
>
>
> [Non-text portions of this message have been removed]
>

41446. RE: [TS-520_820_530_830] Re: TS-820 RFC

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-22 18:18:38 UTC
From: Rick
Topic: 41410 Message: 41446

Thanks, Mike. I guess I assumed it might be a VFO problem because when I tune other bands I get a little intermittent operation at times as if something is a little dirty or not making good contact. I should have made myself more clear. The 160 meter receive is fine it's just no transmitter drive.

I will definitely follow your advice and check the 160 meter VCO, Q2 in particular.

Thanks a million!

Rick/K5IAR

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Mike
Sent: Friday, March 22, 2013 10:14 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: TS-820 RFC

If the 820 works on all bands but is dead on 160, the problem is not the VFO. More than likely the problem is caused by a failure in the 160 meter VCO, Q2 on the VCO board, in the PLL Unit.

The VFO is not controlled by nor is it's output and frequency switched and changed by the band switch. The VFO output is applied to the PLL Unit at PLL-1 pin 2 (VFO signal) and pin 1 (GND).

I would check the 160 meter VCO for the source of your problem on 160.

73
Mike

On 3/22/2013 11:11 AM, Rick wrote:
>
> Hi Wally,
>
> Thanks for the tips. I ordered a final rebuild kit the other day. It
> should
> be here next week. I don't feel the little choke (L1) will cure the
> problems
> I am having, but I was in there and it was charred black from over heating
> too many times, so, I decided to replace it along with the other items in
> the kit. I'm sure the finals are weak or they tested weak on my old

> Hickock.
> I can still get full power after an hour or so warm up on all bands
> but 160
> and it is dead. Probably a VFO issue.
>
> Thanks again,
>
> Rick/K5IAR
>
> Rick
> I think you are referring to the little choke. I think it is about 6.8
> micro
> henries. The exact value is not critical. You could use anything close,
> perhaps even several times the value. I once made one up by winding 6 six
> turns of enameled wire through a very small toroid. It works.
> You just measured the DC resistance of the wire, not the ferro magnetic
> effect of the core (on RF).
> If the big upright choke is the issue, it must be rewound by hand, none
> available. This is a pain. This is again not critical and using the same
> size magnet wire for the same distance(rather than counting the turns) on
> the ceramic tube will work fine. Mark the ceramic form before removing the
> old wire.
> I think Ken http://www.n6wk.com still sells a rebuild kit that
> includes the
> little choke and new high voltage caps and I did use one of his kits. They
> are good and the price is OK. You can spend lots more time finding the
> parts
> and pay a little less. If you are working on the final, this is a good
> thing
> to do while you are in there.
> I think he discusses the issue on his website. It is worthwhile reading.
> If the little choke blew you may have cap trouble that caused it.
> Also the little choke can arc to the metal base of the final tubes and is
> mounted very close to them. The orignal S2001 tubes had plastic bases.
> Wally
> KC9INK
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41447. Re: TRIO KENWOOD TS-515 technical manual (service manual)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-22 20:35:57 UTC
From: james27613
Topic: 41432 Message: 41447

Hi Jean,

http://www.radiomanual.info/KENWOOD.html

manuals in pdf no cost from the big three and more.

share a manual you have if it is not on the list.

73 james ke4drn

41448. Re: [TS-520_820_530_830] Re: TS-820 RFC

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-22 20:40:21 UTC
From: Mike
Topic: 41410 Message: 41448

If receive on 160 is okay but transmit is not working then
not the 160 meter VCO. The VCO, selected by the band switch,
functions in both transmit and receive. Verify the presence of the
TIF signal at the RF Unit's RF1 pins 9 and 10 on 160.

Mike

On 3/22/2013 1:18 PM, Rick wrote:
>
> Thanks, Mike. I guess I assumed it might be a VFO problem because when I
> tune other bands I get a little intermittent operation at times as if
> something is a little dirty or not making good contact. I should have made
> myself more clear. The 160 meter receive is fine it's just no transmitter
> drive.
>
> I will definitely follow your advice and check the 160 meter VCO, Q2 in
> particular.
>
> Thanks a million!
>
> Rick/K5IAR
>
> _____
>
> From: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> [mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Mike
> Sent: Friday, March 22, 2013 10:14 AM
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: Re: [TS-520_820_530_830] Re: TS-820 RFC
>
> If the 820 works on all bands but is dead on 160, the problem is not
> the VFO. More than likely the problem is caused by a failure in the
> 160 meter VCO, Q2 on the VCO board, in the PLL Unit.
>
> The VFO is not controlled by nor is it's output and frequency
> switched and changed by the band switch. The VFO output is
> applied to the PLL Unit at PLL-1 pin 2 (VFO signal) and
> pin 1 (GND).
>
> I would check the 160 meter VCO for the source of your problem
> on 160.
>

> 73
> Mike
>
> On 3/22/2013 11:11 AM, Rick wrote:
> >
> > Hi Wally,
> >
> > Thanks for the tips. I ordered a final rebuild kit the other day. It
> > should
> > be here next week. I don't feel the little choke (L1) will cure the
> > problems
> > I am having, but I was in there and it was charred black from over
> heating
> > too many times, so, I decided to replace it along with the other
> items in
> > the kit. I'm sure the finals are weak or they tested weak on my old
> > Hickock.
> > I can still get full power after an hour or so warm up on all bands
> > but 160
> > and it is dead. Probably a VFO issue.
> >
> > Thanks again,
> >
> > Rick/K5IAR
> >
> > Rick
> > I think you are referring to the little choke. I think it is about 6.8
> > micro
> > henries. The exact value is not critical. You could use anything close,
> > perhaps even several times the value. I once made one up by winding
> 6 six
> > turns of enameled wire through a very small toroid. It works.
> > You just measured the DC resistance of the wire, not the ferro magnetic
> > effect of the core (on RF).
> > If the big upright choke is the issue, it must be rewound by hand, none
> > available. This is a pain. This is again not critical and using the same
> > size magnet wire for the same distance(rather than counting the
> turns) on
> > the ceramic tube will work fine. Mark the ceramic form before
> removing the
> > old wire.
> > I think Ken http://www.n6wk.com still sells a rebuild kit that
> > includes the
> > little choke and new high voltage caps and I did use one of his
> kits. They
> > are good and the price is OK. You can spend lots more time finding the
> > parts
> > and pay a little less. If you are working on the final, this is a good
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> > to do while you are in there.

> > I think he discusses the issue on his website. It is worthwhile reading.
> > If the little choke blew you may have cap trouble that caused it.
> > Also the little choke can arc to the metal base of the final tubes
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> > mounted very close to them. The orignal S2001 tubes had plastic bases.
> > Wally
> > KC9INK
> >
> > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
>
> [Non-text portions of this message have been removed]
>
>

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41449. Re: [TS-520_820_530_830] Re: Transmit audio hum with hand held mic

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-22 20:46:56 UTC
From: Peter Carr
Topic: 41392 Message: 41449

Hi Wally and thanks for the reply. You hit it right on the head. The Shure cartridge was from an old deck mic. I'll stuff some pieces of paper egg carton around the element and try that. I hadn't considered CB mics as a source of elements and have a ham friend that has several. Maybe he will part with a couple for test purposes.
Once again thanks for great advice.
73,
Pete WW3O

From: wallydoc <wallydoc@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, March 22, 2013 10:01 AM
Subject: [TS-520_820_530_830] Re: Transmit audio hum with hand held mic

Pete:
Cartridges and mics are much different in their pick up pattern. D 104 mics will pick up anything in the room, for example. If your Shure cartridge is from a Base mic, the kind with a metal stand, it will do the same. Cardiod patterns are mostly dictated by the enclosure.
Mostly hand mics and hence their cartridges, are designed for mobile use where you have lots of noise and need to hold the mic up to your mouth.
If you are interested in experimenting and like the Motorola enclosure, you could go to a local CB shop and buy old CB mics for a buck each and try their cartridges (maybe they will give them away). Some are surprisingly good.
For handling noise you could try sound deadening material, perhaps parts of a paper egg carton. Sound deadener material used to have lead in it, I don't know what is currently available. Maybe left over refrigerator magnets would work. You can cut them to fit.
You could evaluate the sound deadening of a material by putting it in front of a small speaker and seeing if it deadens the sound.
Wally
KC9INK

--- In TS-520_820_530_830@yahoogroups.com, Peter Carr <wb3bqo@...> wrote:
>
> Hi to all. On the subject of mics, I put a Shure cartridge into a Motorola mic and added a 4-pin connector. It works well with my TS-520 but I found that background noise is noticeable. This includes shifting my grip on the mike or squeaks from the PTT switch. I tried a bit of plastic foam inside the mic case and that helped but not very much. Would anyone have a suggestion for better packing?
> Thanks & 73.
> Pete Carr WW3O
>
>
>
>
> ---

> From: wallydoc <wallydoc@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, March 20, 2013 5:05 AM
> Subject: [TS-520_820_530_830] Re: Transmit audio hum with hand held mic
>
>
> Â
> Jack:
> I agree with going over the wiring on the mic.
> Make sure the wiring is correct.
> There are two different "grounds" for the mic, one for the element and one for the PTT.
> Then check the mic wire. Possibly replace it.
> I don't know the mic you are using but some mics need good grounding. Otherwise they act as RF feedback antennas.
> I had a similar problem with a D104 on a 520, which is obviously not the mic you are using.
> Wally
> KC9INK
>
> --- In TS-520_820_530_830@yahoogroups.com, John Donnelly <jack@> wrote:
> >
> > A question for the group:
> >
> > I've got a TS-830s gold medallion that has moderate hum on transmit.Â I'm using a hand held mic that I believe was made for a TS-520.Â It measures
> > 500 ohms with a multimeter.Â The two pins for the keying switch on the micÂ are not connected to either mic element lead.
> >
> > If I key the transmitter with the send switch, and the mic disconnected, the audio is clean. Will getting an MC-50 solve
> > this problem?
> >
> > 73's
> > Jack Donnelly
> >
> > [Non-text portions of this message have been removed]
> >
>
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>
>
> [Non-text portions of this message have been removed]
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[Non-text portions of this message have been removed]

41450. RE: [TS-520_820_530_830] Re: TS-820 RFC

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-22 22:31:29 UTC
From: Rick
Topic: 41410 Message: 41450

I think you were right the first go around, Mike. I think Q2 is defective. I do get a signal from my generator up and down the 160 meter band, however, I just checked the voltages on Q2 and they are all off a lot. The base has zero voltage, the collector voltage is way down and the emitter voltage about twice as much as it should be. So, Q2 cannot be performing correctly. I'm not sure the device is to blame or something in the associated circuitry. I had a NTE cross match for Q2 and installed it. The voltages were much closer but the receiver was dead on 160 and within a few minutes the voltages were zero or almost zero on all legs of the NTE transistor. So much for subs. I've located a 2SC460, but it is not the (B) version so I'm not sure it will stand the test either. I'll get it tomorrow and find out. I put the original device back into the circuit and I'm back where I started.

Rick

If receive on 160 is okay but transmit is not working then
not the 160 meter VCO. The VCO, selected by the band switch,
functions in both transmit and receive. Verify the presence of the
TIF signal at the RF Unit's RF1 pins 9 and 10 on 160.

Mike

[Non-text portions of this message have been removed]

41452. Re: [TS-520_820_530_830] Re: Transmit audio hum with hand held mic

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-23 00:27:27 UTC
From: John Davidson
Topic: 41392 Message: 41452

Most of the Motorola mobile radio mics have a low Z and an amplifier integrated into the mic, So they use unshielded cords.
 A higher Z input on most ham gear needs shielding. May be the cause of your hum !

From: wallydoc <wallydoc@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, March 22, 2013 10:01 AM
Subject: [TS-520_820_530_830] Re: Transmit audio hum with hand held mic

Pete:
KC9INK

--- In mailto:TS-520_820_530_830%40yahoogroups.com, Peter Carr <wb3bqo@...> wrote:
>
> Hi to all. On the subject of mics, I put a Shure cartridge into a Motorola mic and added a 4-pin connector. It works well with my TS-520 but I found that background noise is noticeable. This includes shifting my grip on the mike or squeaks from the PTT switch. I tried a bit of plastic foam inside the mic case and that helped but not very much. Would anyone have a suggestion for better packing?
> Thanks & 73.
> Pete Carr WW3O
>
>
>
>
> ---
> From: wallydoc <wallydoc@...>
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Wednesday, March 20, 2013 5:05 AM
> Subject: [TS-520_820_530_830] Re: Transmit audio hum with hand held mic
>
>
> Â
> Jack:
> I agree with going over the wiring on the mic.
> Make sure the wiring is correct.
> There are two different "grounds" for the mic, one for the element and one for the PTT.
> Then check the mic wire. Possibly replace it.
> I don't know the mic you are using but some mics need good grounding. Otherwise they act as RF feedback antennas.
> I had a similar problem with a D104 on a 520, which is obviously not the mic you are using.
> Wally
> KC9INK
>

> --- In mailto:TS-520_820_530_830%40yahoogroups.com, John Donnelly <jack@> wrote:
> >
> > A question for the group:
> >
> > I've got a TS-830s gold medallion that has moderate hum on transmit.Â I'm using a hand held mic that I believe was made for a TS-520.Â It measures
> > 500 ohms with a multimeter.Â The two pins for the keying switch on the micÂ are not connected to either mic element lead.
> >
> > If I key the transmitter with the send switch, and the mic disconnected, the audio is clean. Will getting an MC-50 solve
> > this problem?
> >
> > 73's
> > Jack Donnelly
> >
> > [Non-text portions of this message have been removed]
> >
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> [Non-text portions of this message have been removed]
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[Non-text portions of this message have been removed]

41453. Re: [TS-520_820_530_830] Re: TRIO KENWOOD TS-515 technical manual (service manual)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-23 00:45:26 UTC
From: Mark Gilger
Topic: 41432 Message: 41453

James,
He's looking for the technical manual. The ones
you posed was for a user manual.

I've never seen a technical manual for the 515,
so hoping one does in fact show up.

73's,
Mark

At 04:35 PM 3/22/2013, james27613 wrote:
>
>
>Hi Jean,
>
><http://www.radiomanual.info/KENWOOD.html>http://www.radiomanual.info/KENWOOD.html
>
>manuals in pdf no cost from the big three and more.
>
>share a manual you have if it is not on the list.
>
>73 james ke4drn
>
>

[Non-text portions of this message have been removed]

41454. Re: [TS-520_820_530_830] 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-23 00:47:41 UTC
From: John Davidson
Topic: 468 Message: 41454

You DON'T need "Matched" tubes in a parallel tube amp ! They just both have to work ! they both should be the same Type number as in 6146A, 6146B or S2001.
I see this urban legend about needing specially "matched" tubes in the hybrid radios every month on this group !
.

From: Kevin O'Dell N0IRW <n0irw@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, March 21, 2013 5:52 PM
Subject: Re: [TS-520_820_530_830] 6146B

Matched pair of Taylor 6146B's for $49.00 from RF Parts...plus shipping....total is about $60.......I just bought a pair......

Kevin O'Dell, N0IRW
On Mar 21, 2013, at 3:51 PM, Rick wrote:

> Where can I get the best deal (quality and money wise) on a couple of 6146B
> tubes?
>
> Thanks,
>
> Rick/K5IAR
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41455. Re: [TS-520_820_530_830] Drive at the high end of 75 meters.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-23 00:53:10 UTC
From: John Davidson
Topic: 41414 Message: 41455

My service manual has detailed alignment instructions. Make sure you align each band in order and have the VFO set to the recommended freqs.
You have to do the entire alignment and don't try to just do one band, results are not what you expect if you try one band..

From: Peter <wb3bqo@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, March 21, 2013 1:14 PM
Subject: [TS-520_820_530_830] Drive at the high end of 75 meters.

Hi to all.
I have a TS-520 that works very well except at the high end of 75 meters. The normal drive level is indicated on the meter in normal tune-up up to about 3.75 MHz. From there on up the needle will drop off gradually to zero at about 3.82 MHz. All the other bands show normal drive levels at both ends. Power output is normal when the drive is tuned up.
I just obtained this rig from QTH.com and it is excellent in every respect except this. I've changed driver tubes and the trouble is there with both of them. It appears that the coil pack associated with 75 meters needs adjusted. I have the operating and service manuals but they have no guidance about this.
Would anyone have an idea how to resolve this problem?
Thanks & 73,
Pete WW3O

[Non-text portions of this message have been removed]

41456. Re: [TS-520_820_530_830] TS-820 RFC

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-23 00:56:07 UTC
From: John Davidson
Topic: 41410 Message: 41456

To DC it is just a thin piece of wire. close to Zero, maybe a few tenths of an ohm.

From: Rick <rickb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, March 21, 2013 3:02 PM
Subject: RE: [TS-520_820_530_830] TS-820 RFC

Please, forgive my error. It was brought to my attention I had misstated
what I wanted to know. I, of course, meant "DC resistance", not impedance.
Some days my brain refuses to cooperate with me. HI

Thanks,

Rick/K5IAR

From: mailto:TS-520_820_530_830%40yahoogroups.com
[mailto:mailto:TS-520_820_530_830%40yahoogroups.com] On Behalf Of Rick
Sent: Thursday, March 21, 2013 9:58 AM
To: mailto:TS-520_820_530_830%40yahoogroups.com
Subject: [TS-520_820_530_830] TS-820 RFC

Does anyone happen to know the approximate impedance of L1 in the final
cage? Mine measures .47 ohms.

Thanks,

Rick/K5IAR

-.-'---

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[Non-text portions of this message have been removed]

41457. Re: [TS-520_820_530_830] Re: TRIO KENWOOD TS-515 technical manual (service manual)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-23 15:03:36 UTC
From: Behiels JeanPierre
Topic: 41457 Message: 41457

Hi Guys;

Anyway thanks all for your help.
Yes I now this website very well.
But the technical manual of the TRIO KENWOOD TS515 is not available on this website.
And it exist for sure,it is the manual with all the PCB designs and detailed schematics of each unit behind the TS515.
Nobody nows about ??
I have the impression it is for sure a rare object to obtain ?

Regards Jean ON4AEF.

----- Original Message -----
From: Mark Gilger
To: TS-520_820_530_830@yahoogroups.com ; TS-520_820_530_830@yahoogroups.com
Sent: Saturday, March 23, 2013 1:45 AM
Subject: Re: [TS-520_820_530_830] Re: TRIO KENWOOD TS-515 technical manual (service manual)

James,
He's looking for the technical manual. The ones
you posed was for a user manual.

I've never seen a technical manual for the 515,
so hoping one does in fact show up.

73's,
Mark

At 04:35 PM 3/22/2013, james27613 wrote:
>
>
>Hi Jean,
>
><http://www.radiomanual.info/KENWOOD.htmlhttp://www.radiomanual.info/KENWOOD.html
>
>manuals in pdf no cost from the big three and more.
>
>share a manual you have if it is not on the list.
>
>73 james ke4drn
>
>

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[Non-text portions of this message have been removed]

41458. Re: [TS-520_820_530_830] Re: TRIO KENWOOD TS-515 technical manual (service manual)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-23 15:16:39 UTC
From: Mark Gilger
Topic: 41457 Message: 41458

If anyone digs a PDF copy up, I would be interested.

For anyone that wants to spend a few $'s, it's
available on the following web site for about $5. Not sure of the quality.

http://www.manual-buddy.com/p/kenwood/ts515-service-manual.html

Regards,
Mark, WB0IQK

At 11:03 AM 3/23/2013, Behiels JeanPierre wrote:
>
>
>Hi Guys;
>
>Anyway thanks all for your help.
>Yes I now this website very well.
>But the technical manual of the TRIO KENWOOD
>TS515 is not available on this website.
>And it exist for sure,it is the manual with all
>the PCB designs and detailed schematics of each unit behind the TS515.
>Nobody nows about ??
>I have the impression it is for sure a rare object to obtain ?
>
>Regards Jean ON4AEF.
>
>----- Original Message -----
>From: Mark Gilger
>To:
><mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>;
><mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>
>Sent: Saturday, March 23, 2013 1:45 AM
>Subject: Re: [TS-520_820_530_830] Re: TRIO
>KENWOOD TS-515 technical manual (service manual)
>
>James,
>He's looking for the technical manual. The ones
>you posed was for a user manual.
>
>I've never seen a technical manual for the 515,
>so hoping one does in fact show up.
>
>73's,

>Mark
>
>At 04:35 PM 3/22/2013, james27613 wrote:
> >
> >
> >Hi Jean,
> >
> ><<http://www.radiomanual.info/KENWOOD.htmlhttp:
> //www.radiomanual.info/KENWOOD.html>http://www.radiomanual.info/KENWOOD.htmlhttp://www.r
adiomanual.info/KENWOOD.html
> >
> >manuals in pdf no cost from the big three and more.
> >
> >share a manual you have if it is not on the list.
> >
> >73 james ke4drn
> >
> >
>
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41459. Re: 6146B

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-23 13:46:34 UTC
From: Jody
Topic: 468 Message: 41459

--- In TS-520_820_530_830@yahoogroups.com, "Rick" <rickb@...> wrote:
>
> Where can I get the best deal (quality and money wise) on a couple of 6146B
> tubes?
>
>
>
> Thanks,
>
> Rick/K5IAR
>
> THERE'S ONLY ONLY ONE WAY TO BEAT THIS (free) I DUG AROUND AT A TAILGATE AND FOUND A
12by7 and 2 6146's for a buck a piece
>

41460. VFO 230 - frequency instability

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-24 03:28:46 UTC
From: zululima2003
Topic: 41460 Message: 41460

My VFO230 is stable for about half an hour after TS830 switch on - then becomes a little flaky in its frequency readout. Not much mind but slowly turning the dial can sometimes not even shift the frequency. Fast turning of the dial seems to work. I have re-tightened all PCB mounting screws and disconnected and reseated all PCB plug in connections.
Anyone with any ideas?
Thanks
William
ZL2BGX

41461. Re: [TS-520_820_530_830] VFO 230 - frequency instability

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-24 03:55:59 UTC
From: n6wk@...
Topic: 41460 Message: 41461

Encoder needs adjustment.
I have done many of them.

Gordon
N6WK

On 3/23/2013 8:28 PM, zululima2003 wrote:
>
> My VFO230 is stable for about half an hour after TS830 switch on -
> then becomes a little flaky in its frequency readout. Not much mind
> but slowly turning the dial can sometimes not even shift the
> frequency. Fast turning of the dial seems to work. I have re-tightened
> all PCB mounting screws and disconnected and reseated all PCB plug in
> connections.
> Anyone with any ideas?
> Thanks
> William
> ZL2BGX
>
>

41462. TS515 VFO mechanical shaft

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-24 07:35:43 UTC
From: Behiels JeanPierre
Topic: 41462 Message: 41462

Hi Kenwood uergroup members;

I am chearching for the mechanical/reduction setup of the VFO of a old KENWOOD TS515
The shaft has and the mecanical transfer/reductor has been wore out due the intensif use before !!
Nobody who has perhaps a VFO unit in spare for sale or not use anymre or in surplus.
I hope somebody could give my some good advise or adresses where I possibile could buy some spare parts.
Thanks to all anyway..

Regards Jean ON4AEF.

[Non-text portions of this message have been removed]

41463. About final sweep tubes of TS510-515 (S2001 and 6LQ6)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-24 11:24:52 UTC
From: Behiels JeanPierre
Topic: 41463 Message: 41463

Hi members;

The original sweep finals of those both TRIO KENWOOD transceivers (6LQ6 ans S2001) are very difficult to find and expensif!!
Is it not possible by doing some minimal modifications to use some more available final tubes like 6146.
Of course tube sockets has to been changed has major modification,but I saw that both types have same filament voltages.
Ohter voltages like grid and anode supplys are quit same,isn't ?
I am thinking around this subject to change the final types if possible ?
Some more advice around this subject will be mutch appreciated ..

Regards Jean ON4AEF.

[Non-text portions of this message have been removed]

41464. RE: [TS-520_820_530_830] VFO 230 - frequency instability

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-24 12:01:21 UTC
From: fpath fpath
Topic: 41460 Message: 41464

G'day William,

Gordon is correct, but saying that I have two VFO 230s, if I leave them turned off (disconnected from power) for more than a month I have the same issue, I usually leave it connected to power for 24 hours without having it connected to radio when I turn it back on it doesn't miss a beat, know a few people who have had the same issue and as they leave it connected to mains power they never have the problem again. So would be interested in know if you leave it connected to power?

73's
Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: zl2bgx@...
Date: Sun, 24 Mar 2013 03:28:46 +0000
Subject: [TS-520_820_530_830] VFO 230 - frequency instability

My VFO230 is stable for about half an hour after TS830 switch on - then becomes a little flaky in its frequency readout. Not much mind but slowly turning the dial can sometimes not even shift the frequency. Fast turning of the dial seems to work. I have re-tightened all PCB mounting screws and disconnected and reseated all PCB plug in connections.
Anyone with any ideas?
Thanks
William
ZL2BGX

[Non-text portions of this message have been removed]

41465. Re: Transmit audio hum with hand held mic

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-24 16:05:04 UTC
From: wallydoc
Topic: 41392 Message: 41465

John:
Thanks, I didn't know about the unshielded cords.
Wally
KC9INK

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> Most of the Motorola mobile radio mics have a low Z and an amplifier integrated into the mic, So they use unshielded cords.
> Â A higher Z input on most ham gear needs shielding. May be the cause of your hum !
>
>
> _____
> From: wallydoc <wallydoc@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Friday, March 22, 2013 10:01 AM
> Subject: [TS-520_820_530_830] Re: Transmit audio hum with hand held mic
>
>
> Â
>
> Pete:
> KC9INK
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, Peter Carr <wb3bqo@> wrote:
> >
> > Hi to all. On the subject of mics, I put a Shure cartridge into a Motorola mic and added a 4-pin connector. It works well with my TS-520 but I found that background noise is noticeable. This includes shifting my grip on the mike or squeaks from the PTT switch. I tried a bit of plastic foam inside the mic case and that helped but not very much. Would anyone have a suggestion for better packing?
> > Thanks & 73.
> > Pete Carr WW3O
> >
> >
> >
> >
> > _____
> > From: wallydoc <wallydoc@>
> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > Sent: Wednesday, March 20, 2013 5:05 AM
> > Subject: [TS-520_820_530_830] Re: Transmit audio hum with hand held mic
> >
> >
> > Ã□Â

> > Jack:
> > I agree with going over the wiring on the mic.
> > Make sure the wiring is correct.
> > There are two different "grounds" for the mic, one for the element and one for the PTT.
> > Then check the mic wire. Possibly replace it.
> > I don't know the mic you are using but some mics need good grounding. Otherwise they act as RF feedback antennas.
> > I had a similar problem with a D104 on a 520, which is obviously not the mic you are using.
> > Wally
> > KC9INK
> >
> > --- In mailto:TS-520_820_530_830%40yahoogroups.com, John Donnelly <jack@> wrote:
> > >
> > > A question for the group:
> > >
> > > I've got a TS-830s gold medallion that has moderate hum on transmit.ÃÂ I'm using a hand held mic that I believe was made for a TS-520.ÃÂ It measures
> > > 500 ohms with a multimeter.ÃÂ The two pins for the keying switch on the micÃÂ are not connected to either mic element lead.
> > >
> > > If I key the transmitter with the send switch, and the mic disconnected, the audio is clean. Will getting an MC-50 solve
> > > this problem?
> > >
> > > 73's
> > > Jack Donnelly
> > >
> > > [Non-text portions of this message have been removed]
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> >
> > [Non-text portions of this message have been removed]
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>
> [Non-text portions of this message have been removed]
>

41466. Are sale or trades allowed here?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-24 16:47:21 UTC
From: Bruce Gentry
Topic: 41392 Message: 41466

I have one of the radios this group alludes to, and have lost interest in it. Is it allowed for me to post a for sale/trade here? Thanks,
Bruce KA2IVY

41467. Re: Are sale or trades allowed here?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-24 16:58:50 UTC
From: n6wk_skcc3
Topic: 41392 Message: 41467

Yes, you can list radios for Sale on here.

73,
Gordon
N6WK

--- In TS-520_820_530_830@yahoogroups.com, Bruce Gentry <ka2ivy@...> wrote:
>
> I have one of the radios this group alludes to, and have lost interest
> in it. Is it allowed for me to post a for sale/trade here? Thanks,
> Bruce KA2IVY
>

41468. Re: [TS-520_820_530_830] Re: Transmit audio hum with hand held mic

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-24 17:33:32 UTC
From: John Davidson
Topic: 41392 Message: 41468

I just retired from 40+ years in Motorola Service shops and shops that worked on thier products.
Have a lot of inside info :D

From: wallydoc <wallydoc@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, March 24, 2013 12:05 PM
Subject: [TS-520_820_530_830] Re: Transmit audio hum with hand held mic

John:
Thanks, I didn't know about the unshielded cords.
Wally
KC9INK

--- In mailto:TS-520_820_530_830%40yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> Most of the Motorola mobile radio mics have a low Z and an amplifier integrated into the mic, So they use unshielded cords.
> Â A higher Z input on most ham gear needs shielding. May be the cause of your hum !
>
> .have been removed]
>

[Non-text portions of this message have been removed]

41469. Re: [TS-520_820_530_830] Re: Transmit audio hum with hand held mic

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-24 18:00:36 UTC
From: John Donnelly
Topic: 41392 Message: 41469

My problem was solved by picking up an MC-50. The original hand held that was causing the transmit hum
is a Kenwood that originally shipped with a TS-520. The only markings on the mic itself other than "Kenwood"
are on the back:

  Dynamic mic
     500 ohm
       Japan"

BTW, the mic works fine on the TS-520 that it came with - no hum problem at all on transmit. Go figure. The only thing I can think
of is that the impedence difference between the MC-50 and the had held is making the older mic more susceptible to picking up hum.

Thanks for all the suggestions from the group.

Jack DonnellyKV4JX

From: wallydoc <wallydoc@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, March 24, 2013 12:05 PM
Subject: [TS-520_820_530_830] Re: Transmit audio hum with hand held mic

John:
Thanks, I didn't know about the unshielded cords.
Wally
KC9INK

--- In mailto:TS-520_820_530_830%40yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> Most of the Motorola mobile radio mics have a low Z and an amplifier integrated into the mic, So they use unshielded cords.
> Â A higher Z input on most ham gear needs shielding. May be the cause of your hum !
>
>
> ---
> From: wallydoc <wallydoc@...>
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Friday, March 22, 2013 10:01 AM
> Subject: [TS-520_820_530_830] Re: Transmit audio hum with hand held mic
>
>
> Â
>
> Pete:

> KC9INK
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, Peter Carr <wb3bqo@> wrote:
> >
> > Hi to all. On the subject of mics, I put a Shure cartridge into a Motorola mic and added a 4-pin connector. It works well with my TS-520 but I found that background noise is noticeable. This includes shifting my grip on the mike or squeaks from the PTT switch. I tried a bit of plastic foam inside the mic case and that helped but not very much. Would anyone have a suggestion for better packing?
> > Thanks & 73.
> > Pete Carr WW3O
> >
> >
> >
> >
> > _____
> > From: wallydoc <wallydoc@>
> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > Sent: Wednesday, March 20, 2013 5:05 AM
> > Subject: [TS-520_820_530_830] Re: Transmit audio hum with hand held mic
> >
> >
> > Ã‚Â
> > Jack:
> > I agree with going over the wiring on the mic.
> > Make sure the wiring is correct.
> > There are two different "grounds" for the mic, one for the element and one for the PTT.
> > Then check the mic wire. Possibly replace it.
> > I don't know the mic you are using but some mics need good grounding. Otherwise they act as RF feedback antennas.
> > I had a similar problem with a D104 on a 520, which is obviously not the mic you are using.
> > Wally
> > KC9INK
> >
> > --- In mailto:TS-520_820_530_830%40yahoogroups.com, John Donnelly <jack@> wrote:
> > >
> > > A question for the group:
> > >
> > > I've got a TS-830s gold medallion that has moderate hum on transmit.Ã‚Â I'm using a hand held mic that I believe was made for a TS-520.Ã‚Â It measures
> > > 500 ohms with a multimeter.Ã‚Â The two pins for the keying switch on the micÃ‚Â are not connected to either mic element lead.
> > >
> > > If I key the transmitter with the send switch, and the mic disconnected, the audio is clean. Will getting an MC-50 solve
> > > this problem?
> > >
> > > 73's
> > > Jack Donnelly

> > >
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41470. KENWOOD HYBRID USER NET (March 24th, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-24 18:48:39 UTC
From: mvgilger
Topic: 41470 Message: 41470

The Saturday's net on 40 meter we had 23 stations checking with good band conditions. There were 2 new stations checking in. Out of those, there was:

6 running TS-520(x)
3 running TS-530(x)
3 running TS-820(x)
4 running TS-830S

I was running my TS-940s. The rest were running non hybrids of one model or another.

The Sunday's net on 20 meter we had 13 stations checking in under very poor band conditions. We had 1 new check-in, N5CBB.

Out of those, there was:

4 running TS-520(x)
1 running TS-530(x)
2 running TS-820(x)
2 running TS-830S

I was running my TS-940s. The rest were running non hybrids of one model or another.

We have been having several people checking in regularly with their TS-430, TS-440, and TS-940's, which of course is not a hybrid, although over 30+ years old. Everyone is welcome as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a net control station, please send me an email. Currently it's just myself, WB2KNR and WB0SGA. I would like to get several more. If we do, we can alternate so everyone might be on a 3-4 week rotation. It's a lot of fun and a good way to make sure you station is optimized.

For anyone that has not heard, we have a new web site that WB4HFN is hosting. He currently has a very nice site for Drake, Collins and Heathkit and now Kenwood Hybrids. Good quality manuals plus sale flyers and brochures will be found here, along with user supplied information for all Hybrids.

His URL is:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754 check-ins, Sunday total 563 check-ins

November 2012, Saturday's, net total = 47, Sundays total = 20
December 2012, Saturday's, net total = 74, Sunday's total = 70
January 2013, Saturday's, net total = 93, Sunday's total = 87
February 2013, Saturday's net total = 103, Sundays total = 87
March 2013, Saturday's, net total = 112, Sunday's total =39 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

41471. Re: "Plate Idling Current" for a Kenwood TS-820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-24 18:57:01 UTC
From: kc2mru
Topic: 41305 Message: 41471

Problem solved ... thanks for all your help, how do I delete this topic ?

--- In TS-520_820_530_830@yahoogroups.com, "kc2mru" <KC2MRU@...> wrote:
>
> Hey Joe,
> Thanks for the reply ... I've followed the procedure as it was described in the manual . Then I tried the procedure that you told me to do , and then I tried it the way that "k4eaa" said to do on his site ... and no matter which one I'm trying , I'm still not getting a reading on the Plate Idling Current . It would possibly be something like a weak tube would it ?
>
> Thanks,
> Del
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@> wrote:
> >
> > kc2mru,
> >
> > Â Â Not to over simplify, but do the following:Â power up rig, turn "heater" switch ON, "SG" switch to ON...it's on the rear panel.. mode switch to either USB or LSB, meter select switch to "IP," flip "send/rcv" switch to "send." You should see no more than 60mA reading on the meter.
> >
> > Â Â Make sure that you are either connected to a dummy load or suitable antenna...dummy load preferred.
> >
> > If you are not familiar with tuning tube type rigs...may I suggest that a couple of "dry runs" may be in order...ie..location of needed controls...etc.
> > The final amplifier tubes can be harmed, as some other components.. by being operated out of tune/resonance for extended time periods.
> >
> > You can go to Ken Kemski's web siteÂ Â Â k4eaa.comÂ Â he has some very good info/instructions for the beginning tube rig "tuner."
> >
> >
> > Â
> > 73Â Joe
> > WB7UQU
> >
> >
> >
> > _____
> > From: kc2mru <KC2MRU@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Monday, March 11, 2013 5:52 AM

> > Subject: [TS-520_820_530_830] "Plate Idling Current" for a Kenwood TS-820
> >
> >
> > Â
> > I recently bought a nice little TS-820 from another Ham , but I haven't messed with it alot yet . I finally got around to tuning it up so I could try and talk on it . I read the directions in the manual , but at the risk of sounding dumb , for some reason I'm not getting any reading on the meter when attempting to check the Plate Idling Current , even when I attempt to adjust the rear panel bias control ... am I over looking something , or is there a deeper problem , like maybe a repair needs to be done ?
> >
> > Is there anyone else that has experienced this problem that can help me out with this ?
> >
> > Thanks
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

41472. Re: Kenwood TS-820 Transmit Problem

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-24 19:03:15 UTC
From: kc2mru
Topic: 40386 Message: 41472

Sorry ... it doesn't do anything wrong , the gentleman told me it had a transmit problem & I figured I'd repair it ... I hadn't hooked a mic to it yet , and before I could ... he sent me an e-mail stating that the mic he had been using was actually bad , and the radio was probably fine ... when I hooked the mic up to it , sure enough , it was fine . :)

--- In TS-520_820_530_830@yahoogroups.com, "kc2mru" <KC2MRU@...> wrote:
>
> sorry I didn't reply right away ... I had got this rig from another operator , and when we were talking about making the deal he said that it received fine , but it's transmit wasn't very good at all . So I made this post while I was waiting for the radio to get here. The radio just arrived , it's extremely cold from riding in the delivery truck all day ... but I took a look inside to see what I could find out , and this is what I found (so far) : I found a batch of wires that appear to be coming from the digital frequency counter that was unplugged ... and then after looking around a bit more , I found that the 12BY7A driver tube wasn't plugged into it's socket .
>
> --- In TS-520_820_530_830@yahoogroups.com, John Davidson wrote:
> >
> > Tell us what it does ?
> > Â
> >
> >
> > _____
> > From: John Davidson
> > To: "TS-520_820_530_830@yahoogroups.com"
> > Sent: Saturday, December 29, 2012 5:37 PM
> > Subject: Re: [TS-520_820_530_830] Kenwood TS-820 Transmit Problem
> >
> > Â
> > With the information provided I would look somewhere between the mic or key jack and antenna relay.
> >
> > _____
> > From: kc2mru
> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > Sent: Saturday, December 29, 2012 4:27 PM
> > Subject: [TS-520_820_530_830] Kenwood TS-820 Transmit Problem
> >
> > Â
> > Hey Everyone ,
> > I just recently acquired a Kenwood TS-820 that receives just fine & has new tubes in it , but it has a little transmitting problem and I was wondering if any of you might have any suggestions as to where to start poking around at to try and fix it's transmit ... I'd really love to get this old timer back on the air again . :)
> >

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> >
> >
> >
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> >
>

41473. Re: (unknown)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-24 20:14:33 UTC
From: emilioc
Topic: 36631 Message: 41473

--- In TS-520_820_530_830@yahoogroups.com, Mark Gilger <mgilger@...> wrote:
>
> Pete,
> One other comments. By using the single wire to give me just the Mute
> capability on the R-820, that will allow me to listen to two different
> freq. on the same band or separate bands. I can be on 80 meters involved
> in a QSO on the TS-820 and also listening to a net on say 20 meters on the
> R-820. So have the best of two worlds.
>
> Mark
>
> At 05:34 PM 3/28/2012, Mark Gilger wrote:
> >
> >
> >For the connectors, I just used some DB-25 male pins that I had laying
> >around and just pushed them into the holes in the connector. I then tie
> >wrapped my cable to a convenient place on the rear panel so they did not
> >pull out when I pulled the receiver/transceiver out to gain access to it's
> >rear.
> >
> >I pulled my units out and it's even simpler that what I remembered. I just
> >needed a single wire between the two. On the TS-830, run a wire from pin 5
> >on the remote VFO connector over to the Remote plug pin #4 on the
> >R-820. When ever the TS-820 goes to transmit, there will be +12 volts on
> >pin 5 of the TS-820 remote VFO plug which will pull in the relay on the
> >R-820 which will mute it.
> >
> >Done....
> >
> >Mark
> >
> >At 04:56 PM 3/28/2012, you wrote:
> > >
> > >
> > >Evening mark,
> > >thanks for the reply.
> > >I have all the manuals here so I can get the DIY info if I want to build
> > >my own lead.
> > >The one connector I might be stuck on is the multiway on the R820 RX.
> > >I have not looked at sorcing this yet so no part number or manf details yet.
> > >Job for the weekend.
> > >Pete
> > >G7DXV
> > >
> > >From: Mark Gilger

> > <<mailto:mgilger%40brightdsl.net><mailto:mgilger%40brightdsl.net>mgilger@...>
> > >To:
> > ><mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%4
> > 0yahoogroups.com>TS-520_820_530_830@yahoogroups.com
> > >
> > >Sent: Wednesday, 28 March 2012, 2:54
> > >Subject: Re: [TS-520_820_530_830] (unknown)
> > >
> > >Â
> > >I had to build mine. For just the basics It only takes 2 wires. I only
> > >wanted the mute function and for both the R-820 & TS820 to use their own
> > >VFO's so I could listen to two different freq. at one time. If that's all
> > >you need, I can look up the pin numbers to wire to.
> > >Mark, WB0IQK
> > >
> > >At 04:18 PM 3/27/2012, you wrote:
> > > >
> > > > >
> > > > >Good day folks
> > > > >New to the site but not new to the hobby.
> > > > >I am a keen restorer and collector of vinatge and military radio
> > equipment.
> > > > >I have a couple of TS820's including a a TS820S model.
> > > > >I also have a R820 receiver.
> > > > >I am looking for the remote transceive lead in order to connect the TS820S
> > > > >to the R820. Can anyone help out?
> > > > >Thanks
> > > > >Pete G7DXV
> > > > >
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Hi guys

Does

41474. Ken R820 separate TS820S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-24 20:29:00 UTC
From: emilioc
Topic: 41474 Message: 41474

Hi guys.
I would like to ask if there is around pin configuration to join R820 to Ts820.
At the moment i have pin 4 nothing else. Meaby can be' a good job to post like a file for all are interested to use the R with TS in separate vfo or trcv operation.
Trans
73 i2QEN

41475. All fixed - Re: TS-830S - 1W power out?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-24 21:43:28 UTC
From: rolandver109
Topic: 40802 Message: 41475

Many thanks Joe and Terry

My TS-830S bought as for part i now up and running. Output power 100W and 0.76V RMS over 8R with 0dbuV RF-in.
Story:
To begin with I replaced al electrolytic capacitors, washed al circuit boards in Isopropanol and then cleaned the inside with Speedball and Isopropanol. After that the TS-830S was completely dead. After several hours of fault tracing I went back to the first rule in the "Ten demands of debugging" that says "Check hardware". Found a broken wire behind the front to the -7V bias for the IF-boards.
Re-solder the wire and the TS-830S was back too what is was before cleaning etc. - weak audio and 5W output power.
Then I began to study the level diagram from the service manual. First I tried to put in 0dbuV and measure the levels, did not work. Raised input level to 20dBuV and I was able to measure voltage on the RF-board ☐ but confusing, the 1Meg probe loaded and levels was inflected.
Then I searched this forum and found the explanation for the TS-830_RX_Level_Diagram.pdf under files. That explained everything, thank you Terry K9TW.
I traced the problem to a very weak BFO signal to the AF-detector. Instead off 300mV it was about 30mV. Also the level from the VBT oscillator 3.750MHz was low.
I made Item t 1 -7 in the alignment guide from the service manual, including adjustment of the entire IF oscillator frequencies and levels.
Audio level and receiver sensitivity are now in specification and so is also output power.
Next step in my long time planing will be to do the rest of the alignment. Is there any way around using the sweep generator? My radio test equipment is a HP8657B signal generator, a HP8508A Vector Voltmeter and an HP8591EM spectrum analyzer. Also recently a 100W dummy load, a Zetagi 700 power meter and 100W 30dB attentuator. No plans to buy anything expensive as I will retire in a year or two.

Regards / Roland

Story:
To begin with I made an comlete replace of all electrolytis C

--- In TS-520_820_530_830@yahoogroups.com, "scott10k" <scottandalene@...> wrote:
>
> Roland,
> Assuming that the driver tube and the finals are OK, I would suggest that you check Rf voltages according to the Transmit Rf level diagram on page 44 of the service manual. This may give you an indication as to why you are not getting drive (since your ALC reading in Tune mode seems to be zero). Most of these measurements are done with the SG switch OFF so as not to stress the final tubes.
> You will need to use an Rf probe and a digital multimeter or VTVM. I made my own Rf probe from two 1N60 diodes in series, a 0.01 uf ceramic cap (500 volts or more), and 4.7 megohm resistor, according to circuit diagrams in the ARRL handbook or on the internet.
>
> On the Rf board you would first measure the Rf voltage at TP-4 which should be around 2.0 Rf volts. You should also measure the VCO voltage at TP-3 which should be around 1.0 Rf volts. I suggest doing these measurements at 14.175 MHz. If both of these voltage readings are OK, then you know that the mixer should be providing sufficient Rf drive to the driver

tube. If these voltages are very much lower than there may be a problem on the IF board or even on the PLL board.
>
> If you are getting the correct voltages at TP-4 and TP-3, then the next item to check is the Rf drive on pin 7 (the plate) of the driver tube. This requires a device called a Pomona socket, which can be found on eBay. With the Pomona socket in place you can also check that you have the correct DC voltages to pins 7, 8, and 2 to make sure they are within spec. CAUTION-the EXPOSED PINS ON THE POMONA SOCKET WILL HAVE HIGH VOLTAGES (Pin 7 about 330 volts). Rf drive to pin 7 should be about 75 Rf volts, but I have found it to be somewhat lower and I still can get 100 watts output from the rig.
>
> For each measurment, be sure to record the positions of the Drive and Carrier controls. You will need these for future reference.
>
> I hope this will be a good start in your analysis of the low output problem you are having. Terry Wagner first gave me the advice to do the above, and I was able to correct problems with my TS-830S.
>
> 73s, Scott, N6CIC
>
> --- In TS-520_820_530_830@yahoogroups.com, "rolandver109" wrote:
> >
> >
> > Hi
> > I have now serviced the band switch (by disassembling it and testing
> > every switch element). Driver tube socket re-soldered. Caps C29 and C69
> > checked. All resistors on the final unit board checked. After
> > assembling everything and checked band switch alignment (twice) -
> > power output is better but are still is low.
> > Meter reads in tune mode and CAR 50%: ALZ = "0", IP=80mA,
> > HV=800. Power measured to maximum 5W at 14.2MHz against a 50 Ohm dummy
> > load.
> > Anyone who have some hints what to check next?
> > 73´s/Roland
> > --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles wrote:
> > >
> > > Roland,
> > >
> > > Â Â Glad I could help you out a bit. I saw that you intend to
> > remove the RF board. Just make sure to make sure that when you put it
> > back inÂ all the wafers, shaft etc., are aligned correctly. If you
> > have any question about that...I can help. Get a strong light and some
> > magnification and take a good look on the foil side of the driver tube
> > socket. I have seen many cracked solder joints here. Check also all the
> > "molex" connectors on the foil side for dry/cracked solder
> > joints...tough up any that appear questionable. I have been rather
> > successful with cleaning the RF board in a soak of warm water and "DAWN"
> > dish detergent and some light agitation with a long SOFT bristle
> > brush....through rinse and complete drying. It really does work good
> > >
> > >

> > > Â
> > > 73Â Joe
> > > WB7UQU
> > >
> > >
> > >
>

41476. TS-820S for sale or trade

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-24 22:37:53 UTC
From: Bruce Gentry
Topic: 41392 Message: 41476

It is a TS-820s with the MC-50 desk microphone and Kenwood HS-5 headphones. The lever for the AGC speed switch is missing, but the switch is intact and functions fine if you use something to click it. It had a problem in the IF board when I got it, and I repaired it. It's clean and in good to very good cosmetic shape. The digital display is bright and works fine. The output tubes are original but put out well, the DC power unit is not installed. I'm in Syracuse, New York. The goal of this sale/trade is to get a Yaesu VX-8DR handheld. I must emphasize the "DR" model suffix. The others are not of interest. I don't mind if it's dirty, slightly scratched, or fingerworn as long as it's complete, nothing is broken, and it works well. If you have or can find one, I am looking for an even swap. Otherwise, $400.00 plus shipping from zipcode 13211. Several pictures are available on request. Thanks,

Bruce KA2IVY

41477. Re: [TS-520_820_530_830] About final sweep tubes of TS510-515 (S2001 and 6LQ6)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-25 02:51:29 UTC
From: John P.
Topic: 41463 Message: 41477

I had a SWAN 1200 W that used the 6LQ6 tubes.
Found that I could use 6MJ6 and 6ME6 tubes as direct (99%) substitutes.
In fact I ran 2 6LQ6, and one each or the 6ME6 and 6MJ6 tubes.
Just made sure that they were close to equal in strength.
Used a 5 second plate current reading at 0 volt bias and of course individually.
JohnWA2HIP

--- On Sun, 3/24/13, Behiels JeanPierre <on4aef@...> wrote:

From: Behiels JeanPierre <on4aef@...>
Subject: [TS-520_820_530_830] About final sweep tubes of TS510-515 (S2001 and 6LQ6)
To: TS-520_820_530_830@yahoogroups.com
Date: Sunday, March 24, 2013, 7:24 AM

Hi members;

The original sweep finals of those both TRIO KENWOOD transceivers (6LQ6 ans S2001) are very difficult to find and expensif!!

Is it not possible by doing some minimal modifications to use some more available final tubes like 6146.

Of course tube sockets has to been changed has major modification,but I saw that both types have same filament voltages.

Ohter voltages like grid and anode supplys are quit same,isn't it ?

I am thinking around this subject to change the final types if possible ?

Some more advice around this subject will be mutch appreciated ..

Regards Jean ON4AEF.

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[Non-text portions of this message have been removed]

41478. Re: [TS-520_820_530_830] Re: Transmit audio hum with hand held mic

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-25 15:10:21 UTC
From: John Davidson
Topic: 41392 Message: 41478

I had a similar "500 ohm Kenwood" mic that came with a new TS700a that had low mod and sounded very bassy when I used it with a TS520. The TS700 was designed for low Z mics and that mic worked fine with it..

From: John Donnelly <jack@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Sunday, March 24, 2013 2:00 PM
Subject: Re: [TS-520_820_530_830] Re: Transmit audio hum with hand held mic

My problem was solved by picking up an MC-50. The original hand held that was causing the transmit hum
is a Kenwood that originally shipped with a TS-520. The only markings on the mic itself other than "Kenwood"
are on the back:

  Dynamic mic
     500 ohm
       Japan"

BTW, the mic works fine on the TS-520 that it came with - no hum problem at all on transmit. Go figure. The only thing I can think
of is that the impedence difference between the MC-50 and the had held is making the older mic more susceptible to picking up hum.

Thanks for all the suggestions from the group.

Jack DonnellyKV4JX

To: TS-520

[Non-text portions of this message have been removed]

41479. TS-820 Drive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-25 16:25:36 UTC
From: Rick
Topic: 41479 Message: 41479

I'm curious, how many watts drive is normal for each band of the 820? I feel like my drive level is low even though it loads up to the appropriate output wattage generally. This is with exception of the160 meter band which has zero drive even with the carrier level a maximum. The 160 meter receiver works fine, just no drive to the finals for transmitting. In fact, no drive to the driver!

If anyone recalls the amount of drive that is normally present for each band I would appreciate it very much if you'd let me know. I'd like to know if the other bands are behaving normally before going forward with troubleshooting the 160 meter band. I've been building and repairing tube type radios for many, many years, but this is my first foray into the world of hybrids.

Thank,

Rick/K5IAR

[Non-text portions of this message have been removed]

41480. TS 820s digital counter problem

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-25 12:39:45 UTC
From: FRED
Topic: 41480 Message: 41480

HI
My digital counter on my TS 820s seems to be stuck on 9000. From what I have read it looks as if I need to clean some pins. Does anyone have any pictures that might help me? Many thanks in advance
Fred (GM4ALZ)

41481. Re: TS-820 Drive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-25 17:55:16 UTC
From: roberteleazer@rocketmail.com
Topic: 41479 Message: 41481

By "how many watts drive" do you mean the carrier level or the mike gain level required to get signifcant output? You typically have to vary those depending on the band. On my TS-820S and TS-520 10 meters takes a lot more gain than the other bands.

To my knowledge we do not have a way to measure watts of drive to teh finals directly. I suppose you could infer something about how much is there based on the meter readings while in Tune mode.

What kind of ALC indication do you get on 160 meters? My antenna does not work well on 160 meters so I have not bothered to try my 820S there except for limited testing into a dummy load.

Thanks!

Robert

--- In TS-520_820_530_830@yahoogroups.com, "Rick" <rickb@...> wrote:
>
> I'm curious, how many watts drive is normal for each band of the 820? I feel
> like my drive level is low even though it loads up to the appropriate output
> wattage generally. This is with exception of the160 meter band which has
> zero drive even with the carrier level a maximum. The 160 meter receiver
> works fine, just no drive to the finals for transmitting. In fact, no drive
> to the driver!
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>
> If anyone recalls the amount of drive that is normally present for each band
> I would appreciate it very much if you'd let me know. I'd like to know if
> the other bands are behaving normally before going forward with
> troubleshooting the 160 meter band. I've been building and repairing tube
> type radios for many, many years, but this is my first foray into the world
> of hybrids.
>
>
>
> Thank,
>
> Rick/K5IAR
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> [Non-text portions of this message have been removed]
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41482. RE: [TS-520_820_530_830] Re: TS-820 Drive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-25 19:54:05 UTC
From: Rick
Topic: 41479 Message: 41482

I should have been more specific. When loading the 820 how many watts output are indicated on an inline wattmeter when you peak the drive control in the ALC position? Sorry, I didn't make that clear.

Thanks,

Rick

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of roberteleazer@...
Sent: Monday, March 25, 2013 11:55 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS-820 Drive

By "how many watts drive" do you mean the carrier level or the mike gain level required to get signifcant output? You typically have to vary those depending on the band. On my TS-820S and TS-520 10 meters takes a lot more gain than the other bands.

To my knowledge we do not have a way to measure watts of drive to teh finals directly. I suppose you could infer something about how much is there based on the meter readings while in Tune mode.

What kind of ALC indication do you get on 160 meters? My antenna does not work well on 160 meters so I have not bothered to try my 820S there except for limited testing into a dummy load.

Thanks!

Robert

--- In TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> , "Rick" <rickb@...> wrote:
>
> I'm curious, how many watts drive is normal for each band of the 820? I feel
> like my drive level is low even though it loads up to the appropriate output
> wattage generally. This is with exception of the160 meter band which has
> zero drive even with the carrier level a maximum. The 160 meter receiver
> works fine, just no drive to the finals for transmitting. In fact, no drive
> to the driver!
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>
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> If anyone recalls the amount of drive that is normally present for each
band
> I would appreciate it very much if you'd let me know. I'd like to know if
> the other bands are behaving normally before going forward with
> troubleshooting the 160 meter band. I've been building and repairing tube
> type radios for many, many years, but this is my first foray into the
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> of hybrids.
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> Thank,
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> Rick/K5IAR
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> [Non-text portions of this message have been removed]
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41483. Re: [TS-520_820_530_830] Re: TS-820 Drive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-25 21:25:34 UTC
From: John Davidson
Topic: 41479 Message: 41483

With the drive peaked in ALC metering,,
 the plate dipped in Ip metering
and the load adjusted for the proper Ip current and a plate tuning dip maintained,
 you should get no less than 100 W, except on 10M, a little less is normal there.

From: Rick <rickb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, March 25, 2013 3:54 PM
Subject: RE: [TS-520_820_530_830] Re: TS-820 Drive

I should have been more specific. When loading the 820 how many watts output
are indicated on an inline wattmeter when you peak the drive control in the
ALC position? Sorry, I didn't make that clear.

Thanks,

Rick

From: mailto:TS-520_820_530_830%40yahoogroups.com
[mailto:mailto:TS-520_820_530_830%40yahoogroups.com] On Behalf Of
mailto:roberteleazer%40rocketmail.com
Sent: Monday, March 25, 2013 11:55 AM
To: mailto:TS-520_820_530_830%40yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS-820 Drive

By "how many watts drive" do you mean the carrier level or the mike gain
level required to get signifcant output? You typically have to vary those
depending on the band. On my TS-820S and TS-520 10 meters takes a lot more
gain than the other bands.

To my knowledge we do not have a way to measure watts of drive to teh finals
directly. I suppose you could infer something about how much is there based
on the meter readings while in Tune mode.

What kind of ALC indication do you get on 160 meters? My antenna does not
work well on 160 meters so I have not bothered to try my 820S there except
for limited testing into a dummy load.

Thanks!

Robert

--- In mailto:TS-520_820_530_830%40yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> , "Rick" <rickb@...> wrote:
>

> I'm curious, how many watts drive is normal for each band of the 820? I
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> like my drive level is low even though it loads up to the appropriate
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> wattage generally. This is with exception of the160 meter band which has
> zero drive even with the carrier level a maximum. The 160 meter receiver
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> If anyone recalls the amount of drive that is normally present for each
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> I would appreciate it very much if you'd let me know. I'd like to know if
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> troubleshooting the 160 meter band. I've been building and repairing tube
> type radios for many, many years, but this is my first foray into the
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> Thank,
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> Rick/K5IAR
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[Non-text portions of this message have been removed]

41484. RE: [TS-520_820_530_830] Re: TS-820 Drive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-25 22:35:13 UTC
From: Rick
Topic: 41479 Message: 41484

I understand. I am working on a 820 and it has drive problems on the lower bands, especially 160 meters. I am wondering if anyone ever noticed how much output their 820 has when set to ALC and TUNE when the 820 meter is peaked? I want to know how many watts of drive (switches at ALC and TUNE) are indicated on a wattmeter when the 820 meter is peaked?

Thanks,

Rick/K5IAR

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of John Davidson
Sent: Monday, March 25, 2013 3:26 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: TS-820 Drive

With the drive peaked in ALC metering,,
the plate dipped in Ip metering
and the load adjusted for the proper Ip current and a plate tuning dip maintained,
you should get no less than 100 W, except on 10M, a little less is normal there.

From: Rick <rickb@... <mailto:rickb%40tx.rr.com> >
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Monday, March 25, 2013 3:54 PM
Subject: RE: [TS-520_820_530_830] Re: TS-820 Drive

I should have been more specific. When loading the 820 how many watts output are indicated on an inline wattmeter when you peak the drive control in the ALC position? Sorry, I didn't make that clear.

Thanks,

Rick

[Non-text portions of this message have been removed]

41485. Complete Kenwood Vintage Station for Sale

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-25 22:25:34 UTC
From: sceneryguru
Topic: 41485 Message: 41485

Good Evening Group:

I wanted to give my fellow members an opportunity to have a "Heads-up" prior to this equipment going onto eBay and / or other outlets for liquidation. If there is an interest in any or all of the units, please contact me, off the list to discuss further.

The items are as follows:

Kenwood AT-230 antenna tuner

Kenwood MC-50 dynamic cardiod desk microphone

Kenwood SM-220 Station Monitor

Kenwood SP-230 external speaker

Kenwood TS-820S Amateur HF Transceiver

Kenwood VFO-820 external analog display VFO

The units have been keep under dust cover, in a smoke free environment. The above are from my primary operating station, and were in use as recently as this past weekend.

tnx es 73 / 76

Tom G, Sr.
K3SSB

41486. RE: [TS-520_820_530_830] Re: TS-820 Drive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-25 22:40:02 UTC
From: Robert Herendeen
Topic: 41479 Message: 41486

In the TUNE position with the PLATE control adjusted for an IP dip into 50 ohms and the CARRIER control adjusted for mid range ALC reading and the DRIVE control peaked, I get about 15 watts on most bands. I get around 10 watts on 10 mtrs.

Bob/W6JZR

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Rick
Sent: Monday, March 25, 2013 12:54 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] Re: TS-820 Drive

I should have been more specific. When loading the 820 how many watts output are indicated on an inline wattmeter when you peak the drive control in the ALC position? Sorry, I didn't make that clear.

Thanks,

Rick

From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
[mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of
roberteleazer@... <mailto:roberteleazer%40rocketmail.com>
Sent: Monday, March 25, 2013 11:55 AM
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Subject: [TS-520_820_530_830] Re: TS-820 Drive

By "how many watts drive" do you mean the carrier level or the mike gain level required to get signifcant output? You typically have to vary those depending on the band. On my TS-820S and TS-520 10 meters takes a lot more gain than the other bands.

To my knowledge we do not have a way to measure watts of drive to teh finals directly. I suppose you could infer something about how much is there based on the meter readings while in Tune mode.

What kind of ALC indication do you get on 160 meters? My antenna does not work well on 160 meters so I have not bothered to try my 820S there except for limited testing into a dummy load.

Thanks!

Robert

--- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
<mailto:TS-520_820_530_830%40yahoogroups.com> , "Rick" <rickb@...> wrote:
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> I'm curious, how many watts drive is normal for each band of the 820? I
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> like my drive level is low even though it loads up to the appropriate
output
> wattage generally. This is with exception of the160 meter band which has
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> works fine, just no drive to the finals for transmitting. In fact, no
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> Thank,
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> Rick/K5IAR
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41487. Re: TS-820 Drive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-25 22:57:09 UTC
From: k5hfg
Topic: 41479 Message: 41487

All Hybrids are different. I monitor output during entire tune up. I have repaired a few mostly 530 and 830 but they all act a little different. On 160 thru 20 meters I have rigs that will peak ALC at 10 to 15 watts and others 20 to 25 although the 25 is rare. Depends on the tune circuit and condition of the drive. I believe Kenwood designed the tun circuitry to use about 20% to protect the finals from beginners and heavy handers. If you want to see the difference remove the key phono jack and with the mode switch in tun flip the send switch and check your output. Then set the mode switch to cw and flip the send switch. Big difference. Before you sit there and stare at the output meter flip that send switch back to rec. I have my original 520 and rebuilt it last summer. With new driver and finals I can peak 25 watts out on a Bird 43. That rig has been well taken care of. I used the old finals in another 530 and still get 100 watts on the lower bands.

73 Don K5HFG

41488. RE: [TS-520_820_530_830] Re: TS-820 Drive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 00:56:13 UTC
From: Rick
Topic: 41479 Message: 41488

Thanks guys for the replies. With the exception of my troubled 160 meter band that's the results I get too. I really appreciate it. I just wanted to make sure I was in the ballpark with the other bands before I went further into the 160 meter problems.

Rick

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Robert Herendeen
Sent: Monday, March 25, 2013 4:40 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] Re: TS-820 Drive

In the TUNE position with the PLATE control adjusted for an IP dip into 50 ohms and the CARRIER control adjusted for mid range ALC reading and the DRIVE control peaked, I get about 15 watts on most bands. I get around 10 watts on 10 mtrs.

Bob/W6JZR

From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
[mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Rick
Sent: Monday, March 25, 2013 12:54 PM
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Subject: RE: [TS-520_820_530_830] Re: TS-820 Drive

I should have been more specific. When loading the 820 how many watts output are indicated on an inline wattmeter when you peak the drive control in the ALC position? Sorry, I didn't make that clear.

Thanks,

Rick

From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
<mailto:TS-520_820_530_830%40yahoogroups.com>
[mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>

<mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of
roberteleazer@... <mailto:roberteleazer%40rocketmail.com>
<mailto:roberteleazer%40rocketmail.com>
Sent: Monday, March 25, 2013 11:55 AM
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
<mailto:TS-520_820_530_830%40yahoogroups.com>
Subject: [TS-520_820_530_830] Re: TS-820 Drive

By "how many watts drive" do you mean the carrier level or the mike gain level required to get signifcant output? You typically have to vary those depending on the band. On my TS-820S and TS-520 10 meters takes a lot more gain than the other bands.

To my knowledge we do not have a way to measure watts of drive to teh finals directly. I suppose you could infer something about how much is there based on the meter readings while in Tune mode.

What kind of ALC indication do you get on 160 meters? My antenna does not work well on 160 meters so I have not bothered to try my 820S there except for limited testing into a dummy load.

Thanks!

Robert

--- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
<mailto:TS-520_820_530_830%40yahoogroups.com>
<mailto:TS-520_820_530_830%40yahoogroups.com> , "Rick" <rickb@...> wrote:
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> I'm curious, how many watts drive is normal for each band of the 820? I
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> troubleshooting the 160 meter band. I've been building and repairing tube
> type radios for many, many years, but this is my first foray into the
world
> of hybrids.
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>
>
> Thank,
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> Rick/K5IAR
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41489. RE: [TS-520_820_530_830] Re: TS-820 Drive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 02:36:51 UTC
From: Rick
Topic: 41479 Message: 41489

Thanks, Don. I have my original 520 also and it is still my favorite rig! The only thing I have ever had to do to it was replace the filter capacitors in the high voltage supply. I had one pop on me several years ago and I replaced both of them with originals I ordered from Kenwood. That should tell you how long ago it was, they still had parts for it. HI. I hope to have this TS-820 on the air soon. It's not in bad shape but does have an issue or two I'd like to solve before putting it in the operating position. I discovered just today the 500 ohm potentiometer (V4) on the AV board that controls the Monitor Level is intermittent. I think I have a replacement. If not, I'm sure someone does. When Kenwood built these transceivers they intended them to be a round a long time!

Thanks again for the info.

Rick/K5IAR

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of k5hfg
Sent: Monday, March 25, 2013 4:57 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS-820 Drive

All Hybrids are different. I monitor output during entire tune up. I have repaired a few mostly 530 and 830 but they all act a little different. On 160 thru 20 meters I have rigs that will peak ALC at 10 to 15 watts and others 20 to 25 although the 25 is rare. Depends on the tune circuit and condition of the drive. I believe Kenwood designed the tun circuitry to use about 20% to protect the finals from beginners and heavy handers. If you want to see the difference remove the key phono jack and with the mode switch in tun flip the send switch and check your output. Then set the mode switch to cw and flip the send switch. Big difference. Before you sit there and stare at the output meter flip that send switch back to rec. I have my original 520 and rebuilt it last summer. With new driver and finals I can peak 25 watts out on a Bird 43. That rig has been well taken care of. I used the old finals in another 530 and still get 100 watts on the lower bands.

73 Don K5HFG

[Non-text portions of this message have been removed]

41490. RE: [TS-520_820_530_830] Re: TS-820 Drive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 02:09:45 UTC
From: Mark Gilger
Topic: 41479 Message: 41490

Maybe only 5-10 watts max.
Mark

At 06:35 PM 3/25/2013, Rick wrote:
>
>
>I understand. I am working on a 820 and it has drive problems on the lower
>bands, especially 160 meters. I am wondering if anyone ever noticed how much
>output their 820 has when set to ALC and TUNE when the 820 meter is peaked?
>I want to know how many watts of drive (switches at ALC and TUNE) are
>indicated on a wattmeter when the 820 meter is peaked?
>
>Thanks,
>
>Rick/K5IAR
>
>_____
>
>From:
><mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of John Davidson
>Sent: Monday, March 25, 2013 3:26 PM
>To:
><mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>Subject: Re: [TS-520_820_530_830] Re: TS-820 Drive
>
>With the drive peaked in ALC metering,,
>the plate dipped in Ip metering
>and the load adjusted for the proper Ip current and a plate tuning dip
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>you should get no less than 100 W, except on 10M, a little less is normal
>there.
>
>_______________________________
>From: Rick
><<mailto:rickb%40tx.rr.com>rickb@... <mailto:rickb%40tx.rr.com> >
>To:
><mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
><mailto:TS-520_820_530_830%40yahoogroups.com>
>Sent: Monday, March 25, 2013 3:54 PM
>Subject: RE: [TS-520_820_530_830] Re: TS-820 Drive
>
>I should have been more specific. When loading the 820 how many watts output
>are indicated on an inline wattmeter when you peak the drive control in the
>ALC position? Sorry, I didn't make that clear.

>
>Thanks,
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>Rick
>
>_____
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[Non-text portions of this message have been removed]

41491. Re: [TS-520_820_530_830] Re: TS-820 Drive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 04:08:19 UTC
From: John Davidson
Topic: 41479 Message: 41491

My TS520 has the same RF amp circuits and when it was newPeaked and loaded at 200 mA of plate current on 80M had 115 W output, 40 thru 15M had 100 Watts output . 70W on 10M.

From: Rick <rickb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, March 25, 2013 6:35 PM
Subject: RE: [TS-520_820_530_830] Re: TS-820 Drive

I understand. I am working on a 820 and it has drive problems on the lower bands, especially 160 meters. I am wondering if anyone ever noticed how much output their 820 has when set to ALC and TUNE when the 820 meter is peaked? I want to know how many watts of drive (switches at ALC and TUNE) are indicated on a wattmeter when the 820 meter is peaked?

Thanks,

Rick/K5IAR

From: mailto:TS-520_820_530_830%40yahoogroups.com [mailto:mailto:TS-520_820_530_830%40yahoogroups.com] On Behalf Of John Davidson
Sent: Monday, March 25, 2013 3:26 PM
To: mailto:TS-520_820_530_830%40yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: TS-820 Drive

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the plate dipped in Ip metering
and the load adjusted for the proper Ip current and a plate tuning dip maintained,
you should get no less than 100 W, except on 10M, a little less is normal there.

From: Rick <mailto:rickb%40tx.rr.com <mailto:rickb%40tx.rr.com> >
To: mailto:TS-520_820_530_830%40yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Monday, March 25, 2013 3:54 PM
Subject: RE: [TS-520_820_530_830] Re: TS-820 Drive

I should have been more specific. When loading the 820 how many watts output are indicated on an inline wattmeter when you peak the drive control in the ALC position? Sorry, I didn't make that clear.

Thanks,

Rick

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[Non-text portions of this message have been removed]

41492. Re: [TS-520_820_530_830] Re: TS-820 Drive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 04:13:25 UTC
From: John Davidson
Topic: 41479 Message: 41492

How much plate current do you get key down for 15 W >? sounds like a problem.
Does moving the loading control Clockwise increase Plate current and power??

From: Robert Herendeen <w6jzr@prodigy.net>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, March 25, 2013 6:40 PM
Subject: RE: [TS-520_820_530_830] Re: TS-820 Drive

In the TUNE position with the PLATE control adjusted for an IP dip into 50 ohms and the CARRIER control adjusted for mid range ALC reading and the DRIVE control peaked, I get about 15 watts on most bands. I get around 10 watts on 10 mtrs.

Bob/W6JZR

[Non-text portions of this message have been removed]

41493. Re: [TS-520_820_530_830] Re: TS-820 Drive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 04:21:07 UTC
From: John Davidson
Topic: 41479 Message: 41493

I just noticed you are using the TUNE position. I gave you incorrect readings,
I actually hardly ever tuned this way, I always used the CW mode to tune up my 520.
I believe you would get about 1/4 or less normal output
 with the lower screen voltge thru the TUNE position of the mode switch/.

From: John Davidson <k8jd@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, March 26, 2013 12:08 AM
Subject: Re: [TS-520_820_530_830] Re: TS-820 Drive

My TS520 has the same RF amp circuits and when it was newPeaked and loaded at 200 mA of plate current on 80M had 115 W output, 40 thru 15M had 100 Watts output . 70W on 10M.

From: Rick <mailto:rickb%40tx.rr.com>
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Monday, March 25, 2013 6:35 PM
Subject: RE: [TS-520_820_530_830] Re: TS-820 Drive

I understand. I am working on a 820 and it has drive problems on the lower bands, especially 160 meters. I am wondering if anyone ever noticed how much output their 820 has when set to ALC and TUNE when the 820 meter is peaked? I want to know how many watts of drive (switches at ALC and TUNE) are indicated on a wattmeter when the 820 meter is peaked?

Thanks,

Rick/K5IAR

From: mailto:TS-520_820_530_830%40yahoogroups.com [mailto:mailto:TS-520_820_530_830%40yahoogroups.com] On Behalf Of John Davidson
Sent: Monday, March 25, 2013 3:26 PM
To: mailto:TS-520_820_530_830%40yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: TS-820 Drive

With the drive peaked in ALC metering,,
the plate dipped in Ip metering
and the load adjusted for the proper Ip current and a plate tuning dip maintained,
you should get no less than 100 W, except on 10M, a little less is normal there.

From: Rick <mailto:rickb%40tx.rr.com <mailto:rickb%40tx.rr.com> >

To: mailto:TS-520_820_530_830%40yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Monday, March 25, 2013 3:54 PM
Subject: RE: [TS-520_820_530_830] Re: TS-820 Drive

I should have been more specific. When loading the 820 how many watts output are indicated on an inline wattmeter when you peak the drive control in the ALC position? Sorry, I didn't make that clear.

Thanks,

Rick

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[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41494. Re: [TS-520_820_530_830] Re: TS-820 Drive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 04:24:37 UTC
From: John Davidson
Topic: 41479 Message: 41494

Again, missed that the mode switch is in the TUNE position !
I never used that method of tuning up.
I did it in the CW position.

From: John Davidson <k8jd@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, March 26, 2013 12:13 AM
Subject: Re: [TS-520_820_530_830] Re: TS-820 Drive

How much plate current do you get key down for 15 W >? sounds like a problem.
Does moving the loading control Clockwise increase Plate current and power??

From: Robert Herendeen <mailto:w6jzr%40prodigy.net>
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Monday, March 25, 2013 6:40 PM
Subject: RE: [TS-520_820_530_830] Re: TS-820 Drive

In the TUNE position with the PLATE control adjusted for an IP dip into 50
ohms and the CARRIER control adjusted for mid range ALC reading and the
DRIVE control peaked, I get about 15 watts on most bands. I get around 10
watts on 10 mtrs.

Bob/W6JZR

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[Non-text portions of this message have been removed]

41495. TS-820 - Dip or Peak?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 13:10:58 UTC
From: Rick
Topic: 41495 Message: 41495

The loading instructions for the TS-820 state after you dip the Plate current (Ip) while in the Tune and Ip positions you should move the switch to the RF position and peak the meter using the Tune and Load controls. My question or possible problem is, when I do this the peak is not resonant. When I switch back to check the dip or resonance of the Ip I find it is no longer correct. Through the many years of loading transmitters and amplifiers I have always made sure the tank is resonant by dipping the plate last. Am I missing something here or do I have a problem I need to address in my 820?

Thanks,

Rick/K5IAR

[Non-text portions of this message have been removed]

41496. Re: TS-820 - Dip or Peak?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 12:42:02 UTC
From: mvgilger
Topic: 41495 Message: 41496

As long as you are neutralized properly on 10 meters, per the instructions, you are ok. You will typically always have a little difference between the RF peak and the plate dip. Not much, but some.

Regards,
Mark

--- In TS-520_820_530_830@yahoogroups.com, "Rick" <rickb@...> wrote:
>
> The loading instructions for the TS-820 state after you dip the Plate
> current (Ip) while in the Tune and Ip positions you should move the switch
> to the RF position and peak the meter using the Tune and Load controls. My
> question or possible problem is, when I do this the peak is not resonant.
> When I switch back to check the dip or resonance of the Ip I find it is no
> longer correct. Through the many years of loading transmitters and
> amplifiers I have always made sure the tank is resonant by dipping the plate
> last. Am I missing something here or do I have a problem I need to address
> in my 820?
>
>
>
> Thanks,
>
> Rick/K5IAR
>
>
>
> [Non-text portions of this message have been removed]
>

41497. Re: [TS-520_820_530_830] Re: TS-820 - Dip or Peak?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 12:49:48 UTC
From: John Donnelly
Topic: 41495 Message: 41497

An authorized Kenwood tech that still does a lot of work on the hybrid series told me that the best way to tune any of the
boat anchors is to go to the TUNE mode, peak the ALC with the drive control and go straight to the RF position and tune
for peak output. The difference between the peak and dip is minimal and you're not feeding plate current to the antenna,
you're looking for RF power.

Jack Donnelly KV4JX

From: mvgilger <mgilger@brightdsl.net>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, March 26, 2013 8:42 AM
Subject: [TS-520_820_530_830] Re: TS-820 - Dip or Peak?

As long as you are neutralized properly on 10 meters, per the instructions, you are ok. You will typically always have a little difference between the RF peak and the plate dip. Not much, but some.

Regards,
Mark

--- In mailto:TS-520_820_530_830%40yahoogroups.com, "Rick" <rickb@...> wrote:
>
> The loading instructions for the TS-820 state after you dip the Plate
> current (Ip) while in the Tune and Ip positions you should move the switch
> to the RF position and peak the meter using the Tune and Load controls. My
> question or possible problem is, when I do this the peak is not resonant.
> When I switch back to check the dip or resonance of the Ip I find it is no
> longer correct. Through the many years of loading transmitters and
> amplifiers I have always made sure the tank is resonant by dipping the plate
> last. Am I missing something here or do I have a problem I need to address
> in my 820?
>
>
>
> Thanks,
>
> Rick/K5IAR
>
>
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> [Non-text portions of this message have been removed]
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41498. Re: TS-820 - Dip or Peak?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 13:01:42 UTC
From: mvgilger
Topic: 41495 Message: 41498

Even easier if you have an external watt meter in line. Just peak on it's reading and you won't wear out your switch on the 820.
Mark

--- In TS-520_820_530_830@yahoogroups.com, "mvgilger" <mgilger@...> wrote:
>
> As long as you are neutralized properly on 10 meters, per the instructions, you are ok. You will typically always have a little difference between the RF peak and the plate dip. Not much, but some.
>
> Regards,
> Mark
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Rick" <rickb@> wrote:
> >
> > The loading instructions for the TS-820 state after you dip the Plate
> > current (Ip) while in the Tune and Ip positions you should move the switch
> > to the RF position and peak the meter using the Tune and Load controls. My
> > question or possible problem is, when I do this the peak is not resonant.
> > When I switch back to check the dip or resonance of the Ip I find it is no
> > longer correct. Through the many years of loading transmitters and
> > amplifiers I have always made sure the tank is resonant by dipping the plate
> > last. Am I missing something here or do I have a problem I need to address
> > in my 820?
> >
> >
> >
> > Thanks,
> >
> > Rick/K5IAR
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

41499. Re: Ken R820 separate TS820S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 13:18:44 UTC
From: mvgilger
Topic: 41474 Message: 41499

All that I run between my R-820 and TS-820 is pin #4 on the R-820 to pin 5 on the TS-820 Remote VFO plug. This will mute the R-820 when TS-820 is in transmit mode. Running it this way gives me flexibility to use both VFO's and run the R820 on a separate band as the TS-820 is using, or use both on the same band or same freq. if needed.

Regards,
Mark

--- In TS-520_820_530_830@yahoogroups.com, "emilioc" <beamshoot@...> wrote:
>
> Hi guys.
> I would like to ask if there is around pin configuration to join R820 to Ts820.
> At the moment i have pin 4 nothing else. Meaby can be' a good job to post like a file for all are interested to use the R with TS in separate vfo or trcv operation.
> Trans
> 73 i2QEN
>

41500. Re: [TS-520_820_530_830] TS-820 - Dip or Peak?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 13:39:34 UTC
From: John Davidson
Topic: 41495 Message: 41500

May be neutralization problem or antenna is not proper Z or reactive on the freq you are using,
If you use a dummy load the Ip dip and peak power should coincide.

From: Rick <rickb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, March 26, 2013 9:10 AM
Subject: [TS-520_820_530_830] TS-820 - Dip or Peak?

The loading instructions for the TS-820 state after you dip the Plate current (Ip) while in the Tune and Ip positions you should move the switch to the RF position and peak the meter using the Tune and Load controls. My question or possible problem is, when I do this the peak is not resonant. When I switch back to check the dip or resonance of the Ip I find it is no longer correct. Through the many years of loading transmitters and amplifiers I have always made sure the tank is resonant by dipping the plate last. Am I missing something here or do I have a problem I need to address in my 820?

Thanks,

Rick/K5IAR

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[Non-text portions of this message have been removed]

41501. Re: [TS-520_820_530_830] TS-820 - Dip or Peak?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 14:39:29 UTC
From: Mike
Topic: 41495 Message: 41501

Rick,

It's possible, as a previous response stated, the 820's final amplifier neutralization should, at a minimum, be checked and, if necessary, perform the neutralization procedures.

Tom Ranch, W8JI, has an excellent article on his website that discusses neutralizing an amplifiers (see the link below).

http://w8ji.com/neutralizing__amplifier.htm

Although the article covers grounded grid amplifiers, if you scroll down the page you will see the section that covers "Grid Driven" amplifiers which is what the hybrid final amplifiers are. I highly recommend Tom's article as a must read for all members/hams.

73
Mike

On 3/26/2013 8:10 AM, Rick wrote:
>
> The loading instructions for the TS-820 state after you dip the Plate
> current (Ip) while in the Tune and Ip positions you should move the switch
> to the RF position and peak the meter using the Tune and Load controls. My
> question or possible problem is, when I do this the peak is not resonant.
> When I switch back to check the dip or resonance of the Ip I find it is no
> longer correct. Through the many years of loading transmitters and
> amplifiers I have always made sure the tank is resonant by dipping the
> plate
> last. Am I missing something here or do I have a problem I need to address
> in my 820?
>
> Thanks,
>
> Rick/K5IAR
>
> [Non-text portions of this message have been removed]
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41502. Re: TS-820 - Dip or Peak?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 14:53:34 UTC
From: roberteleazer@rocketmail.com
Topic: 41495 Message: 41502

I have found that when operating MY TS-820S through an antenna tuner with built in wattmeter and SWR meter it is possible to get two different transceiver control and antenna tuner settings that give "acceptable" RF power out and SWR. However, one will be significantly better than the other. The control settings differ to a degree but the largest single difference seems to be the setting of the LOAD control. For the poorer setting, the LOAD control is set a lot lower; the rest of the settings differ by not so much.

Robert

--- In TS-520_820_530_830@yahoogroups.com, "Rick" <rickb@...> wrote:
>
> The loading instructions for the TS-820 state after you dip the Plate
> current (Ip) while in the Tune and Ip positions you should move the switch
> to the RF position and peak the meter using the Tune and Load controls. My
> question or possible problem is, when I do this the peak is not resonant.
> When I switch back to check the dip or resonance of the Ip I find it is no
> longer correct. Through the many years of loading transmitters and
> amplifiers I have always made sure the tank is resonant by dipping the plate
> last. Am I missing something here or do I have a problem I need to address
> in my 820?
>
>
>
> Thanks,
>
> Rick/K5IAR
>
>
>
> [Non-text portions of this message have been removed]
>

41503. RE: [TS-520_820_530_830] TS-820 - Dip or Peak?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 15:54:35 UTC
From: Rick
Topic: 41495 Message: 41503

I agree, John. All of my measurements and troubleshooting are wit a dummy load, so, it looks like I have a little problem. I'll try neutralizing it after I install the new L! choke that is charred. I will likely install a couple of the caps in that section too while I'm in there.

Thanks,

Rick

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of John Davidson
Sent: Tuesday, March 26, 2013 7:40 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-820 - Dip or Peak?

May be neutralization problem or antenna is not proper Z or reactive on the freq you are using,
If you use a dummy load the Ip dip and peak power should coincide.

[Non-text portions of this message have been removed]

41504. RE: [TS-520_820_530_830] Re: TS-820 - Dip or Peak?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 15:56:39 UTC
From: Rick
Topic: 41495 Message: 41504

I do have a Bird 43 inline with my dummy load or antenna whichever way it is switched. However, the problem is when the RF is peaked to the wattmeter the Plate Ip is not dipped fully and is therefore not at resonance. I must have a little issue there.

Thanks,

Rick/K5IAR

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of mvgilger
Sent: Tuesday, March 26, 2013 7:02 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS-820 - Dip or Peak?

Even easier if you have an external watt meter in line. Just peak on it's reading and you won't wear out your switch on the 820.
Mark

--- In TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> , "mvgilger" <mgilger@...> wrote:
>
> As long as you are neutralized properly on 10 meters, per the instructions, you are ok. You will typically always have a little difference between the RF peak and the plate dip. Not much, but some.
>
> Regards,
> Mark
>
>
> --- In TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> , "Rick" <rickb@> wrote:
> >
> > The loading instructions for the TS-820 state after you dip the Plate
> > current (Ip) while in the Tune and Ip positions you should move the switch
> > to the RF position and peak the meter using the Tune and Load controls. My
> > question or possible problem is, when I do this the peak is not resonant.
> > When I switch back to check the dip or resonance of the Ip I find it is no
> > longer correct. Through the many years of loading transmitters and

> > amplifiers I have always made sure the tank is resonant by dipping the
plate
> > last. Am I missing something here or do I have a problem I need to
address
> > in my 820?
> >
> >
> >
> > Thanks,
> >
> > Rick/K5IAR
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41505. Re: TS-820 Drive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 14:57:42 UTC
From: roberteleazer@rocketmail.com
Topic: 41479 Message: 41505

Sure, you can tune it up in CW mode. I usually do a quick check in CW mode after tuning up in TUNE mode, prior to going to SSB.

But if you are as slow to tune and as ham-fisted as I am, you'll burn out your finals faster by not going to TUNE mode first.

Robert

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> I just noticed you are using the TUNE position.Â I gave you incorrect readings,
> I actually hardly ever tuned this way, I always usedÂ the Â CW modeÂ to tune up my 520.
> I believe you would get about 1/4 or lessÂ normal output
> Â with the lower screen voltge thru theÂ TUNE position of the mode switch/.
>
>
> _____
> From: John Davidson <k8jd@...>
> To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
> Sent: Tuesday, March 26, 2013 12:08 AM
> Subject: Re: [TS-520_820_530_830] Re: TS-820 Drive
>
>
> Â
>
> My TS520 has the same RF amp circuits andÂ when it was newPeaked and loaded at 200 mA of plate current on 80M had 115 W output, 40Â thru 15M had 100 Watts output . 70W on 10M.
>
> _____
> From: Rick <mailto:rickb%40tx.rr.com>
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Monday, March 25, 2013 6:35 PM
> Subject: RE: [TS-520_820_530_830] Re: TS-820 Drive
>
>
> Â
>
> I understand. I am working on a 820 and it has drive problems on the lower
> bands, especially 160 meters. I am wondering if anyone ever noticed how much
> output their 820 has when set to ALC and TUNE when the 820 meter is peaked?
> I want to know how many watts of drive (switches at ALC and TUNE) are
> indicated on a wattmeter when the 820 meter is peaked?
>
> Thanks,
>
> Rick/K5IAR

>
> _____
>
> From: mailto:TS-520_820_530_830%40yahoogroups.com
> [mailto:mailto:TS-520_820_530_830%40yahoogroups.com] On Behalf Of John Davidson
> Sent: Monday, March 25, 2013 3:26 PM
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Subject: Re: [TS-520_820_530_830] Re: TS-820 Drive
>
> With the drive peaked in ALC metering,,
> the plate dipped in Ip metering
> and the load adjusted for the proper Ip current and a plate tuning dip
> maintained,
> you should get no less than 100 W, except on 10M, a little less is normal
> there.
>
> _____
> From: Rick <mailto:rickb%40tx.rr.com <mailto:rickb%40tx.rr.com> >
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Monday, March 25, 2013 3:54 PM
> Subject: RE: [TS-520_820_530_830] Re: TS-820 Drive
>
> I should have been more specific. When loading the 820 how many watts output
> are indicated on an inline wattmeter when you peak the drive control in the
> ALC position? Sorry, I didn't make that clear.
>
> Thanks,
>
> Rick
>
> _____
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41506. RE: [TS-520_820_530_830] Re: TS-820 - Dip or Peak?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 15:58:20 UTC
From: Rick
Topic: 41495 Message: 41506

Thanks, John. That sounds like good advice. However, the difference between the dip and the peak in my case is considerable. Therefore, I must have an issue that needs solving before moving on.

Thanks,

Rick/K5IAR

_____

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of John Donnelly
Sent: Tuesday, March 26, 2013 6:50 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: TS-820 - Dip or Peak?

An authorized Kenwood tech that still does a lot of work on the hybrid series told me that the best way to tune any of the
boat anchors is to go to the TUNE mode, peak the ALC with the drive control and go straight to the RF position and tune
for peak output. The difference between the peak and dip is minimal and you're not feeding plate current to the antenna,
you're looking for RF power.

Jack Donnelly KV4JX

_____
From: mvgilger <mgilger@... <mailto:mgilger%40brightdsl.net> >
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Tuesday, March 26, 2013 8:42 AM
Subject: [TS-520_820_530_830] Re: TS-820 - Dip or Peak?

As long as you are neutralized properly on 10 meters, per the instructions, you are ok. You will typically always have a little difference between the RF peak and the plate dip. Not much, but some.

Regards,
Mark

--- In mailto:TS-520_820_530_830%40yahoogroups.com, "Rick" <rickb@...>
wrote:
>
> The loading instructions for the TS-820 state after you dip the Plate
> current (Ip) while in the Tune and Ip positions you should move the switch
> to the RF position and peak the meter using the Tune and Load controls. My
> question or possible problem is, when I do this the peak is not resonant.

> When I switch back to check the dip or resonance of the Ip I find it is no
> longer correct. Through the many years of loading transmitters and
> amplifiers I have always made sure the tank is resonant by dipping the
plate
> last. Am I missing something here or do I have a problem I need to address
> in my 820?
>
>
>
> Thanks,
>
> Rick/K5IAR
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[Non-text portions of this message have been removed]

41507. RE: [TS-520_820_530_830] Re: TS-820 Drive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 16:01:21 UTC
From: Rick
Topic: 41479 Message: 41507

I understand exactly what you mean about ☐ham-fisted☐. My old paws sure don☐t move as quickly as they once did and they don☐t always do exactly what I intend for them to do. I guess old age has its perks, but quick tuning is not one of them. HI HI.

73,

Rick/K5IAR

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of roberteleazer@...
Sent: Tuesday, March 26, 2013 8:58 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS-820 Drive

Sure, you can tune it up in CW mode. I usually do a quick check in CW mode after tuning up in TUNE mode, prior to going to SSB.

But if you are as slow to tune and as ham-fisted as I am, you'll burn out your finals faster by not going to TUNE mode first.

Robert

--- In TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> , John Davidson <k8jd@...> wrote:
>
> I just noticed you are using the TUNE position.Â I gave you incorrect readings,
> I actually hardly ever tuned this way, I always usedÂ the Â CW modeÂ to tune up my 520.
> I believe you would get about 1/4 or lessÂ normal output
> Â with the lower screen voltge thru theÂ TUNE position of the mode switch/.
>
>
> _____
> From: John Davidson <k8jd@...>
> To: "TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> >
> Sent: Tuesday, March 26, 2013 12:08 AM
> Subject: Re: [TS-520_820_530_830] Re: TS-820 Drive

>
>
> Â
>
> My TS520 has the same RF amp circuits andÂ when it was newPeaked and
loaded at 200 mA of plate current on 80M had 115 W output, 40Â thru 15M had
100 Watts output . 70W on 10M.
>
> _____
> From: Rick <mailto:rickb%40tx.rr.com>
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Monday, March 25, 2013 6:35 PM
> Subject: RE: [TS-520_820_530_830] Re: TS-820 Drive
>
>
> Â
>
> I understand. I am working on a 820 and it has drive problems on the lower
> bands, especially 160 meters. I am wondering if anyone ever noticed how
much
> output their 820 has when set to ALC and TUNE when the 820 meter is
peaked?
> I want to know how many watts of drive (switches at ALC and TUNE) are
> indicated on a wattmeter when the 820 meter is peaked?
>
> Thanks,
>
> Rick/K5IAR
>
> _____
>
> From: mailto:TS-520_820_530_830%40yahoogroups.com
> [mailto:mailto:TS-520_820_530_830%40yahoogroups.com] On Behalf Of John
Davidson
> Sent: Monday, March 25, 2013 3:26 PM
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Subject: Re: [TS-520_820_530_830] Re: TS-820 Drive
>
> With the drive peaked in ALC metering,,
> the plate dipped in Ip metering
> and the load adjusted for the proper Ip current and a plate tuning dip
> maintained,
> you should get no less than 100 W, except on 10M, a little less is normal
> there.
>
> _____
> From: Rick <mailto:rickb%40tx.rr.com <mailto:rickb%40tx.rr.com> >
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Monday, March 25, 2013 3:54 PM

> Subject: RE: [TS-520_820_530_830] Re: TS-820 Drive
>
> I should have been more specific. When loading the 820 how many watts
output
> are indicated on an inline wattmeter when you peak the drive control in
the
> ALC position? Sorry, I didn't make that clear.
>
> Thanks,
>
> Rick
>
> _____
>
> [Non-text portions of this message have been removed]
>
> [Non-text portions of this message have been removed]
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>
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> [Non-text portions of this message have been removed]
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41508. RE: [TS-520_820_530_830] TS-820 - Dip or Peak?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 16:03:57 UTC
From: Rick
Topic: 41495 Message: 41508

Thanks, Mike. Great advice. I will follow the link and read up on the procedure. I've done it a zillion times on my old homebrew exciters and amplifiers, but I am always anxious to hear another view of it.

Thanks and 73,

Rick/K5IAR

_____

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Mike
Sent: Tuesday, March 26, 2013 8:39 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-820 - Dip or Peak?

Rick,

It's possible, as a previous response stated, the 820's final amplifier neutralization should, at a minimum, be checked and, if necessary, perform the neutralization procedures.

Tom Ranch, W8JI, has an excellent article on his website that discusses neutralizing an amplifiers (see the link below).

http://w8ji.com/neutralizing__amplifier.htm

Although the article covers grounded grid amplifiers, if you scroll down the page you will see the section that covers "Grid Driven" amplifiers which is what the hybrid final amplifiers are. I highly recommend Tom's article as a must read for all members/hams.

73
Mike

On 3/26/2013 8:10 AM, Rick wrote:
>
> The loading instructions for the TS-820 state after you dip the Plate
> current (Ip) while in the Tune and Ip positions you should move the switch
> to the RF position and peak the meter using the Tune and Load controls. My
> question or possible problem is, when I do this the peak is not resonant.
> When I switch back to check the dip or resonance of the Ip I find it is no
> longer correct. Through the many years of loading transmitters and
> amplifiers I have always made sure the tank is resonant by dipping the
> plate
> last. Am I missing something here or do I have a problem I need to address
> in my 820?
>

> Thanks,
>
> Rick/K5IAR
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41509. Re: Ken R820 separate TS820S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 15:26:04 UTC
From: emilioc
Topic: 41474 Message: 41509

Yes is ok like this Mark but as you know can be interesting to use RMT position on TS820 for frequency spot and in this scenary you will have R820 and TS820 in RX.

Regards, Emilio

--- In TS-520_820_530_830@yahoogroups.com, "mvgilger" <mgilger@...> wrote:
>
> All that I run between my R-820 and TS-820 is pin #4 on the R-820 to pin 5 on the TS-820 Remote VFO plug. This will mute the R-820 when TS-820 is in transmit mode. Running it this way gives me flexibility to use both VFO's and run the R820 on a separate band as the TS-820 is using, or use both on the same band or same freq. if needed.
>
> Regards,
> Mark
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "emilioc" <beamshoot@> wrote:
> >
> > Hi guys.
> > I would like to ask if there is around pin configuration to join R820 to Ts820.
> > At the moment i have pin 4 nothing else. Meaby can be' a good job to post like a file for all are interested to use the R with TS in separate vfo or trcv operation.
> > Trans
> > 73 i2QEN
> >
>

41510. Re: [TS-520_820_530_830] Re: Ken R820 separate TS820S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 15:58:31 UTC
From: Cliff White
Topic: 41474 Message: 41510

You might also read this: http://www.k4eaa.com/r820info.htm

Respectfully,
Cliff White, W5CNW
w5cnw@... <mailto:w5cnw@...>
On 03/26/2013 10:26 AM, emilioc wrote:
> Yes is ok like this Mark but as you know can be interesting to use RMT
> position on TS820 for frequency spot and in this scenary you will have R820 and TS820 in RX.
>
> Regards, Emilio
>
> --- In TS-520_820_530_830@yahoogroups.com, "mvgilger" <mgilger@...> wrote:
>> All that I run between my R-820 and TS-820 is pin #4 on the R-820 to pin 5 on the TS-820 Remote VFO plug. This will mute the R-820 when TS-820 is in transmit mode. Running it this way gives me flexibility to use both VFO's and run the R820 on a separate band as the TS-820 is using, or use both on the same band or same freq. if needed.
>>
>> Regards,
>> Mark
>>
>>
>> --- In TS-520_820_530_830@yahoogroups.com, "emilioc" <beamshoot@> wrote:
>>> Hi guys.
>>> I would like to ask if there is around pin configuration to join R820 to Ts820.
>>> At the moment i have pin 4 nothing else. Meaby can be' a good job to post like a file for all are interested to use the R with TS in separate vfo or trcv operation.
>>> Trans
>>> 73 i2QEN
>>>
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>

[Non-text portions of this message have been removed]

41511. Re: [TS-520_820_530_830] Re: TS-520 Drive & tuning.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 16:00:30 UTC
From: John Davidson
Topic: 41479 Message: 41511

I was starting with the carrier control set low so as to limit drive and IP initially, while quickly tuning the plate to a dip, praking the drive tuning and gradually , increasing drive with the carrier control until I have ALC action and finishing with alternately increasing load and re dip plate until I get 200 mA. So no strain on the tubes from overcurrent tuning up.
I am mostly on CW so don't have to change the mode switch when I am done tuning up. .The whole process takes me about 15 seconds to complete.
I grew up with tubes so peak and dip are not a new thing to me. No tune radios are still a novelty in my mind !

From: "roberteleazer@rocketmail.com" <roberteleazer@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, March 26, 2013 10:57 AM
Subject: [TS-520_820_530_830] Re: TS-820 Drive

Sure, you can tune on CW.....
> My TS520 has the same RF amp circuits andÂ when it was newPeaked and loaded at 200 mA of plate current on 80M had 115 W output, 40Â thru 15M had 100 Watts output . 70W on 10M.
> have been removed]
>

[Non-text portions of this message have been removed]

41512. Re: TS 820s digital counter problem

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 18:38:29 UTC
From: kd0fds
Topic: 41480 Message: 41512

hiya Fred.

Sorry I don't have any good photos of the pins on the counter boards, but I have taken mine apart many times!

unplug power from ts-820s. No need to go shakin' hands with mr. electricity.

Take off the top and bottom covers. (mind the speaker cable!)
Follow the leads from the actual display to a large goldish metal box on the top. That's the counter assembly. Big linear connector on top and there is another connector on the bottom. Clean those pins/connetors. Maybe that is all it will take?

OK. Same 9000? 4 screws hold that big box in the rig. Wait 'til you drop one of those 4 screws and it disappears in the wire loom. Don't panic. You'll find it eventually.

Now you have the little bugger in your hands. Start taking out all the screws in that thing too. The screws are all the same length so you can just drop them into your magnetic bowl.

Got the 2 lids off, eh? nice work. Screws in the corners of the boards right? Take those out. Now you can (gently) remove the boards from the box. The pull up straight off the internal interconnect pins. Feelin' extra proud of yourself? Pop the plastic pin holders from the metal box so you can REALLY get after the pins on the cleanup steps. I mean you don't want to have to do this twice, right? (or about 10x like I have.)

Assembly = no worries. You will find that the boards only go back in the box one correct way. If you notice the connector seems to stick out a long way, yeah, that isn't the right board on the right side!

26 screws later...and after pushing the connectors back on you are ready to fire up your rig an check that counter again.

Good luck.

If that doesn't work, check into "through hole" repairs. Basically, you will be soldering tiny wire strands through the through holes on the boards in place of the questionable solder only connections. You can't get to all of them, but there are about 24. I think the hole under IC#11 is a blind hole because the chip is on top of it.

If that doesn't work, get out a bright light and a magnifying glass and start looking for cracked traces. That is how I FINALLY fixed my counter. (image in the photo's section under kd0fds)

-Stephen
KD0FDS

--- In TS-520_820_530_830@yahoogroups.com, "FRED" <fred_gordon@...> wrote:
>
> HI

> My digital counter on my TS 820s seems to be stuck on 9000. From what I have read it looks as if I need to clean some pins. Does anyone have any pictures that might help me? Many thanks in advance
> Fred (GM4ALZ)
>

41513. Re: [TS-520_820_530_830] Re: TS-820 - Dip or Peak?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 19:11:12 UTC
From: pmarkavage@...
Topic: 41495 Message: 41513

Since I've had my TS-830S for almost 30 years, my tune up procedure hasn't changed all that much. I generally tune for maximum power output viewing the inline meter (not the meter in the 830). When max power is achieved, I then check for final tank resonance (by checking or doing a dip of the final if necessary) and then making sure the ALC level is set properly according to the instructions. Any RF power lowering, as viewed on the inline meter, generally is insignificant on the other end of the contact. Keeping your final tank circuit happy by being in resonance is far more important for its components, tubes, etc. All of my components in the final and driver stages are still original and look like they were just put there recently. Although lower frequency operating tends to be less of a problem (tune for maximum output versus dip/load), it can be more stressful for components, tubes, etc. as you climb higher in frequency if the final is not in resonance. Checking/adjusting for correct neutralization of the final is always an important consideration.

Pete, wa2cwa
http://www.manualman.com

On Tue, 26 Mar 2013 09:58:20 -0600 "Rick" <rickb@...> writes:
> Thanks, John. That sounds like good advice. However, the difference
> between
> the dip and the peak in my case is considerable. Therefore, I must
> have an
> issue that needs solving before moving on.
>
> Thanks,
>
> Rick/K5IAR

41514. Re: [TS-520_820_530_830] Re: TS-520 Drive & tuning.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 19:15:17 UTC
From: pmarkavage@...
Topic: 41479 Message: 41514

My CE 100V and 200V, from the late 50's, were no-tune transmitters but it took several weeks to get them to work that way on all bands.

Pete, wa2cwa
http://www.manualman.com

On Tue, 26 Mar 2013 09:00:30 -0700 (PDT) John Davidson <k8jd@...> writes:
> I grew up with tubes so peak and dip are not a new thing to me. No
> tune radios are still a novelty in my mind !

41515. Mechanical design of VFO TS520 and TS515

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 19:20:51 UTC
From: Behiels JeanPierre
Topic: 41515 Message: 41515

Hi Kenwood members;

Could someone confirm me if the mechanical design and mechanical drive shaft behind the main dial of both Kenwood rigs are the same or not ?
I personally did not have a TS520,but regarding some pictures I saw before,I presume there are both quit the same and maby some pieces are interchangeable ??
I look forward if perhaps someone could give my some more details around.
I am chearching for a new mechanical drive shaft gear for my old TS515.

Regards Jean ON4AEF.

[Non-text portions of this message have been removed]

41516. Re: [TS-520_820_530_830] Re: TS-520 Drive & tuning.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 19:25:15 UTC
From: n6wk@...
Topic: 41479 Message: 41516

Pete,
I have a CE-100V here that was given to me. I just put it on the Bench.
I am going to completely go through it. It's been sitting somewhere for
many many years.

73,
Gordon

On 3/26/2013 12:15 PM, pmarkavage@... wrote:
>
> My CE 100V and 200V, from the late 50's, were no-tune transmitters but it
> took several weeks to get them to work that way on all bands.
>
> Pete, wa2cwa
> http://www.manualman.com
>
> On Tue, 26 Mar 2013 09:00:30 -0700 (PDT) John Davidson <k8jd@...
> <mailto:k8jd%40yahoo.com>>
> writes:
> > I grew up with tubes so peak and dip are not a new thing to me. No
> > tune radios are still a novelty in my mind !
>
>

41517. RE: [TS-520_820_530_830] Re: TS-820 - Dip or Peak?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 20:40:43 UTC
From: Rick
Topic: 41495 Message: 41517

Thanks, Pete. I agree 100%. Keeping the final tank circuitry in resonance is much more important than the few extra watts you may get from simply peaking the RF meter. I personally think it plays not only a big role in the life of your components but also aides in the quality of signal you broadcast.

Thanks,

Rick/K5IAR

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of pmarkavage@...
Sent: Tuesday, March 26, 2013 1:11 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: TS-820 - Dip or Peak?

Since I've had my TS-830S for almost 30 years, my tune up procedure hasn't changed all that much. I generally tune for maximum power output viewing the inline meter (not the meter in the 830). When max power is achieved, I then check for final tank resonance (by checking or doing a dip of the final if necessary) and then making sure the ALC level is set properly according to the instructions. Any RF power lowering, as viewed on the inline meter, generally is insignificant on the other end of the contact. Keeping your final tank circuit happy by being in resonance is far more important for its components, tubes, etc. All of my components in the final and driver stages are still original and look like they were just put there recently. Although lower frequency operating tends to be less of a problem (tune for maximum output versus dip/load), it can be more stressful for components, tubes, etc. as you climb higher in frequency if the final is not in resonance. Checking/adjusting for correct neutralization of the final is always an important consideration.

Pete, wa2cwa
http://www.manualman.com

On Tue, 26 Mar 2013 09:58:20 -0600 "Rick" <rickb@...
<mailto:rickb%40tx.rr.com> > writes:
> Thanks, John. That sounds like good advice. However, the difference
> between
> the dip and the peak in my case is considerable. Therefore, I must
> have an
> issue that needs solving before moving on.
>
> Thanks,
>
> Rick/K5IAR

[Non-text portions of this message have been removed]

41518. 820 VFO for 520S?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 19:34:31 UTC
From: n3kvl
Topic: 41518 Message: 41518

HI All,

I am wondering if the remote VFO for the 820 will function with the 520S? I am in search of a VFO to complete the station and thought this might be an option. Haven't had a chance to find the manuals to read it myself yet.

Thanks
Archie
(N3KVL)

41519. Re: [TS-520_820_530_830] 820 VFO for 520S?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 20:10:46 UTC
From: W LEWIS
Topic: 41518 Message: 41519

Yes. They are wired the same and are interchangeable.
Butch Lewis
KØPSA

--- On Tue, 3/26/13, n3kvl <n3kvl@...> wrote:

From: n3kvl <n3kvl@...>
Subject: [TS-520_820_530_830] 820 VFO for 520S?
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, March 26, 2013, 2:34 PM

HI All,

I am wondering if the remote VFO for the 820 will function with the 520S? I am in search of a VFO to complete the station and thought this might be an option. Haven't had a chance to find the manuals to read it myself yet.

Thanks
Archie
(N3KVL)

[Non-text portions of this message have been removed]

41520. Re: Ken R820 separate TS820S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 21:49:24 UTC
From: emilioc
Topic: 41474 Message: 41520

Cliff Thanks.

I know about this article regarding R820.
It is part of manual.

73 Emilio

--- In TS-520_820_530_830@yahoogroups.com, Cliff White <cn.white@...> wrote:
>
> You might also read this: http://www.k4eaa.com/r820info.htm
>
> Respectfully,
> Cliff White, W5CNW
> w5cnw@... <mailto:w5cnw@...>
> On 03/26/2013 10:26 AM, emilioc wrote:
> > Yes is ok like this Mark but as you know can be interesting to use RMT
> > position on TS820 for frequency spot and in this scenary you will have R820 and TS820 in RX.
> >
> > Regards, Emilio
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "mvgilger" <mgilger@> wrote:
> >> All that I run between my R-820 and TS-820 is pin #4 on the R-820 to pin 5 on the TS-820 Remote VFO plug. This will mute the R-820 when TS-820 is in transmit mode. Running it this way gives me flexibility to use both VFO's and run the R820 on a separate band as the TS-820 is using, or use both on the same band or same freq. if needed.
> >>
> >> Regards,
> >> Mark
> >>
> >>
> >> --- In TS-520_820_530_830@yahoogroups.com, "emilioc" <beamshoot@> wrote:
> >>> Hi guys.
> >>> I would like to ask if there is around pin configuration to join R820 to Ts820.
> >>> At the moment i have pin 4 nothing else. Meaby can be' a good job to post like a file for all are interested to use the R with TS in separate vfo or trcv operation.
> >>> Trans
> >>> 73 i2QEN
> >>>
> >
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> > ------------------------------------
> >
> > Yahoo! Groups Links
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>
> [Non-text portions of this message have been removed]
>

41521. Re: [TS-520_820_530_830] Complete Kenwood Vintage Station for Sale

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 20:21:32 UTC
From: Alvin Chipmunk
Topic: 41485 Message: 41521

Hi Tom,

I have an interest in the SP-230 if its a good match for my TS-520S.

Also maybe the VFO is it will interface with the 520....

Archie
(N3KVL)

n3kvl@...

or

archimede.ziviello@...

From: sceneryguru <k3ssb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, March 25, 2013 6:25 PM
Subject: [TS-520_820_530_830] Complete Kenwood Vintage Station for Sale

Good Evening Group:

I wanted to give my fellow members an opportunity to have a "Heads-up" prior to this equipment going onto eBay and / or other outlets for liquidation. If there is an interest in any or all of the units, please contact me, off the list to discuss further.

The items are as follows:

Kenwood AT-230 antenna tuner

Kenwood MC-50 dynamic cardiod desk microphone

Kenwood SM-220 Station Monitor

Kenwood SP-230 external speaker

Kenwood TS-820S Amateur HF Transceiver

Kenwood VFO-820 external analog display VFO

The units have been keep under dust cover, in a smoke free environment. The above are from my primary operating station, and were in use as recently as this past weekend.

tnx es 73 / 76

Tom G, Sr.
K3SSB

[Non-text portions of this message have been removed]

41522. Re: TS-820S/R-820 interfacing

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 21:56:51 UTC
From: emilioc
Topic: 18552 Message: 41522

Hi Jon.
R820 connect to if ts820 loss part of signal so you must use very short coax cable.
Have you doid the remote cable ??
Have you only connected pin 4 R820 to pin 5 VFO connector ts820 ?
About other pin for RMT and trcv ????

73 Emilio I2QEN

--- In TS-520_820_530_830@yahoogroups.com, "k5xrf" <k5xrf@...> wrote:
>
> Hi, I'm new to the group and I need some help. I have a TS-820S
> which I really enjoy operating. I bought a R-820 to accompany it
> and set about fabricating the necessary cables as it didn't come
> with any. I actually found a NOS Hirose connector for the R-820 and
> proceeded to make that cable and the other required RCA-jack
> cables. I performed the TS-820S mods per the R-820 owner's manual.
> I can operate the TS-820S in stand-alone mode just fine with the
> modification to the external VFO plug.
>
> After connecting the two together and putting the R-820 "Transceive"
> control to the "RX" position both of the radios seem to operate fine
> using the R-820 VFO. If I change the R-820 "Transceive" control to
> the "TX" position I get a signal that is several hundred Kcs off of
> the TS-820S frequency setting and sometimes the R-820 digital
> display becomes intermittent with displaying that frequency. I
> suspect that there could be a connection problem somewhere between
> the VCO in the TS-820S and the R-820. Are there other things that I
> should check for as well? Any help is greatly appreciated!
> 73,
>
> Jon K5XRF
>

41523. Re: transceive cable for kenwood twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 22:39:50 UTC
From: emilioc
Topic: 24774 Message: 41523

Osamu can you help us for order to the Japanese Company for twins cable ???
Thanks
73 Emilio

--- In TS-520_820_530_830@yahoogroups.com, "Osamu Hazawa" <pomerol@...> wrote:
>
> Dave et al,
>
> >There was a thread on this list a few years ago about this company and a
> >Japanese ham who was trying to get an order together for cables.
>
> I' m the person! B-)
>
> Osamu
>
>
> ----- Original Message -----
> From: Dave
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, February 03, 2010 4:10 PM
> Subject: Re: [TS-520_820_530_830] Re: transceive cable for kenwood twins
>
>
>
> I believe the cables are still available in Japan at TMT, but my reading
> ability is really rusty:
>
> http://www.toyama-smenet.or.jp/~tmt/page1c.htm
>
> This page has a bunch of stuff made of unobtainium :) Search for
> '599'. The price is about US$85. They seem to be located in Toyama,
> based on their telephone number and email address.
>
> There was a thread on this list a few years ago about this company and a
> Japanese ham who was trying to get an order together for cables.
> Unfortunately they only want to deal with domestic orders, so I think it
> really requires someone in Japan to make it happen.
>
> My missing treasure is a TV-502 cable.
>
> 73,
> - Dave W6OT
>
> Chuck Goelz wrote:
> >

> >
> > Bob,
> >
> > Apparently you are finding out just how scarce these are! As far as I
> > know, there aren't any. But, you probably CAN buy the whole cable,
> > provided that you are very patient and willing to pay the "fair market
> > price". I see the cables go up for sale on eBay periodically, as there
> > are sellers that recognize the value of splitting up the Twins... It
> > kind of hurts to see that this is profitable, but that's what the
> > market has done. Anyhow, I posted a couple of months ago that yet
> > another cable was available on eBay (I had no connection with the
> > sale!), just to let people like you know that it was available. They
> > tend to show up 2 or 3 time as year, so don't expect to be able to buy
> > one tomorrow... And when they do show up, they usually sell for $90 to
> > $120. Really.
> >
> > For now, I'm keeping my cable. But I keep thinking that I might want
> > to sell my Twins (almost perfect T-599D with original S2001A finals,
> > R-599D w/ both 6m and 2m convertors, S-599, and THE cable) to buy a
> > new house or airplane or something... ;-) But my dilemma is that I
> > can't imagine breaking up such a beautiful set of Kenwood Twins just
> > to satisfy the existing market that is driven by the "I absolutely
> > NEED this piece at any ridiculous price to complete my station"
> > mentality. So I guess I'll just keep 'em... For now. (Wondering what
> > kind of responses I'll get from this one...)
> >
> > Anyhow, I hope someone else in the group has a better answer for you.
> > If you want the functionality that the cable provides, and originality
> > is not an issue, you could replace the connectors with something that
> > you CAN get mates for... And save the old connectors in case you get
> > lucky some day...
> >
> > Sincerely, good luck! And if you are not sure how to find the cable on
> > eBay, drop me an email...
> >
> > Cheers & 73,
> > Chuck WA3CEJ
> >
> > ----- Original Message -----
> > From: Bob
> > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Tuesday, February 02, 2010 9:24 PM
> > Subject: [TS-520_820_530_830] Re: transceive cable for kenwood twins
> >
> > I have been looking for the ends to the connector cables the last
> > couple of months. I have hit every local shop here in Orange County
> > California and the surplus places etc. they have checked with there
> > suppliers and so on. The end of this process is that no one has found
> > the ends to the cable. IF someone has a connection and knows where the

> > ends of the cable for the 599 twins can be purchased let me know.
> > Thank You
> > KB6KPK
> > Bob Musser
> > Orange, CA.
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, pmarkavage
> > <pmarkavage@> wrote:
> > >
> > > Wiring diagram for the cable/connectors can be pulled from the
> > > receiver/transmitter schematics. If you don't use a transceiver cable,
> > > the receiver has a jumper plug in the remote socket (so you already
> have
> > > one plug) but the jumpers would have to be removed if you use it as
> one
> > > cable end.
> > >
> > > Pete, wa2cwa
> > >
> > > On Sun, 31 Jan 2010 22:54:14 -0500 yash@ writes:
> > > >
> > > > Looking at a set of 599D kenwood twins,seller does not have the 16
> > > > pin cable that goes between the receiver and transmitter. needed for
> > > > transceive operation. Dose anyone have a cable,or the 16 pin
> > > > connectors and or a wiring diagram for the cable?
> > > > any info on the cable assembly or a wiring diagram to build one,
> > > > would really be greatful.
> > > > thanks
> > > > dale wt4t
> > >
> > >
> >
> [Non-text portions of this message have been removed]
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>
> [Non-text portions of this message have been removed]
>

41524. RE: [TS-520_820_530_830] Re: transceive cable for kenwood twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-26 23:57:11 UTC
From: Daedalus
Topic: 24774 Message: 41524

When you all give up and want to unload your T99A - D, I'm here!

Jack

WA2OLZ

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of emilioc
Sent: Tuesday, March 26, 2013 6:40 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: transceive cable for kenwood twins

Osamu can you help us for order to the Japanese Company for twins cable ???
Thanks
73 Emilio

--- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> , "Osamu Hazawa" <pomerol@...>
wrote:
>
> Dave et al,
>
> >There was a thread on this list a few years ago about this company and a
> >Japanese ham who was trying to get an order together for cables.
>
> I' m the person! B-)
>
> Osamu
>
>
> ----- Original Message -----
> From: Dave
> To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Wednesday, February 03, 2010 4:10 PM
> Subject: Re: [TS-520_820_530_830] Re: transceive cable for kenwood twins
>
>
>
> I believe the cables are still available in Japan at TMT, but my reading
> ability is really rusty:
>
> http://www.toyama-smenet.or.jp/~tmt/page1c.htm
>
> This page has a bunch of stuff made of unobtainium :) Search for
> '599'. The price is about US$85. They seem to be located in Toyama,

> based on their telephone number and email address.
>
> There was a thread on this list a few years ago about this company and a
> Japanese ham who was trying to get an order together for cables.
> Unfortunately they only want to deal with domestic orders, so I think it
> really requires someone in Japan to make it happen.
>
> My missing treasure is a TV-502 cable.
>
> 73,
> - Dave W6OT
>
> Chuck Goelz wrote:
> >
> >
> > Bob,
> >
> > Apparently you are finding out just how scarce these are! As far as I
> > know, there aren't any. But, you probably CAN buy the whole cable,
> > provided that you are very patient and willing to pay the "fair market
> > price". I see the cables go up for sale on eBay periodically, as there
> > are sellers that recognize the value of splitting up the Twins... It
> > kind of hurts to see that this is profitable, but that's what the
> > market has done. Anyhow, I posted a couple of months ago that yet
> > another cable was available on eBay (I had no connection with the
> > sale!), just to let people like you know that it was available. They
> > tend to show up 2 or 3 time as year, so don't expect to be able to buy
> > one tomorrow... And when they do show up, they usually sell for $90 to
> > $120. Really.
> >
> > For now, I'm keeping my cable. But I keep thinking that I might want
> > to sell my Twins (almost perfect T-599D with original S2001A finals,
> > R-599D w/ both 6m and 2m convertors, S-599, and THE cable) to buy a
> > new house or airplane or something... ;-) But my dilemma is that I
> > can't imagine breaking up such a beautiful set of Kenwood Twins just
> > to satisfy the existing market that is driven by the "I absolutely
> > NEED this piece at any ridiculous price to complete my station"
> > mentality. So I guess I'll just keep 'em... For now. (Wondering what
> > kind of responses I'll get from this one...)
> >
> > Anyhow, I hope someone else in the group has a better answer for you.
> > If you want the functionality that the cable provides, and originality
> > is not an issue, you could replace the connectors with something that
> > you CAN get mates for... And save the old connectors in case you get
> > lucky some day...
> >
> > Sincerely, good luck! And if you are not sure how to find the cable on
> > eBay, drop me an email...
> >
> > Cheers & 73,

> > Chuck WA3CEJ
> >
> > ----- Original Message -----
> > From: Bob
> > To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Tuesday, February 02, 2010 9:24 PM
> > Subject: [TS-520_820_530_830] Re: transceive cable for kenwood twins
> >
> > I have been looking for the ends to the connector cables the last
> > couple of months. I have hit every local shop here in Orange County
> > California and the surplus places etc. they have checked with there
> > suppliers and so on. The end of this process is that no one has found
> > the ends to the cable. IF someone has a connection and knows where the
> > ends of the cable for the 599 twins can be purchased let me know.
> > Thank You
> > KB6KPK
> > Bob Musser
> > Orange, CA.
> >
> > --- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, pmarkavage
> > <pmarkavage@> wrote:
> > >
> > > Wiring diagram for the cable/connectors can be pulled from the
> > > receiver/transmitter schematics. If you don't use a transceiver cable,
> > > the receiver has a jumper plug in the remote socket (so you already
> have
> > > one plug) but the jumpers would have to be removed if you use it as
> one
> > > cable end.
> > >
> > > Pete, wa2cwa
> > >
> > > On Sun, 31 Jan 2010 22:54:14 -0500 yash@ writes:
> > > >
> > > > Looking at a set of 599D kenwood twins,seller does not have the 16
> > > > pin cable that goes between the receiver and transmitter. needed for
> > > > transceive operation. Dose anyone have a cable,or the 16 pin
> > > > connectors and or a wiring diagram for the cable?
> > > > any info on the cable assembly or a wiring diagram to build one,
> > > > would really be greatful.
> > > > thanks
> > > > dale wt4t
> > >
> >
>
> [Non-text portions of this message have been removed]

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> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

41525. Re: [TS-520_820_530_830] Re: TS-520 Drive & tuning.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-27 02:35:14 UTC
From: pmarkavage@...
Topic: 41479 Message: 41525

My 100V was sitting by the curb waiting for trash pickup before I got it.
Took a lot of work to get that thing up and running. Had it on the air
for several years mostly on AM. Not bad for SSB either. I used my
Squires Sanders SS-1R as the companion receiver. I even had a QSO on 20
meters SSB with Wes Shum, the designer of the transmitter back in the
90's. Finally took it to Dayton several years ago to find it a new home.

Pete, wa2cwa
http://www.manualman.com

On Tue, 26 Mar 2013 12:25:15 -0700 n6wk@... writes:
> Pete,
> I have a CE-100V here that was given to me. I just put it on the
> Bench.
> I am going to completely go through it. It's been sitting somewhere
> for
> many many years.
>
> 73,
> Gordon
>
>
> On 3/26/2013 12:15 PM, pmarkavage@... wrote:
> >
> > My CE 100V and 200V, from the late 50's, were no-tune transmitters
> but it
> > took several weeks to get them to work that way on all bands.
> >
> > Pete, wa2cwa
> > http://www.manualman.com
> >
> > On Tue, 26 Mar 2013 09:00:30 -0700 (PDT) John Davidson
> <k8jd@...
> > <mailto:k8jd%40yahoo.com>>
> > writes:
> > > I grew up with tubes so peak and dip are not a new thing to me.
> No
> > > tune radios are still a novelty in my mind !

41526. Re: [TS-520_820_530_830] Re: TS-520 Drive & tuning.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-27 02:41:20 UTC
From: n6wk@...
Topic: 41479 Message: 41526

Pete,
I love hearing stories like that. The 100V was way beyond it's time for
1957-58.
I'll let you know how the restoration goes on this thing.

73,
Gordon
N6WK

On 3/26/2013 7:35 PM, pmarkavage@... wrote:
>
> My 100V was sitting by the curb waiting for trash pickup before I got it.
> Took a lot of work to get that thing up and running. Had it on the air
> for several years mostly on AM. Not bad for SSB either. I used my
> Squires Sanders SS-1R as the companion receiver. I even had a QSO on 20
> meters SSB with Wes Shum, the designer of the transmitter back in the
> 90's. Finally took it to Dayton several years ago to find it a new home.
>
> Pete, wa2cwa
> http://www.manualman.com
>
> On Tue, 26 Mar 2013 12:25:15 -0700 n6wk@...
> <mailto:n6wk%40n6wk.com> writes:
> > Pete,
> > I have a CE-100V here that was given to me. I just put it on the
> > Bench.
> > I am going to completely go through it. It's been sitting somewhere
> > for
> > many many years.
> >
> > 73,
> > Gordon
> >
> >
> > On 3/26/2013 12:15 PM, pmarkavage@...
> <mailto:pmarkavage%40juno.com> wrote:
> > >
> > > My CE 100V and 200V, from the late 50's, were no-tune transmitters
> > but it
> > > took several weeks to get them to work that way on all bands.
> > >
> > > Pete, wa2cwa
> > > http://www.manualman.com
> > >
> > > On Tue, 26 Mar 2013 09:00:30 -0700 (PDT) John Davidson

> > <k8jd@... <mailto:k8jd%40yahoo.com>
> > > <mailto:k8jd%40yahoo.com>>
> > > writes:
> > > > I grew up with tubes so peak and dip are not a new thing to me.
> > No
> > > > > tune radios are still a novelty in my mind !
>
>

41527. Re: [TS-520_820_530_830] TS-820S - Low power on 160 Meters

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-27 05:29:19 UTC
From: Jim Showker
Topic: 41354 Message: 41527

Hi Roger,
You might indeed have a cap problem or a switching problem in the tank circuit. I have repaired a couple radios that did. I have a procedure up on my site that tests these caps for proper switching in and out of circuit. In order to get the tank circuit to resonate, the coil taps and additional ceramic caps are switched in and out, in a rather complicated arrangement, to get the right combination to resonate on the desired band. If anything is amiss, then no resonance, you can't tune it, and no or low power out.

http://www.hybridrestore.com/final-cage-repair/

Jim KE7OAY

On 3/15/2013 9:18 PM, Roger wrote:
>
> Hello All,
>
> I have a TS-820S that I have been repairing and the one final issue
> that I have is low output power on 160 Meters. The radio tunes up fine
> on all other bands, putting out a good solid 100 Watts.
>
> I have good level of ALC and the idling current seems fine on 160
> Meters, but I cannot get any dip of IP when adjusting the plate
> control in tune or CW mode. Also, in CW mode I get the full 225 ma,
> but only about 25-50 watts out. It is almost like there is something
> amiss in the final tank circuit or something, but I can't seem to find
> the issue. (Or, perhaps this is just my wrong thinking...)
>
> Any suggestions/ideas would be appreciated.
>
> Thanks and 73,
>
> Roger (AE3RT)
>
>

[Non-text portions of this message have been removed]

41528. Re: [TS-520_820_530_830] Mechanical design of VFO TS520 and TS515

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-27 13:00:38 UTC
From: Mike
Topic: 41515 Message: 41528

The TS-515S operator's manual is available at the following link.

http://afu-df3iq.de/Hersteller/Kenwood/TR-515S_operating%20manual.pdf

It's difficult to say whether the tuning mechanism and mounting of the
TS-515S VFO is the same as the tuning mechanism and mounting of the
TS-520s VFO.

I suspect the VFO tuning range, 5.500Mhz to 5.000Mhz, in the same in
both transceiver VFOsbutI do not believe the mounting and electrical
connections to the TS-515S VFO are the same as the TS-520S. I have a
Kenwood R599 receive and it's VFO appears to be the samephysical design
as the VFO in the TS-515S, based on studying the top view of the TS-515S
chassis on page 18, figure 18, of the TS-515S operator's manual and
comparing that with thesame top view of the R599 receiver I have.
Assuming that's true then the TS-515S VFO mounting is not the same as it
is in the TS-520S and the electrical connections are soldered to the
TS-515S VFO verses using plugs in the TS-520S VFO. I can't so for sure
whether the physical offset from center whether the TS-515S VFO will
"fit" properly in the TS-520S or vice verse.

73
Mike

On 3/26/2013 2:20 PM, Behiels JeanPierre wrote:
>
>
> Hi Kenwood members;
>
> Could someone confirm me if the mechanical design and mechanical drive
> shaft behind the main dial of both Kenwood rigs are the same or not ?
> I personally did not have a TS520,but regarding some pictures I saw
> before,I presume there are both quit the same and maby some pieces are
> interchangeable ??
> I look forward if perhaps someone could give my some more details around.
> I am chearching for a new mechanical drive shaft gear for my old TS515.
>
> Regards Jean ON4AEF.
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

41529. Re: [TS-520_820_530_830] Mechanical design of VFO TS520 and TS515

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-27 13:22:55 UTC
From: Behiels JeanPierre
Topic: 41515 Message: 41529

Problem I have the mechanical setup of my TS515 VFO is been wore out totally hier !!!
So I look for a change what kind of matter it should be.
So I thought by using the VFO of another naber type of radio,in worst case hi ..
But if someone nows a source where I possible can obtain anothe rone,always welcome..
Thanks for yoru information Mike.

Regards Jean ON4AEF.

----- Original Message -----
From: Mike
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, March 27, 2013 2:00 PM
Subject: Re: [TS-520_820_530_830] Mechanical design of VFO TS520 and TS515

The TS-515S operator's manual is available at the following link.

http://afu-df3iq.de/Hersteller/Kenwood/TR-515S_operating%20manual.pdf

It's difficult to say whether the tuning mechanism and mounting of the
TS-515S VFO is the same as the tuning mechanism and mounting of the
TS-520s VFO.

I suspect the VFO tuning range, 5.500Mhz to 5.000Mhz, in the same in
both transceiver VFOsbutI do not believe the mounting and electrical
connections to the TS-515S VFO are the same as the TS-520S. I have a
Kenwood R599 receive and it's VFO appears to be the samephysical design
as the VFO in the TS-515S, based on studying the top view of the TS-515S
chassis on page 18, figure 18, of the TS-515S operator's manual and
comparing that with thesame top view of the R599 receiver I have.
Assuming that's true then the TS-515S VFO mounting is not the same as it
is in the TS-520S and the electrical connections are soldered to the
TS-515S VFO verses using plugs in the TS-520S VFO. I can't so for sure
whether the physical offset from center whether the TS-515S VFO will
"fit" properly in the TS-520S or vice verse.

73
Mike

On 3/26/2013 2:20 PM, Behiels JeanPierre wrote:
>
>
> Hi Kenwood members;
>
> Could someone confirm me if the mechanical design and mechanical drive
> shaft behind the main dial of both Kenwood rigs are the same or not ?

> I personally did not have a TS520,but regarding some pictures I saw
> before,I presume there are both quit the same and maby some pieces are
> interchangeable ??
> I look forward if perhaps someone could give my some more details around.
> I am chearching for a new mechanical drive shaft gear for my old TS515.
>
> Regards Jean ON4AEF.
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41530. Re: TS-820S - Low power on 160 Meters

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-27 13:59:34 UTC
From: rc143dr
Topic: 41354 Message: 41530

Hello Jim,

Thanks for the response. I ended up replacing a choke and two ceramic caps. They apparently had been damaged by the last owner that had the radio operational.

When removed from the circuit, it was found that they (the caps) had apparently been cooked pretty good. They were way out of spec and probably had other issues (i.e. they were breaking down inside).

Thanks for the link, I will look at it for future reference. I am currently restoring the TS-520S that I previously didn't think was repairable. After looking at it more, it was just too nice to scrap for parts and I don't believe I will need to invest too much to get it working. Already have the receiver working (bad transistor for the carrier oscillator and VFO repair/tuning). TX looks like it is in good condition, except I need to replace some things I borrowed to fix the TS-820S).

Thanks again and 73,

Roger (AE3RT)

--- In TS-520_820_530_830@yahoogroups.com, Jim Showker <jshowker@...> wrote:
>
> Hi Roger,
> You might indeed have a cap problem or a switching problem in the
> tank circuit. I have repaired a couple radios that did. I have a
> procedure up on my site that tests these caps for proper switching in
> and out of circuit. In order to get the tank circuit to resonate, the
> coil taps and additional ceramic caps are switched in and out, in a
> rather complicated arrangement, to get the right combination to resonate
> on the desired band. If anything is amiss, then no resonance, you can't
> tune it, and no or low power out.
>
> http://www.hybridrestore.com/final-cage-repair/
>
> Jim KE7OAY
>
>
>
> On 3/15/2013 9:18 PM, Roger wrote:
> >
> > Hello All,
> >
> > I have a TS-820S that I have been repairing and the one final issue
> > that I have is low output power on 160 Meters. The radio tunes up fine
> > on all other bands, putting out a good solid 100 Watts.
> >

> > I have good level of ALC and the idling current seems fine on 160
> > Meters, but I cannot get any dip of IP when adjusting the plate
> > control in tune or CW mode. Also, in CW mode I get the full 225 ma,
> > but only about 25-50 watts out. It is almost like there is something
> > amiss in the final tank circuit or something, but I can't seem to find
> > the issue. (Or, perhaps this is just my wrong thinking...)
> >
> > Any suggestions/ideas would be appreciated.
> >
> > Thanks and 73,
> >
> > Roger (AE3RT)
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

41531. Re: transceive cable for kenwood twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-27 08:25:10 UTC
From: emilioc
Topic: 24774 Message: 41531

Sorry Jack i don't understood if your replay it is for my one here or for other.
Please let me know thanks.
Ciao
Emilio

--- In TS-520_820_530_830@yahoogroups.com, Daedalus <jvm@...> wrote:
>
> When you all give up and want to unload your T99A - D, I'm here!
>
>
>
> Jack
>
> WA2OLZ
>
>
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of emilioc
> Sent: Tuesday, March 26, 2013 6:40 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: transceive cable for kenwood twins
>
>
>
>
>
> Osamu can you help us for order to the Japanese Company for twins cable ???
> Thanks
> 73 Emilio
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com> , "Osamu Hazawa" <pomerol@>
> wrote:
> >
> > Dave et al,
> >
> > >There was a thread on this list a few years ago about this company and a
> > >Japanese ham who was trying to get an order together for cables.
> >
> > I' m the person! B-)
> >
> > Osamu
> >
> >

> > ----- Original Message -----
> > From: Dave
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Wednesday, February 03, 2010 4:10 PM
> > Subject: Re: [TS-520_820_530_830] Re: transceive cable for kenwood twins
> >
> >
> >
> > I believe the cables are still available in Japan at TMT, but my reading
> > ability is really rusty:
> >
> > http://www.toyama-smenet.or.jp/~tmt/page1c.htm
> >
> > This page has a bunch of stuff made of unobtainium :) Search for
> > '599'. The price is about US$85. They seem to be located in Toyama,
> > based on their telephone number and email address.
> >
> > There was a thread on this list a few years ago about this company and a
> > Japanese ham who was trying to get an order together for cables.
> > Unfortunately they only want to deal with domestic orders, so I think it
> > really requires someone in Japan to make it happen.
> >
> > My missing treasure is a TV-502 cable.
> >
> > 73,
> > - Dave W6OT
> >
> > Chuck Goelz wrote:
> > >
> > >
> > > Bob,
> > >
> > > Apparently you are finding out just how scarce these are! As far as I
> > > know, there aren't any. But, you probably CAN buy the whole cable,
> > > provided that you are very patient and willing to pay the "fair market
> > > price". I see the cables go up for sale on eBay periodically, as there
> > > are sellers that recognize the value of splitting up the Twins... It
> > > kind of hurts to see that this is profitable, but that's what the
> > > market has done. Anyhow, I posted a couple of months ago that yet
> > > another cable was available on eBay (I had no connection with the
> > > sale!), just to let people like you know that it was available. They
> > > tend to show up 2 or 3 time as year, so don't expect to be able to buy
> > > one tomorrow... And when they do show up, they usually sell for $90 to
> > > $120. Really.
> > >
> > > For now, I'm keeping my cable. But I keep thinking that I might want
> > > to sell my Twins (almost perfect T-599D with original S2001A finals,
> > > R-599D w/ both 6m and 2m convertors, S-599, and THE cable) to buy a
> > > new house or airplane or something... ;-) But my dilemma is that I

> > > can't imagine breaking up such a beautiful set of Kenwood Twins just
> > > to satisfy the existing market that is driven by the "I absolutely
> > > NEED this piece at any ridiculous price to complete my station"
> > > mentality. So I guess I'll just keep 'em... For now. (Wondering what
> > > kind of responses I'll get from this one...)
> > >
> > > Anyhow, I hope someone else in the group has a better answer for you.
> > > If you want the functionality that the cable provides, and originality
> > > is not an issue, you could replace the connectors with something that
> > > you CAN get mates for... And save the old connectors in case you get
> > > lucky some day...
> > >
> > > Sincerely, good luck! And if you are not sure how to find the cable on
> > > eBay, drop me an email...
> > >
> > > Cheers & 73,
> > > Chuck WA3CEJ
> > >
> > > ----- Original Message -----
> > > From: Bob
> > > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Tuesday, February 02, 2010 9:24 PM
> > > Subject: [TS-520_820_530_830] Re: transceive cable for kenwood twins
> > >
> > > I have been looking for the ends to the connector cables the last
> > > couple of months. I have hit every local shop here in Orange County
> > > California and the surplus places etc. they have checked with there
> > > suppliers and so on. The end of this process is that no one has found
> > > the ends to the cable. IF someone has a connection and knows where the
> > > ends of the cable for the 599 twins can be purchased let me know.
> > > Thank You
> > > KB6KPK
> > > Bob Musser
> > > Orange, CA.
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, pmarkavage
> > > <pmarkavage@> wrote:
> > > >
> > > > Wiring diagram for the cable/connectors can be pulled from the
> > > > receiver/transmitter schematics. If you don't use a transceiver cable,
> > > > the receiver has a jumper plug in the remote socket (so you already
> > have
> > > > one plug) but the jumpers would have to be removed if you use it as
> > one
> > > > cable end.
> > > >

> > > > Pete, wa2cwa
> > > >
> > > > On Sun, 31 Jan 2010 22:54:14 -0500 yash@ writes:
> > > > >
> > > > > Looking at a set of 599D kenwood twins,seller does not have the 16
> > > > > pin cable that goes between the receiver and transmitter. needed for
> > > > > transceive operation. Dose anyone have a cable,or the 16 pin
> > > > > connectors and or a wiring diagram for the cable?
> > > > > any info on the cable assembly or a wiring diagram to build one,
> > > > > would really be greatful.
> > > > > thanks
> > > > > dale wt4t
> > > > >
> > > >
> > > [Non-text portions of this message have been removed]
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> > > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
>

41532. Re: [TS-520_820_530_830] Re: transceive cable for kenwood twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-27 15:00:50 UTC
From: Jack McAdams
Topic: 24774 Message: 41532

This was for you, Emilio. It is the pin connections for the cable between
the T599 and the R599.
I think the email was getting too long so I removed the rest! Is this what
you need?

I do not have a cable schematic. I did find the following information that
may be of help.

>
> >From the T599 manual I have, the following is the "REMOTE" pin
> assignments.
>
>* 1. - VFO input/output during transceiver operation
> 2. - Not Used
> 3. - Calibrate signal to R599 during combined operation
> 4. - Relay voltage to R599 during combined operation
> 5. - Not Used
> 6. - ALC input from linear amplifier
> 7. - Not Used
> 8. - Heterodyne Oscillator input from R599 receiver during transceive
> operation
> 9. - Ground
> 10. - Anti-Vox input
> 11. - B+ input to TX VFO during transceive operation when using the TX
> VFO for frequency control
> 12, 13, and 14 - Pins 12, 13, and 14 are paralleled with a single pole
> double throw contact of the VOX relay. During standby operation, pin
> 13 become a common grounded contact for pin 14. During transmit, it
> becomes a grounded common contact with pin 12 which is connected to amp C.
> 15. - Sidetone
> 16. - Ground
*>
> This is straight from the T-599 manual, "Table 4 Remote Connector"
>
> "AMP C" on the rear of the T-599 connects to the linear amplifier's
> internal relay. In transmit, AMP C is grounded, activating the linear
> amplifier's relay. In receive, AMP C is no longer grounded, causing
> the linear amplifier's relay to become de-energized.
>
> By looking at the R-599 schematic it appears that pins 2 and 11 as
> well as pins 4 and 5 are shorted together in a "blank" plug that is
> inserted into the R-599's rear "REMOTE" socket. Pins 7 and 16 are
> connected to a antenna change over relays terminals that, during
> receive, pins 7 and 11 are shorted. In transmit, however, when the
> antenna change over relay is activated, pins 7 and 16 are no longer

> shorted causing the R-599 to mute. This is only when using a
> transmitter other than the T-599 with an external antenna change over
> relay. The relay voltage is supplied from either the transmitter it
> self or from a separate power source. The only connections from the
> relay to the R-599 are through remote pins 7 and 11 and the relay
> terminal, in receive, is "N.C." otherwise the R-599 will be muted in
> receive.
>
> I traced the R-599 and T-599 pins and it does appear the cable is
> straight through although I cannot find a cable wiring diagram. I can
> only see the T-599 REMOTE CONNECTOR pin labels and from their labels
> trace the R-599 REMOTE CONNECTOR to see what pins go where and it does
> appear the cable is straight through. As you know the R-599 does not
> need pin 6 which is the external linear amplifier ALC input to the
> T-599 so that pin on the receiver would be not used. Other than that's
> all I can see.

On Wed, Mar 27, 2013 at 4:25 AM, emilioc <beamshoot@...> wrote:

> **
>
>
> Sorry Jack i don't understood if your replay it is for my one here or for
> other.
> Please let me know thanks.
> Ciao
> Emilio
>

[Non-text portions of this message have been removed]

41533. Liquidating my Kenwood Station Equipment.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-28 11:37:49 UTC
From: sceneryguru
Topic: 41533 Message: 41533

Good Morning Group:

If you saw my earlier post, you are aware that I am in the process of liquidating my Kenwood station equipment. To those members who took advantage of my offer to sale Thank You!. And to the entire Group, Thank You for indulging me.

The following units are unspoken for and are destined to go to auction this evening, Thursday, March 28, 2013. This is the equivalent of a "Last-Call."

Kenwood AT-230 antenna tuner 7.2 x 5.3 x 11.5 inches 7.5 lbs.
The Kenwood AT-230 antenna tuner covers the 9 amateur bands from 1.8 to 30 MHz. Through power is 200 watts maximum. It has power scales for 20 and 200 watts. Rear panel jacks: Input is SO-239 [UHF]. Antenna Output 1 is SO-239 [UHF], Antenna Output 2 is SO-239 [UHF], Antenna Output 3 is wire connection and ground. The AT-230 is compatible with the TS-520/30S series and TS-820/30S series.
"Quite possibly one of the best small tuners ever made"

Kenwood SP-230 external speaker 7.2 x 5.3 x 11.5 inches 4.0 lbs.
features filtration. There is a switch on the front panel to select input A or B. The headphone jack on the front panel is post-filtration. 8 ohms maximum input 2 watts. Compatible with all Kenwood models.

Kenwood TS-820S Amateur HF Transceiver 13.3 x 6 x 14 inches 35.2 lbs.
is designed for SSB and CW modes in the 160 through 10 meter ham bands. It also features receive of WWV at 15 MHz. Power input is 200W PEP SSB and 160W DC CW. (This transceiver does not have general coverage receive). The TS-820S can transceive with the Kenwood R-820 receiver.

tnx es 73 / 76

Tom G, Sr.
K3SSB

41534. Re: [TS-520_820_530_830] Liquidating my Kenwood Station Equipment.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-28 11:47:26 UTC
From: Mark L. Hammond
Topic: 41533 Message: 41534

Hi,

What are the prices for tuner or radio?

73,
Mark L. Hammond [N8MH]

On Mar 28, 2013, at 6:37 AM, "sceneryguru" <k3ssb@...> wrote:

> Good Morning Group:
>
> If you saw my earlier post, you are aware that I am in the process of liquidating my Kenwood station equipment. To those members who took advantage of my offer to sale… Thank You!. And to the entire Group, Thank You for indulging me.
>
> The following units are unspoken for and are destined to go to auction this evening, Thursday, March 28, 2013. This is the equivalent of a "Last-Call."
>
> Kenwood AT-230 antenna tuner 7.2 x 5.3 x 11.5 inches 7.5 lbs.
> The Kenwood AT-230 antenna tuner covers the 9 amateur bands from 1.8 to 30 MHz. Through power is 200 watts maximum. It has power scales for 20 and 200 watts. Rear panel jacks: Input is SO-239 [UHF]. Antenna Output 1 is SO-239 [UHF], Antenna Output 2 is SO-239 [UHF], Antenna Output 3 is wire connection and ground. The AT-230 is compatible with the TS-520/30S series and TS-820/30S series.
> "Quite possibly one of the best small tuners ever made"
>
> Kenwood SP-230 external speaker 7.2 x 5.3 x 11.5 inches 4.0 lbs.
> features filtration. There is a switch on the front panel to select input A or B. The headphone jack on the front panel is post-filtration. 8 ohms maximum input 2 watts. Compatible with all Kenwood models.
>
> Kenwood TS-820S Amateur HF Transceiver 13.3 x 6 x 14 inches 35.2 lbs.
> is designed for SSB and CW modes in the 160 through 10 meter ham bands. It also features receive of WWV at 15 MHz. Power input is 200W PEP SSB and 160W DC CW. (This transceiver does not have general coverage receive). The TS-820S can transceive with the Kenwood R-820 receiver.
>
> tnx es 73 / 76
>
> Tom G, Sr.
> K3SSB
>
>

[Non-text portions of this message have been removed]

41535. RCA 6883B's (12v 6146) Available

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-28 13:44:54 UTC
From: David
Topic: 41535 Message: 41535

Hello, to the group. I have a mix of NOS (qty 3) and used tested good (qty 6). Would like to get $10 for the new, $7 for the used, plus shipping, or make an offer on the package. Please contact off list.
Tnx, Dave AF5B Dallas

41536. Re: [TS-520_820_530_830] Liquidating my Kenwood Station Equipment.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-28 21:11:28 UTC
From: Gregory Albers
Topic: 41533 Message: 41536

Hi
I am a new ham and am trying to set up my shack. I have a TS 520 and I am interested in your AT 230?. How much are you asking for it?
Thanks
Greg Albers
KC9VVU

Sent from Greg Albers iPad

On Mar 28, 2013, at 7:37 AM, "sceneryguru" <k3ssb@...> wrote:

> Good Morning Group:
>
> If you saw my earlier post, you are aware that I am in the process of liquidating my Kenwood station equipment. To those members who took advantage of my offer to sale… Thank You!. And to the entire Group, Thank You for indulging me.
>
> The following units are unspoken for and are destined to go to auction this evening, Thursday, March 28, 2013. This is the equivalent of a "Last-Call."
> Kenwood AT-230 antenna tuner 7.2 x 5.3 x 11.5 inches 7.5 lbs.
> The Kenwood AT-230 antenna tuner covers the 9 amateur bands from 1.8 to 30 MHz. Through power is 200 watts maximum. It has power scales for 20 and 200 watts. Rear panel jacks: Input is SO-239 [UHF]. Antenna Output 1 is SO-239 [UHF], Antenna Output 2 is SO-239 [UHF], Antenna Output 3 is wire connection and ground. The AT-230 is compatible with the TS-520/30S series and TS-820/30S series.
> "Quite possibly one of the best small tuners ever made"
>
> Kenwood SP-230 external speaker 7.2 x 5.3 x 11.5 inches 4.0 lbs.
> features filtration. There is a switch on the front panel to select input A or B. The headphone jack on the front panel is post-filtration. 8 ohms maximum input 2 watts. Compatible with all Kenwood models.
>
> Kenwood TS-820S Amateur HF Transceiver 13.3 x 6 x 14 inches 35.2 lbs.
> is designed for SSB and CW modes in the 160 through 10 meter ham bands. It also features receive of WWV at 15 MHz. Power input is 200W PEP SSB and 160W DC CW. (This transceiver does not have general coverage receive). The TS-820S can transceive with the Kenwood R-820 receiver.
>
> tnx es 73 / 76
>
> Tom G, Sr.
> K3SSB
>
>

[Non-text portions of this message have been removed]

41537. TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-28 21:37:43 UTC
From: geagent21
Topic: 1213 Message: 41537

I am setting up my first shack. I have a TS-520 and VFO. I am trying to set up the TS-520 per the manual. When I turn it on thr meter swings all the way to the right. I Don't want to fry anything so what is my next step? Thanks in advance.
Greg
KC9VVU

41538. Re: [TS-520_820_530_830] TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-28 21:47:38 UTC
From: Chris Robinson
Topic: 1213 Message: 41538

Check your switches. I have one of these rigs but forget exact lay out.
however there is a rotary switch that indicated IP and a few others, slowly
flip this to see if all the meter readings go high.

Being a tube radio, you arent going to fry it as quick as you would with
solid state.

The rotory is labeled ALC IP RF and HV. I always ran mine watching either
the ALC or IP. There are two other knobs to think of also. Play with the
RF control as it will allow you to deflect meter to actually show you true
signal. RF knob will either wipe ou the noise or make it appear really loud.

Also what mode are you in?

On Thu, Mar 28, 2013 at 2:37 PM, geagent21 <GEAgent21@aol.com> wrote:

> **
>
>
> I am setting up my first shack. I have a TS-520 and VFO. I am trying to
> set up the TS-520 per the manual. When I turn it on thr meter swings all
> the way to the right. I Don't want to fry anything so what is my next step?
> Thanks in advance.
> Greg
> KC9VVU
>
>
>

--
Making life hell for others since 1973

Mr.C.Robinson
73 DE KF6NFW

[Non-text portions of this message have been removed]

41539. Re: [TS-520_820_530_830] TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-28 21:53:29 UTC
From: Tyler Frugia
Topic: 1213 Message: 41539

Might have your RF gain set all the way clockwise?

On Thu, Mar 28, 2013 at 2:37 PM, geagent21 <GEAgent21@...> wrote:

> **
>
>
> I am setting up my first shack. I have a TS-520 and VFO. I am trying to
> set up the TS-520 per the manual. When I turn it on thr meter swings all
> the way to the right. I Don't want to fry anything so what is my next step?
> Thanks in advance.
> Greg
> KC9VVU
>
>
>

[Non-text portions of this message have been removed]

41540. Re: [TS-520_820_530_830] TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-28 21:58:04 UTC
From: Chris Robinson
Topic: 1213 Message: 41540

Thats what I was looking for, I knew the RF knob controlled this, which most people arent familiar as they are use to a Squelch control, not knowing that is what RF gain does also, in a different manner.

On Thu, Mar 28, 2013 at 2:53 PM, Tyler Frugia <tfrugia@...> wrote:

> Might have your RF gain set all the way clockwise?
>
>
> On Thu, Mar 28, 2013 at 2:37 PM, geagent21 <GEAgent21@...> wrote:
>
> > **
> >
> >
> > I am setting up my first shack. I have a TS-520 and VFO. I am trying to
> > set up the TS-520 per the manual. When I turn it on thr meter swings all
> > the way to the right. I Don't want to fry anything so what is my next
> step?
> > Thanks in advance.
> > Greg
> > KC9VVU
> >
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> [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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Mr.C.Robinson
73 DE KF6NFW

[Non-text portions of this message have been removed]

41541. Re: [TS-520_820_530_830] TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-28 22:20:53 UTC
From: Bob Macklin
Topic: 1213 Message: 41541

In receive the meter is always connected to the S-Meter circuit. If the RF gain is turned CCW thee meter will read UPSCALE.

Turn the RF gain fully CW.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: "Chris Robinson" <kf6nfw@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Thursday, March 28, 2013 2:47 PM
Subject: Re: [TS-520_820_530_830] TS-520

> Check your switches. I have one of these rigs but forget exact lay out.
> however there is a rotary switch that indicated IP and a few others,
> slowly
> flip this to see if all the meter readings go high.
>
> Being a tube radio, you arent going to fry it as quick as you would with
> solid state.
>
> The rotory is labeled ALC IP RF and HV. I always ran mine watching either
> the ALC or IP. There are two other knobs to think of also. Play with the
> RF control as it will allow you to deflect meter to actually show you true
> signal. RF knob will either wipe ou the noise or make it appear really
> loud.
>
> Also what mode are you in?
>
> On Thu, Mar 28, 2013 at 2:37 PM, geagent21 <GEAgent21@...> wrote:
>
>> **
>>
>>
>> I am setting up my first shack. I have a TS-520 and VFO. I am trying to
>> set up the TS-520 per the manual. When I turn it on thr meter swings all
>> the way to the right. I Don't want to fry anything so what is my next
>> step?
>> Thanks in advance.
>> Greg
>> KC9VVU
>>
>>

>>
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>
> --
> Making life hell for others since 1973
>
> Mr.C.Robinson
> 73 DE KF6NFW
>
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> [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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41542. Re: TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-28 21:48:28 UTC
From: edirish
Topic: 1213 Message: 41542

Make sure the RF Gain is turned fully clockwise.

Ed, K7EPH

--- In TS-520_820_530_830@yahoogroups.com, "geagent21" <GEAgent21@...> wrote:
>
> I am setting up my first shack. I have a TS-520 and VFO. I am trying to set up the TS-520 per the manual. When I turn it on thr meter swings all the way to the right. I Don't want to fry anything so what is my next step? Thanks in advance.
> Greg
> KC9VVU
>

41543. Re: [TS-520_820_530_830] TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-29 00:08:53 UTC
From: Gregory Albers
Topic: 1213 Message: 41543

Thanks everyone. Backing off on the RF gain solved that problem. Now the next problem is the drive control does not move the meter when adjusting for peak. Is the load control minimum setting clockwise or counter clockwise? I am using K4EAA's tune up procedure.

Sent from Greg Albers iPad

On Mar 28, 2013, at 5:47 PM, Chris Robinson <kf6nfw@...> wrote:

> Check your switches. I have one of these rigs but forget exact lay out.
> however there is a rotary switch that indicated IP and a few others, slowly
> flip this to see if all the meter readings go high.
>
> Being a tube radio, you arent going to fry it as quick as you would with
> solid state.
>
> The rotory is labeled ALC IP RF and HV. I always ran mine watching either
> the ALC or IP. There are two other knobs to think of also. Play with the
> RF control as it will allow you to deflect meter to actually show you true
> signal. RF knob will either wipe ou the noise or make it appear really loud.
>
> Also what mode are you in?
>
> On Thu, Mar 28, 2013 at 2:37 PM, geagent21 <GEAgent21@...> wrote:
>
>> **
>>
>>
>> I am setting up my first shack. I have a TS-520 and VFO. I am trying to
>> set up the TS-520 per the manual. When I turn it on thr meter swings all
>> the way to the right. I Don't want to fry anything so what is my next step?
>> Thanks in advance.
>> Greg
>> KC9VVU
>>
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>
> --
> Making life hell for others since 1973
>
> Mr.C.Robinson
> 73 DE KF6NFW
>
>

> [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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41544. Re: [TS-520_820_530_830] TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-29 00:18:04 UTC
From: John Donnelly
Topic: 1213 Message: 41544

Greg,

Looks like you already got your answer from someone but just in case you missed it, your RF gain control is likely turned all the way down. As you turn it down, the S meter goes upscale and will peg when the F gain is all the way off.

Jack Donnelly KV4JX
Ball Ground Video Productions
308 Calusa Place

Ball Ground, GA 30107
Phone 678-592-9974www.ballgroundvideo.com

From: geagent21 <GEAgent21@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, March 28, 2013 5:37 PM
Subject: [TS-520_820_530_830] TS-520

I am setting up my first shack. I have a TS-520 and VFO. I am trying to set up the TS-520 per the manual. When I turn it on thr meter swings all the way to the right. I Don't want to fry anything so what is my next step? Thanks in advance.
Greg
KC9VVU

[Non-text portions of this message have been removed]

41546. Re: [TS-520_820_530_830] TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-29 00:33:52 UTC
From: Gregory Albers
Topic: 1213 Message: 41546

Thanks Jack
That was the problem.

Sent from Greg Albers iPad

On Mar 28, 2013, at 8:18 PM, John Donnelly <jack@...> wrote:

> Greg,
>
> Looks like you already got your answer from someone but just in case you missed it, your RF gain control is likely turned all the way down. As you turn it down, the S meter
> goes upscale and will peg when the F gain is all the way off.
>
> Jack Donnelly KV4JX
> Ball Ground Video Productions
> 308 Calusa Place
>
> Ball Ground, GA 30107
> Phone 678-592-9974www.ballgroundvideo.com
>
>
> _____
> From: geagent21 <GEAgent21@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, March 28, 2013 5:37 PM
> Subject: [TS-520_820_530_830] TS-520
>
>
>
> I am setting up my first shack. I have a TS-520 and VFO. I am trying to set up the TS-520 per the manual. When I turn it on thr meter swings all the way to the right. I Don't want to fry anything so what is my next step? Thanks in advance.
> Greg
> KC9VVU
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

41548. illuminating AT meter?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-29 13:57:22 UTC
From: n3kvl
Topic: 41548 Message: 41548

Hi All,

Has anyone modified an AT-220 so it has a illuminated meter? Also maybe later the VFO I'll have soon.

My gear is in a low light condition and it would be neat if I could see the meter without going to an overhead light.

I am thinking that I could modify the unit with a 3V LED and small internal battery.

What would be real cool is a touch sensitive ON/OFF area on the face that had a burn time that I could program for say 5 or 10 minutes.

Can anyone lend some ideas? I'm not keeping the gear for resale, so I don't mind modifying it (in a clean manner).

TIA,
Archie

41549. Re: [TS-520_820_530_830] illuminating AT meter?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-29 16:29:03 UTC
From: Denise Hargreaves
Topic: 41548 Message: 41549

I have put lights in the meters of a couple of my tuners....done properly it does not affect the value of the unit in my opinion....both of the units I did it looks totally factory...I spend a few hours in my radio room and do not always like lights glaring at me so illuminated meters really help keeping an eye on things....plus as you get older....subtle illumination sure helps....I put meter lights such as the lamps in the radio's in mine and run things with a wall wart....but your idea of led's is good.....they draw so little power that an internal bat...would last a long time....touch switch....never thought of that....should work....maybe RF might mess with that ?....I used mini rockers on the side of the tuner just behind the front trim ...they are very small....and look ok....good luck on the mods.....some of these simple mods can be a lot fun with excellent results....

Regards....Wes...VA6DWH

On 2013-03-29, at 7:57 AM, n3kvl wrote:

> Hi All,
>
> Has anyone modified an AT-220 so it has a illuminated meter? Also maybe later the VFO I'll have soon.
>
> My gear is in a low light condition and it would be neat if I could see the meter without going to an overhead light.
>
> I am thinking that I could modify the unit with a 3V LED and small internal battery.
>
> What would be real cool is a touch sensitive ON/OFF area on the face that had a burn time that I could program for say 5 or 10 minutes.
>
> Can anyone lend some ideas? I'm not keeping the gear for resale, so I don't mind modifying it (in a clean manner).
>
> TIA,
> Archie
>
>

[Non-text portions of this message have been removed]

41550. TS-830S IF Board

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-29 16:43:12 UTC
From: Stephen - AE2S
Topic: 41550 Message: 41550

Hi Everyone,
I'm looking for an IF board for a TS-830s. If anyone wants to part with one that works please let me know by email.

mycall at arrl.net

Thanks,
Steve - AE2S

41551. Re: illuminating AT meter?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-29 18:11:49 UTC
From: w9cac
Topic: 41548 Message: 41551

I just did my AT-230 with blue LED's. Just due the math for the resistor or resistors. Installed a jack in the rear for the power. I may add a pot for more lighting control too!!!??? Not sure yet.
Dave W9CAC

--- In TS-520_820_530_830@yahoogroups.com, "n3kvl" <n3kvl@...> wrote:
>
> Hi All,
>
> Has anyone modified an AT-220 so it has a illuminated meter? Also maybe later the VFO I'll have soon.
>
> My gear is in a low light condition and it would be neat if I could see the meter without going to an overhead light.
>
> I am thinking that I could modify the unit with a 3V LED and small internal battery.
>
> What would be real cool is a touch sensitive ON/OFF area on the face that had a burn time that I could program for say 5 or 10 minutes.
>
> Can anyone lend some ideas? I'm not keeping the gear for resale, so I don't mind modifying it (in a clean manner).
>
> TIA,
> Archie
>

41552. Re: [TS-520_820_530_830] illuminating AT meter?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-29 18:52:02 UTC
From: meyer.
Topic: 41548 Message: 41552

Aviation uses what they call eyebrow lights. Might be worth a look
KCØNPJ Gary

From: n3kvl
Sent: Friday, March 29, 2013 8:57 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] illuminating AT meter?

Hi All,

Has anyone modified an AT-220 so it has a illuminated meter? Also maybe later the VFO I'll have soon.

My gear is in a low light condition and it would be neat if I could see the meter without going to an overhead light.

I am thinking that I could modify the unit with a 3V LED and small internal battery.

What would be real cool is a touch sensitive ON/OFF area on the face that had a burn time that I could program for say 5 or 10 minutes.

Can anyone lend some ideas? I'm not keeping the gear for resale, so I don't mind modifying it (in a clean manner).

TIA,
Archie

[Non-text portions of this message have been removed]

41553. Re: [TS-520_820_530_830] illuminating AT meter?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-29 18:55:41 UTC
From: Jeff Blaine
Topic: 41548 Message: 41553

I am interested in that as well.

For my TS-820S, I put a few white SMT LED mounted on a set of two parallel wires and put that right on top of the meter. The effect was great. I've not pulled my AT apart to look but I think that would be workable there as well. It's also a modification that would be reversible assuming the top of the meters were exposed.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: meyer.
Sent: Friday, March 29, 2013 1:52 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] illuminating AT meter?

Aviation uses what they call eyebrow lights. Might be worth a look
KCØNPJ Gary

From: n3kvl
Sent: Friday, March 29, 2013 8:57 AM
To: mailto:TS-520_820_530_830%40yahoogroups.com
Subject: [TS-520_820_530_830] illuminating AT meter?

Hi All,

Has anyone modified an AT-220 so it has a illuminated meter? Also maybe later the VFO I'll have soon.

My gear is in a low light condition and it would be neat if I could see the meter without going to an overhead light.

I am thinking that I could modify the unit with a 3V LED and small internal battery.

What would be real cool is a touch sensitive ON/OFF area on the face that had a burn time that I could program for say 5 or 10 minutes.

Can anyone lend some ideas? I'm not keeping the gear for resale, so I don't mind modifying it (in a clean manner).

TIA,
Archie

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41554. Strange sidetone engage - TS-830s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-29 17:44:41 UTC
From: Greg Mason
Topic: 41554 Message: 41554

I changed the RL-1 relay and it works fine on SSB. However, when I switch to CW and insert the key (even just a plug) it engages the sidetone and mutes the RX, but doesot key the transmitter; Closing the key sends CW. What might be happening ... this has me stumped?

Greg, VE4AMN

[Non-text portions of this message have been removed]

41555. Need 5 pin connector for MC-50

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-29 19:43:25 UTC
From: ki4ax
Topic: 41555 Message: 41555

Hello to all. I have an MC-50 mic that was gifted to me with out a cord. I can make a cord and have plenty of the 4-pin connectors for the radio end of the cord but I do not have the 5-pin connector for the Mic end of the cord. It is a 5-pin with the 5th pin in the center of the connector. Does anyone know where I can obtain a 5-pin connector for the MC-50? I would even take a used one as long as it is still in good shape.

Thanks

Dan KI4AX

41556. Re: [TS-520_820_530_830] Need 5 pin connector for MC-50

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-29 21:13:18 UTC
From: Ken Winterling
Topic: 41555 Message: 41556

Dan,

Good luck locating them as those 5 pin MC-50 connectors, both the chassis and cable end, are "unobtanium". Many have been searching for a long time and have come up empty handed. If you do manage to find a source please let us know.

Sometimes you will find somebody getting rid of a MC-50 base w/cord when the mic has died or been damaged. I would grab it.

Ken
WA2LBI

On Fri, Mar 29, 2013 at 3:43 PM, ki4ax <dan8barb@...> wrote:

> **
>
>
> Hello to all. I have an MC-50 mic that was gifted to me with out a cord. I
> can make a cord and have plenty of the 4-pin connectors for the radio end
> of the cord but I do not have the 5-pin connector for the Mic end of the
> cord. It is a 5-pin with the 5th pin in the center of the connector. Does
> anyone know where I can obtain a 5-pin connector for the MC-50? I would
> even take a used one as long as it is still in good shape.
>
> Thanks
>
> Dan KI4AX
>

[Non-text portions of this message have been removed]

41557. RE: [TS-520_820_530_830] illuminating AT meter?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-29 23:09:26 UTC
From: fpath fpath
Topic: 41548 Message: 41557

G'day,

Another way of doing it is powering from radio using a RCA plug and socket so as you turn your radio on it automatically turns tuner lights on. From 12.6v secondary tap on the transformer to an RCA plug on rear of radio then also RCA plug on rear of ATU, work out using ohms law appropriate resistor to suit your brightness level for led. Only issue is working out how to mount the led\lamp over the meter in the ATU.

Dave
VK5PDL

> To: TS-520_820_530_830@yahoogroups.com
> From: pioneer6@...
> Date: Fri, 29 Mar 2013 10:29:03 -0600
> Subject: Re: [TS-520_820_530_830] illuminating AT meter?
>
> I have put lights in the meters of a couple of my tuners....done properly it does not affect the value of the unit in my opinion....both of the units I did it looks totally factory...I spend a few hours in my radio room and do not always like lights glaring at me so illuminated meters really help keeping an eye on things....plus as you get older....subtle illumination sure helps....I put meter lights such as the lamps in the radio's in mine and run things with a wall wart....but your idea of led's is good.....they draw so little power that an internal bat...would last a long time....touch switch....never thought of that....should work....maybe RF might mess with that ?....I used mini rockers on the side of the tuner just behind the front trim ...they are very small....and look ok....good luck on the mods.....some of these simple mods can be a lot fun with excellent results....
>
> Regards....Wes...VA6DWH
>
>
>
>
>
> On 2013-03-29, at 7:57 AM, n3kvl wrote:
>
> > Hi All,
> >
> > Has anyone modified an AT-220 so it has a illuminated meter? Also maybe later the VFO I'll have soon.
> >
> > My gear is in a low light condition and it would be neat if I could see the meter without going to an overhead light.
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> >

> > What would be real cool is a touch sensitive ON/OFF area on the face that had a burn time that I could program for say 5 or 10 minutes.
> >
> > Can anyone lend some ideas? I'm not keeping the gear for resale, so I don't mind modifying it (in a clean manner).
> >
> > TIA,
> > Archie
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
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>
> Yahoo! Groups Links
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>

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41558. RE: [TS-520_820_530_830] Need 5 pin connector for MC-50

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-29 22:46:45 UTC
From: Chuck Noe
Topic: 41555 Message: 41558

Elliot electronics in Tucson had a bin full of mic connectors last time I
was in there. Most were marked at anywhere from 1.50 to 2.50

Both 4 pin and 5 pin

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Ken Winterling
Sent: Friday, March 29, 2013 2:13 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Need 5 pin connector for MC-50

Dan,

Good luck locating them as those 5 pin MC-50 connectors, both the chassis
and cable end, are "unobtanium". Many have been searching for a long time
and have come up empty handed. If you do manage to find a source please
let us know.

Sometimes you will find somebody getting rid of a MC-50 base w/cord when
the mic has died or been damaged. I would grab it.

Ken
WA2LBI

On Fri, Mar 29, 2013 at 3:43 PM, ki4ax <dan8barb@...
<mailto:dan8barb%40gte.net> > wrote:

> **
>
>
> Hello to all. I have an MC-50 mic that was gifted to me with out a cord. I
> can make a cord and have plenty of the 4-pin connectors for the radio end
> of the cord but I do not have the 5-pin connector for the Mic end of the
> cord. It is a 5-pin with the 5th pin in the center of the connector. Does
> anyone know where I can obtain a 5-pin connector for the MC-50? I would
> even take a used one as long as it is still in good shape.
>
> Thanks
>
> Dan KI4AX
>

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[Non-text portions of this message have been removed]

41559. KENWOOD HYBRID USER NET (March 30th, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-30 20:39:30 UTC
From: mvgilger
Topic: 41559 Message: 41559

The Saturday's net on 40 meter we had 23 stations checking with good band conditions. There were 2 new stations checking in. Out of those, there was:

6 running TS-520(x)
3 running TS-530(x)
3 running TS-820(x)
4 running TS-830S

I was running my TS-940s. The rest were running non hybrids of one model or another.

There will not be a Sunday's net on 20 meter due to it being Easter unless someone wants to step up and try their hand at running the net. Wish everyone a nice Easter and hope to see everyone on the net next week.

We have been having several people checking in regularly with their TS-430, TS-440, and TS-940's, which of course is not a hybrid, although over 30+ years old. Everyone is welcome as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a net control station, please send me an email. Currently it's just myself, WB2KNR and WB0SGA. I would like to get several more. If we do, we can alternate so everyone might be on a 3-4 week rotation. It's a lot of fun and a good way to make sure you station is optimized.

For anyone that has not heard, we have a new web site that WB4HFN is hosting. He currently has a very nice site for Drake, Collins and Heathkit and now Kenwood Hybrids. Good quality manuals plus sale flyers and brochures will be found here, along with user supplied information for all Hybrids.

His URL is:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754 check-ins, Sunday total 563 check-ins

November 2012, Saturday's, net total = 47, Sundays total = 20
December 2012, Saturday's, net total = 74, Sunday's total = 70
January 2013, Saturday's, net total = 93, Sunday's total = 87
February 2013, Saturday's net total = 103, Sundays total = 87
March 2013, Saturday's, net total = 135, Sunday's total =39 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

41560. Re: [TS-520_820_530_830] Liquidating my Kenwood Station Equipment.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-31 03:38:15 UTC
From: Ted Wright
Topic: 41533 Message: 41560

Hi Tom
How much for the speaker ??
ted n3zrx
sceneryguru wrote:
>
> Good Morning Group:
>
> If you saw my earlier post, you are aware that I am in the process of
> liquidating my Kenwood station equipment. To those members who took
> advantage of my offer to sale... Thank You!. And to the entire Group,
> Thank You for indulging me.
>
> The following units are unspoken for and are destined to go to auction
> this evening, Thursday, March 28, 2013. This is the equivalent of a
> "Last-Call."
>
> Kenwood AT-230 antenna tuner 7.2 x 5.3 x 11.5 inches 7.5 lbs.
> The Kenwood AT-230 antenna tuner covers the 9 amateur bands from 1.8
> to 30 MHz. Through power is 200 watts maximum. It has power scales for
> 20 and 200 watts. Rear panel jacks: Input is SO-239 [UHF]. Antenna
> Output 1 is SO-239 [UHF], Antenna Output 2 is SO-239 [UHF], Antenna
> Output 3 is wire connection and ground. The AT-230 is compatible with
> the TS-520/30S series and TS-820/30S series.
> "Quite possibly one of the best small tuners ever made"
>
> Kenwood SP-230 external speaker 7.2 x 5.3 x 11.5 inches 4.0 lbs.
> features filtration. There is a switch on the front panel to select
> input A or B. The headphone jack on the front panel is
> post-filtration. 8 ohms maximum input 2 watts. Compatible with all
> Kenwood models.
>
> Kenwood TS-820S Amateur HF Transceiver 13.3 x 6 x 14 inches 35.2 lbs.
> is designed for SSB and CW modes in the 160 through 10 meter ham
> bands. It also features receive of WWV at 15 MHz. Power input is 200W
> PEP SSB and 160W DC CW. (This transceiver does not have general
> coverage receive). The TS-820S can transceive with the Kenwood R-820
> receiver.
>
> tnx es 73 / 76
>
> Tom G, Sr.
> K3SSB
>
>
>

> No virus found in this message.
> Checked by AVG - www.avg.com <http://www.avg.com>
> Version: 2013.0.3267 / Virus Database: 3161/6209 - Release Date: 03/27/13
>

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.3267 / Virus Database: 3161/6215 - Release Date: 03/30/13

[Non-text portions of this message have been removed]

41561. TS 520 repair mod mode switch

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-31 05:54:31 UTC
From: bgolpmp
Topic: 41561 Message: 41561

Hello

I have a ts 520 here that someone tried to do a modification to. I will try and describe the problems that I have and maybe this is something that you have seen before and maybe there is more that I have not found.

Anyways

There is an orange wire that goes from the antenna relay terminal 12 as far as I can tell that is spliced to a yellow wire that goes to the mode switch. The best that I can tell is that the yellow wire from the mode switch is supposed to go to car unit board "CWR" terminal??? What about the orange one???
There is a grew wire with a white tracer that was cut and is laying by the VOX board and IF unit board. Where would this wire go???

There is a brown wire on the IF board that is connected to the "CW" terminal and then back to the mode switch. This does not look like it would have come from the factory. Is that right? I looked at the schematic and it does not as far as I can tell show a wire hooked up to that terminal.

There were also a pair of green wires cut from the mode switch that are soldered together. I think I know where these wires go on the mode switch.

As far as the mode switch goes is there a schematic of it??? I have looked all over and have not had any luck. How do I know where the wires go??

Thanks for reading and helping

73's de n9zga

41562. SM-220 and TS-520S Pan Adapter IF

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-31 17:14:53 UTC
From: n3kvl
Topic: 41562 Message: 41562

All,

I am adding the IF tap to my TS520S.

I added the 10K Ohm resistor and 22pf cap as in the manual and an RCA to the back of the radio.

I used RG-174 coaxial, however the manual notes it as 75 Ohm although all spec sheets note it as 50??

So, with the SM-220 connected to the rig..

I can see the marker of the adapter, but not the 25Khz calibration from the radio, and I can not hear the adapter marker in the rig.

A couple of things...

I can not peak T201 as noted in the manual as I do not have the adjusting tool. Can anyone tell me what tool? I've seen them, but can't remember where.

Also, could the 50 Ohm RG-174 I used be a problem? Also, I did not have an RCA jumper with coax, so I used an audio cable. Is this a problem maybe.

Also, I only had a 22pf mica cap rated for 600V. From what I have read this should not be the problem but maybe it is??

Also, The schematic and pictoral of Q4 is a little strange and I hope I tagged onto the drain properly. I did move the connection to the capacitor C35 because it seemed like I could identify the drain lead correctly by tracing it position versus looking at the diagram of the transistor in the manual and the case of the rather small real one on the board.

Basic questions, but I am just gettting started with actual hands on bench work.

Any advice would be appreciated.

41563. Re: [TS-520_820_530_830] SM-220 and TS-520S Pan Adapter IF

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-31 18:11:31 UTC
From: Mike
Topic: 41562 Message: 41563

Did you verifythe correct Band Scopeis installed in your SM-220?

There are 2 Band Scopes for the SM-220

1. BS-5
2. BS-8

The correct Band Scope for the TS-520 is the BS-5.The BS-8 will not work
with the TS-520.

73
Mike

On 3/31/2013 12:14 PM, n3kvl wrote:
>
> All,
>
> I am adding the IF tap to my TS520S.
>
> I added the 10K Ohm resistor and 22pf cap as in the manual and an RCA
> to the back of the radio.
>
> I used RG-174 coaxial, however the manual notes it as 75 Ohm although
> all spec sheets note it as 50??
>
> So, with the SM-220 connected to the rig..
>
> I can see the marker of the adapter, but not the 25Khz calibration
> from the radio, and I can not hear the adapter marker in the rig.
>
> A couple of things...
>
> I can not peak T201 as noted in the manual as I do not have the
> adjusting tool. Can anyone tell me what tool? I've seen them, but
> can't remember where.
>
> Also, could the 50 Ohm RG-174 I used be a problem? Also, I did not
> have an RCA jumper with coax, so I used an audio cable. Is this a
> problem maybe.
>
> Also, I only had a 22pf mica cap rated for 600V. From what I have read
> this should not be the problem but maybe it is??
>
> Also, The schematic and pictoral of Q4 is a little strange and I hope
> I tagged onto the drain properly. I did move the connection to the
> capacitor C35 because it seemed like I could identify the drain lead

> correctly by tracing it position versus looking at the diagram of the
> transistor in the manual and the case of the rather small real one on
> the board.
>
> Basic questions, but I am just gettting started with actual hands on
> bench work.
>
> Any advice would be appreciated.
>
>

[Non-text portions of this message have been removed]

41564. Re: [TS-520_820_530_830] SM-220 and TS-520S Pan Adapter IF

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-31 18:43:25 UTC
From: N3K
Topic: 41562 Message: 41564

I did not check. Is the unit marked

Sent from my LG Smartphone on Sprint

Mike <w5rkl@yahoo.com> wrote:

>Did you verifythe correct Band Scopeis installed in your SM-220?
>
>There are 2 Band Scopes for the SM-220
>
>1. BS-5
>2. BS-8
>
>The correct Band Scope for the TS-520 is the BS-5.The BS-8 will not work
>with the TS-520.
>
>73
>Mike
>
>
>
>On 3/31/2013 12:14 PM, n3kvl wrote:
>>
>> All,
>>
>> I am adding the IF tap to my TS520S.
>>
>> I added the 10K Ohm resistor and 22pf cap as in the manual and an RCA
>> to the back of the radio.
>>
>> I used RG-174 coaxial, however the manual notes it as 75 Ohm although
>> all spec sheets note it as 50??
>>
>> So, with the SM-220 connected to the rig..
>>
>> I can see the marker of the adapter, but not the 25Khz calibration
>> from the radio, and I can not hear the adapter marker in the rig.
>>
>> A couple of things...
>>
>> I can not peak T201 as noted in the manual as I do not have the
>> adjusting tool. Can anyone tell me what tool? I've seen them, but
>> can't remember where.
>>
>> Also, could the 50 Ohm RG-174 I used be a problem? Also, I did not
>> have an RCA jumper with coax, so I used an audio cable. Is this a

>> problem maybe.
>>
>> Also, I only had a 22pf mica cap rated for 600V. From what I have read
>> this should not be the problem but maybe it is??
>>
>> Also, The schematic and pictoral of Q4 is a little strange and I hope
>> I tagged onto the drain properly. I did move the connection to the
>> capacitor C35 because it seemed like I could identify the drain lead
>> correctly by tracing it position versus looking at the diagram of the
>> transistor in the manual and the case of the rather small real one on
>> the board.
>>
>> Basic questions, but I am just gettting started with actual hands on
>> bench work.
>>
>> Any advice would be appreciated.
>>
>>
>
>
>
>[Non-text portions of this message have been removed]
>

41565. Re: [TS-520_820_530_830] SM-220 and TS-520S Pan Adapter IF

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-31 22:47:37 UTC
From: Mike
Topic: 41562 Message: 41565

"Is the unit marked?"

If you mean is the SM-220 marked whether it has a band scope module or not then the answer is typically "No". The band scope modules (BS-5 and BS-8) are "optional" accessories for the SM-220. This is clearly stated on page 18 section 8.1 titled, "GENERAL INFORMATION" in the SM-220 manual. Just because there's a 3.5mm socket on the SM-220 panel doesnot mean a band scope module is installed. It's up to you to determine whether a band scope module is installed or not. Remember, the correct band scope module for the TS-520 series transceivers is the BS-5, the BS-8 band scope module will not work with the TS-520 series transceivers.

The following link shows what the band scope modules looks like and how one appears when installed in the SM-220:

http://www.coutant.org/sm220/

73
Mike

On 3/31/2013 1:43 PM, N3K wrote:
>
> I did not check. Is the unit marked
>
> Sent from my LG Smartphone on Sprint
>
> Mike <w5rkl@... <mailto:w5rkl%40yahoo.com>> wrote:
>
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> >Mike
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> >
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41566. Re: [TS-520_820_530_830] SM-220 and TS-520S Pan Adapter IF

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-03-31 22:51:49 UTC
From: N3K
Topic: 41562 Message: 41566

The pan adapter is installed. I need tp determine if its a b5

Sent from my LG Smartphone on Sprint

Mike <w5rkl@yahoo.com> wrote:

>"Is the unit marked?"
>
>If you mean is the SM-220 marked whether it has a band scope module or
>not then the answer is typically "No". The band scope modules (BS-5 and
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>on page 18 section 8.1 titled, "GENERAL INFORMATION" in the SM-220
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41567. Re: [TS-520_820_530_830] SM-220 and TS-520S Pan Adapter IF

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-01 00:22:58 UTC
From: Bob Macklin
Topic: 41562 Message: 41567

See if you can read the frequency on the crystal.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: N3K
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, March 31, 2013 3:51 PM
Subject: Re: [TS-520_820_530_830] SM-220 and TS-520S Pan Adapter IF

The pan adapter is installed. I need tp determine if its a b5

Sent from my LG Smartphone on Sprint

Mike <w5rkl@...> wrote:

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41568. WTT BS-8

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-01 02:17:38 UTC
From: Mike
Topic: 41568 Message: 41568

I have a BS-8 pan adapter that I would like to trade for a BS-5. Anyone intrested?

Mike Bracey
KE5YTV

41569. Re: [TS-520_820_530_830] SM-220 and TS-520S Pan Adapter IF

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-01 12:22:13 UTC
From: Mike
Topic: 41562 Message: 41569

The band scope module should have a stamp on the edge indicating which
band scope module it is.

73
Mike

On 3/31/2013 5:51 PM, N3K wrote:
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> Sent from my LG Smartphone on Sprint
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41570. Re: [TS-520_820_530_830] SM-220 and TS-520S Pan Adapter IF

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-01 12:58:30 UTC
From: Alvin Chipmunk
Topic: 41562 Message: 41570

I also see from the manual I made a error in selecting the IF take-off point. It is from the NB board, not Q4 on the IF board??

From: Mike <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, April 1, 2013 8:22 AM
Subject: Re: [TS-520_820_530_830] SM-220 and TS-520S Pan Adapter IF

The band scope module should have a stamp on the edge indicating which
band scope module it is.

73
Mike

On 3/31/2013 5:51 PM, N3K wrote:
>
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> Sent from my LG Smartphone on Sprint
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> Mike <w5rkl@... <mailto:w5rkl%40yahoo.com>> wrote:
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41571. Re: [TS-520_820_530_830] SM-220 and TS-520S Pan Adapter IF

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-01 19:51:55 UTC
From: Mike
Topic: 41562 Message: 41571

The Band Scope has to be placed in the receive signal path where the
bandwidth is the widest. That is why the Band Scope is connected at the
NB and not any of the IF amplifiers. If you tap the IF stage "after" the
crystal filter then the Band Scope would be useless because at that
point the crystal filter has filtered all but 2.5 or 3Khz of the receive
signal. The same applies to the NB.

73
Mike

On 4/1/2013 7:58 AM, Alvin Chipmunk wrote:
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> To: TS-520_820_530_830@yahoogroups.com
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> > >> >>
> > >> >> Any advice would be appreciated.
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> > >> >>
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41572. TS-830s and 599D Twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-02 00:53:41 UTC
From: w0szv
Topic: 41572 Message: 41572

Hello fellow members. I have a unmodified working TS-830s and a set of 599D Twins with matching speaker . the 830s has a MC-50 Mic and the 599D's have a D-104 mic. the 599D reciever also has the 2mtr module installed. I would like to know what the members think these are worth as I don't want to overprice them but at the same time don't want to be lowballed into giving them away. They are both excess to my needs and I would ask that you reply thru e-mail and not the reflector to keep from clogging it up with unnecessary info.
thanks
Eldon Scott
w0szv

41573. Re: [TS-520_820_530_830] TS-830s and 599D Twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-02 04:55:58 UTC
From: John Schroeder
Topic: 41572 Message: 41573

Whats ur email address? Tried skip4450 but it didn't work... U can contact me ... Am intrested in the twins... 73 ... KB9PBM ...

dmir2001@yahoo.com

John ...

From: w0szv <skip4450@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, April 1, 2013 7:53 PM
Subject: [TS-520_820_530_830] TS-830s and 599D Twins

Hello fellow members. I have a unmodified working TS-830s and a set of 599D Twins with matching speaker . the 830s has a MC-50 Mic and the 599D's have a D-104 mic. the 599D reciever also has the 2mtr module installed. I would like to know what the members think these are worth as I don't want to overprice them but at the same time don't want to be lowballed into giving them away. They are both excess to my needs and I would ask that you reply thru e-mail and not the reflector to keep from clogging it up with unnecessary info.
thanks
Eldon Scott
w0szv

[Non-text portions of this message have been removed]

41574. Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-03 02:56:15 UTC
From: tfrugia81
Topic: 41132 Message: 41574

Hi Alan,

Over the past month or so I have fooled with the TS-520se trying to pin down this issue. I've poked and wiggled all of the connections and terminals on the RF, IF and generator boards. I've actually poked just about every one in the entire unit, but nothing seems to make a difference. After a random amount of time everything just goes back to normal, and then after a short time it starts doing it again.

It seems to be doing it more frequent now. I'm nervous to event attempt a qso on it. Can you think of any other things I should look for?

One other clue, when this is happening if I turn the RF gain fully CCW, the meter only goes up to around 1/3 of the full meter (http://content.screencast.com/users/Tyler81/folders/Jing/media/1253a282-fe21-4f48-8288-0b171fd729b1/00000812.png). When the problem stops (I can send/receive again) the meter peaks when I turn the RF gain all of the way CCW.

Thanks for any help,

Tyler
k7fru

--- In TS-520_820_530_830@yahoogroups.com, "Alan Riley" <arr44@...> wrote:
>
> This problem could be a little harder to track down. If you havenâ☐☐t done
> so already, make sure all board mounting screws are tight â☐" loosen them
> up a little first and then retighten. If you have a quality spray contact
> cleaner such as DeoxIT D5, you could clean the MODE and FUNCTION
> switch contacts, followed by blowing them dry with compressed air, but
> I really donâ☐☐t think it is a switch contact issue.
>
> Since you have already found one bad solder connection, it is very possible
> that there may another one that is temperature sensitive causing this
> problem. It is affecting both the receive and transmit functions so that
> narrows it down a bit.
>
> I think I would concentrate on the RF, IF, and GENERATOR board connections.
> Using a hair dryer to warm each board a little might point you to the general
> area of the problem but you canâ☐☐t concentrate the heat well enough to really
> isolate the problem. Donâ☐☐t use a soldering iron for this since the rig will
> need to have power applied. ***The RF unit has dangerous voltages
> applied***.
>
> Using an insulated tool such as a wooden popsickle stick, gently wiggle
> the wires at the soldered connections with the rig powered up. There
> could also be an issue with a component lead not making reliable contact
> but check the wire connections to the terminals first.

>
> If this doesnâ□□t work, we will try something else. Also, there are other forum
> members with more experience on these rigs than I have, so feel free to
> jump in.
>
> 73,
> Alan, KD5R
>
> From: tfrugia81
> Sent: Friday, March 01, 2013 5:22 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: ts520se sidetone question
>
>
> One more observation. When the receive is out, if I put the mode to TUNE and the function switch to VFO, I can hear white noise just as normal. Any other combination of MODE and FUNCTION cause it to have no receive.
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, "tfrugia81" wrote:
> >
> > I'm not sure why my reply to this didn't show last night, but for the record the KEY terminal was loose. Soldering it back together solved the sidetone issue. Thanks Alan!
> >
> > Regarding the loss of receive audio. When it happens if I tune to the 25 kHz calibrator I do not hear the tone. When the receive finally comes back I DO hear the tone, but while it's dropped out I do not hear it. I can still hear other stations in SSB, but I have to turn the volume up all of the way and even then it's barely audible.
> >
> > I also tried keying the microphone several times. I can hear the relays clicking but I do not get any RF output while this is happening. Once the receive comes back everything works normal again. I also tried cycling the receive antenna switch. It has something wedged in to keep it "up" all of the time. I will take that out and see if toggling the switch makes a difference.
> >
> > Oddly, once the radio has been on for a while this issue doesn't seem to happen at all. But it's really frustrating sometimes!
> >
> > Thanks again for your help,
> >
> >
> > Tyler
> > k7fru
> >
> >
> >
> > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley" wrote:
> > >
> > > Well, the video tells me you may have a bad TR relay causing the intermittent
> > > loss of receive audio. You can check for this by turning on the internal 25 kHz
> > > calibrator. If it is the TR relay, the signal from the internal calibrator will still
> > > be at itÃ¢Â□Â□s normal level even though the received signal off of the antenna has
> > > dropped out. Connect a microphone and key it briefly a few times and see if

> > > the signal from the antenna returns. In addition, exercise the external receive
> > > antenna switch on the rear of the rig since the receive signal path goes through
> > > it too.
> > >
> > > On the constant sidetone issue, look closely at all soldered connections in
> > > the sidetone circuit and especially any wire-wrap connections. You should
> > > be able to track down the problem there with your voltmeter. Also, make
> > > sure the board mounting screws are tight.
> > >
> > > 73,
> > > Alan, KD5R
> > >
> > >
> > >
> > > From: tfrugia81
> > > Sent: Tuesday, February 26, 2013 12:42 PM
> > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > Subject: [TS-520_820_530_830] Re: ts520se sidetone question
> > >
> > >
> > > Thanks again for the help. I will test this tonight.
> > >
> > > Here is an issue I'm having as well, could this be related? I would think not, but thought I'd send it anyway - http://www.youtube.com/watch?v=AAWdikZZt58
> > >
> > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley" wrote:
> > > >
> > > > Ok, good. The purpose of this Ã□Â¢Ã□Â□"63 vdc is to inhibit the sidetone oscillator
> > > > when your key contacts are open. It does this by reverse biasing diode D3,
> > > > thus turning it off and interrupting the feedback path necessary for Q6 to
> > > > oscillate.
> > > >
> > > > It appears that your Ã□Â¢Ã□Â□"63 volts is either not reaching the diode or else the
> > > > diode is shorted. A positive voltage of about +100 vdc enters the AF board
> > > > at the Ã□Â¢Ã□Â□Ã□Â□STBÃ□Â¢Ã□Â□Ã□Â□ terminal. This +100v and the voltage at the Ã□Â¢Ã□Â□Ã□Â□KEYÃ□Â¢Ã□Â□Ã□Â□ terminal
> > > > (-63v key up, 0v key down) are combined through resistors R35 and R36
> > > > such that D3 is forward biased when your key contacts are closed but
> > > > when the key contacts open, the Ã□Â¢Ã□Â□"63v Ã□Â¢Ã□Â□Ã□Â□overpowersÃ□Â¢Ã□Â□Ã□Â□ the positive voltage,
> > > > killing the oscillator.
> > > >
> > > > One other possibility would be for the R35 and/or R36 values to have changed
> > > > such that the negative voltage is not quite able to overcome the positive voltage.
> > > >
> > > > Measure the voltage at the anode of D3 under key up and key down conditions.
> > > > Also, if you are using an analog meter or a digital meter with a diode test
> > > > function, measure resistance both directions across D3 (be sure there is
> > > > no voltage present on the diode when you do this).

> > > >
> > > > Let us know what you find.
> > > >
> > > > 73,
> > > > Alan, KD5R
> > > >
> > > >
> > > > From: tfrugia81
> > > > Sent: Monday, February 25, 2013 8:20 PM
> > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > > Subject: [TS-520_820_530_830] Re: ts520se sidetone question
> > > >
> > > >
> > > > Got it, thank you for the clarification.
> > > >
> > > > I measured voltage at the KEY terminal on the AF board, and it indeed has -63ish volts DC with the key open. All of the connections on the AF board look ok to my naked eye. I traced the ones that I could easily follow and they seemed ok (using a meter to test continuity).
> > > >
> > > > I am very much new to these radios (and radio repair in general). Is there anything else I should be looking for? I appreciate your help!
> > > >
> > > > 73
> > > >
> > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley" wrote:
> > > > >
> > > > > Tyler, your TS-520SE wonÃ□Â□Ã□Â¢Ã□Â□Ã□Â□Ã□Â□Ã□Â□t have a FIX3-11, that is just the place I located
> > > > > the problem in my TS-820S. Sorry, I should have pointed that out.
> > > > >
> > > > > Your problem, however appears to be the same as mine was Ã□Â□Ã□Â¢Ã□Â□Ã□Â□" loss of cutoff
> > > > > voltage to the sidetone oscillator. The sidetone oscillator runs when the key
> > > > > is closed but it is cut off by a negative voltage applied when the key is open.
> > > > >
> > > > > In the TS-520SE, the sidetone oscillator is Q6 on the AF Unit (X49-008-01).
> > > > > The Ã□Â□Ã□Â¢Ã□Â□Ã□Â□Ã□Â□Ã□Â□KEYÃ□Â□Ã□Â¢Ã□Â□Ã□Â□Ã□Â□Ã□Â□ terminal on that board should have a negative voltage of about
> > > > > -65 vdc in the key-up condition (it should be the same as the open-circuit
> > > > > voltage across your key contacts). Check there to see if the negative voltage
> > > > > is present. I donÃ□Â□Ã□Â¢Ã□Â□Ã□Â□Ã□Â□Ã□Â□t know whether the TS-520SE uses a wire-wrap connection
> > > > > at that point or not but if it does, then I suspect you will find it to be the
> > > > > problem. If it is a bad wire-wrap connection, clean it good and solder it.
> > > > >
> > > > > If you donÃ□Â□Ã□Â¢Ã□Â□Ã□Â□Ã□Â□Ã□Â□t have the manuals for it, you can download them from GordonÃ□Â□Ã□Â¢Ã□Â□Ã□Â□Ã□Â□Ã□Â□s
> > > > > website as I just did (thanks, Gordon!).
> > > > >
> > > > > Let us know what you find.

> > > > >
> > > > > 73,
> > > > > Alan, KD5R
> > > > >
> > > > >
> > > > >
> > > > > From: Tyler Frugia
> > > > > Sent: Sunday, February 24, 2013 9:07 PM
> > > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > > > Subject: Re: [TS-520_820_530_830] ts520se sidetone question
> > > > >
> > > > >
> > > > > Hi Alan,
> > > > >
> > > > > Thanks for the email. Pardon my ignorance, but where would I find
> > > > > FIX3-11?
> > > > >
> > > > > I appreciate any help!
> > > > >
> > > > > 73,
> > > > >
> > > > > Tyler
> > > > > k7fru
> > > > >
> > > > > On Sun, Feb 24, 2013 at 6:52 PM, Alan Riley mailto:arr44%40suddenlink.net> wrote:
> > > > >
> > > > > **
> > > > >
> > > > >
> > > > > My TS-820S had the exact same problem when I bought it. I found the
> > > > > problem to be a broken
> > > > > contact on connector FIX3-11 not making connection to the pin on the pcb.
> > > > >
> > > > > 73,
> > > > > Alan, KD5R
> > > > >
> > > > > From: tfrugia81
> > > > > Sent: Saturday, February 23, 2013 11:09 PM
> > > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > > > Subject: [TS-520_820_530_830] ts520se sidetone question
> > > > >
> > > > >
> > > > > Hello all. I'm a new owner of a kenwood hybrid. I absolutely love it.
> > > > >
> > > > > I searched the group to try and find an answer to my problem. There are
> > > > > many similar posts but not quite what I am experiencing.
> > > > >
> > > > > If I have a key plugged in and switch to CW, I hear a constant sidetone.
> > > > > If I put the radio in "send" there is no RF output, but I hear the tone. If

> > > > > > I press the key, it transmits as it should. The sidetone never stops until
> > > > > > I unplug the key.
> > > > > > >
> > > > > > > This is just a standard straight key on a mono plug. I even tried plugin
> > > > > > > in a plug with nothing attached and it does the same thing. Oddly enough,
> > > > > > > it randomly will work fine. Today I left the rig turned on in CW mode for
> > > > > > > about an hour. When I came back the tone was gone, but switching to "tune"
> > > > > > > and back to CW caused the sidetone to come on and remain on.
> > > > > > > >
> > > > > > > > Any ideas? I took the case off and the plug is clean and looks brand new.
> > > > > > > >
> > > > > > > > 73
> > > > > > > >
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41575. Re: [TS-520_820_530_830] Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-03 14:02:11 UTC
From: Mike
Topic: 41132 Message: 41575

I don't see where you tried cleaning relay RL-1located top left rear
below the Marker and VOX Unit boards. You might try doing that then
check to see if the symptoms change.I don't know if relay RL-1's cover
can be gently pried off or not but if it can be then you might try
cleaning the relay terminals with a thin piece of paper wet with contact
cleanerslid between the relay contacts. Clean the relay socket as well.
This requires "gentle" prying off of the relay's cover and "gentle"
passing of thin paper wet with contact cleaner between the relay
terminals. You will have to "manually" move the relay's armature with
your finger to clean some contacts.You should use several pieces of
paper wet with cleanerslid through the contacts until the paper is no
longer "black" from carbon. I use simple printer paper cut in thin
strips that fit between the relay terminals. Thoroughly inspect the
relay terminals and armature movement to ensure the relay terminals are
not bent after your cleaning process. Use canned air, available at
Walmart, to remove any/all cleaner residue. Adhere to ALL warnings
printed on the cleaner's label. Some cleaners are flammable and it only
takes a small spark to ignite the cleaner so don't ignore or skip
reading the warnings on the cleaner's can!

Relays are one of the most "ignored" or "overlooked" component in the
transceiver. Quite often relays are only "visually" inspected to see if
the armature is moving when the relay is energized. If the armature is
moving then the relay is "assumed" to be "okay". Just because a relay's
armature is moving when the relay is energized does NOT mean the relay
"contacts" are good! Over time, carbon builds up on the relay terminals
due to circuit switching. Carbon build up on relay terminals can result
in intermittent connections or no connection at all.

73
Mike

On 4/2/2013 9:56 PM, tfrugia81 wrote:
>
> Hi Alan,
>
> Over the past month or so I have fooled with the TS-520se trying to
> pin down this issue. I've poked and wiggled all of the connections and
> terminals on the RF, IF and generator boards. I've actually poked just
> about every one in the entire unit, but nothing seems to make a
> difference. After a random amount of time everything just goes back to
> normal, and then after a short time it starts doing it again.
>
> It seems to be doing it more frequent now. I'm nervous to event
> attempt a qso on it. Can you think of any other things I should look for?
>

> One other clue, when this is happening if I turn the RF gain fully
> CCW, the meter only goes up to around 1/3 of the full meter
> (http://content.screencast.com/users/Tyler81/folders/Jing/media/1253a282-fe21-4f48-8288-0b171fd729b1/00000812.png).
> When the problem stops (I can send/receive again) the meter peaks when
> I turn the RF gain all of the way CCW.
>
> Thanks for any help,
>
> Tyler
> k7fru
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Alan Riley"
> <arr44@...> wrote:
> >
> > This problem could be a little harder to track down. If you
> havenâEUR^(TM)t done
> > so already, make sure all board mounting screws are tight âEUR"
> loosen them
> > up a little first and then retighten. If you have a quality spray
> contact
> > cleaner such as DeoxIT D5, you could clean the MODE and FUNCTION
> > switch contacts, followed by blowing them dry with compressed air, but
> > I really donâEUR^(TM)t think it is a switch contact issue.
> >
> > Since you have already found one bad solder connection, it is very
> possible
> > that there may another one that is temperature sensitive causing this
> > problem. It is affecting both the receive and transmit functions so
> that
> > narrows it down a bit.
> >
> > I think I would concentrate on the RF, IF, and GENERATOR board
> connections.
> > Using a hair dryer to warm each board a little might point you to
> the general
> > area of the problem but you canâEUR^(TM)t concentrate the heat well
> enough to really
> > isolate the problem. DonâEUR^(TM)t use a soldering iron for this
> since the rig will
> > need to have power applied. ***The RF unit has dangerous voltages
> > applied***.
> >
> > Using an insulated tool such as a wooden popsickle stick, gently wiggle
> > the wires at the soldered connections with the rig powered up. There
> > could also be an issue with a component lead not making reliable contact
> > but check the wire connections to the terminals first.
> >
> > If this doesnâEUR^(TM)t work, we will try something else. Also,

> there are other forum
> > members with more experience on these rigs than I have, so feel free to
> > jump in.
> >
> > 73,
> > Alan, KD5R
> >
> > From: tfrugia81
> > Sent: Friday, March 01, 2013 5:22 PM
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Subject: [TS-520_820_530_830] Re: ts520se sidetone question
> >
> >
> > One more observation. When the receive is out, if I put the mode to
> TUNE and the function switch to VFO, I can hear white noise just as
> normal. Any other combination of MODE and FUNCTION cause it to have no
> receive.
> >
> > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "tfrugia81" wrote:
> > >
> > > I'm not sure why my reply to this didn't show last night, but for
> the record the KEY terminal was loose. Soldering it back together
> solved the sidetone issue. Thanks Alan!
> > >
> > > Regarding the loss of receive audio. When it happens if I tune to
> the 25 kHz calibrator I do not hear the tone. When the receive finally
> comes back I DO hear the tone, but while it's dropped out I do not
> hear it. I can still hear other stations in SSB, but I have to turn
> the volume up all of the way and even then it's barely audible.
> > >
> > > I also tried keying the microphone several times. I can hear the
> relays clicking but I do not get any RF output while this is
> happening. Once the receive comes back everything works normal again.
> I also tried cycling the receive antenna switch. It has something
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> see if toggling the switch makes a difference.
> > >
> > > Oddly, once the radio has been on for a while this issue doesn't
> seem to happen at all. But it's really frustrating sometimes!
> > >
> > > Thanks again for your help,
> > >
> > >
> > > Tyler
> > > k7fru
> > >
> > >
> > >
> > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley"

> wrote:
> > > >
> > > > Well, the video tells me you may have a bad TR relay causing the
> intermittent
> > > > loss of receive audio. You can check for this by turning on the
> internal 25 kHz
> > > > calibrator. If it is the TR relay, the signal from the internal
> calibrator will still
> > > > be at itÃ¢ÂEURÂ^(TM)s normal level even though the received
> signal off of the antenna has
> > > > dropped out. Connect a microphone and key it briefly a few times
> and see if
> > > > the signal from the antenna returns. In addition, exercise the
> external receive
> > > > antenna switch on the rear of the rig since the receive signal
> path goes through
> > > > it too.
> > > >
> > > > On the constant sidetone issue, look closely at all soldered
> connections in
> > > > the sidetone circuit and especially any wire-wrap connections.
> You should
> > > > be able to track down the problem there with your voltmeter.
> Also, make
> > > > sure the board mounting screws are tight.
> > > >
> > > > 73,
> > > > Alan, KD5R
> > > >
> > > >
> > > >
> > > > From: tfrugia81
> > > > Sent: Tuesday, February 26, 2013 12:42 PM
> > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > > Subject: [TS-520_820_530_830] Re: ts520se sidetone question
> > > >
> > > >
> > > > Thanks again for the help. I will test this tonight.
> > > >
> > > > Here is an issue I'm having as well, could this be related? I
> would think not, but thought I'd send it anyway -
> http://www.youtube.com/watch?v=AAWdikZZt58
> > > >
> > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley"
> wrote:
> > > > >
> > > > > Ok, good. The purpose of this ÃfÂ¢Ã‚ÂEUR"63 vdc is to inhibit
> the sidetone oscillator
> > > > > when your key contacts are open. It does this by reverse
> biasing diode D3,

> > > > > thus turning it off and interrupting the feedback path
> necessary for Q6 to
> > > > > oscillate.
> > > > >
> > > > > It appears that your ÃfÂ¢Ã‚EUR"63 volts is either not
> reaching the diode or else the
> > > > > diode is shorted. A positive voltage of about +100 vdc enters
> the AF board
> > > > > at the ÃfÂ¢Ã‚EURÃ‚oeSTBÃfÂ¢Ã‚EURÃ‚? terminal. This +100v
> and the voltage at the ÃfÂ¢Ã‚EURÃ‚oeKEYÃfÂ¢Ã‚EURÃ‚? terminal
> > > > > (-63v key up, 0v key down) are combined through resistors R35
> and R36
> > > > > such that D3 is forward biased when your key contacts are
> closed but
> > > > > when the key contacts open, the ÃfÂ¢Ã‚EUR"63v
> ÃfÂ¢Ã‚EURÃ‚oeoverpowersÃfÂ¢Ã‚EURÃ‚? the positive voltage,
> > > > > killing the oscillator.
> > > > >
> > > > > One other possibility would be for the R35 and/or R36 values
> to have changed
> > > > > such that the negative voltage is not quite able to overcome
> the positive voltage.
> > > > >
> > > > > Measure the voltage at the anode of D3 under key up and key
> down conditions.
> > > > > Also, if you are using an analog meter or a digital meter with
> a diode test
> > > > > function, measure resistance both directions across D3 (be
> sure there is
> > > > > no voltage present on the diode when you do this).
> > > > >
> > > > > Let us know what you find.
> > > > >
> > > > > 73,
> > > > > Alan, KD5R
> > > > >
> > > > >
> > > > > From: tfrugia81
> > > > > Sent: Monday, February 25, 2013 8:20 PM
> > > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > > > Subject: [TS-520_820_530_830] Re: ts520se sidetone question
> > > > >
> > > > >
> > > > > Got it, thank you for the clarification.
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> > > > > I measured voltage at the KEY terminal on the AF board, and it
> indeed has -63ish volts DC with the key open. All of the connections
> on the AF board look ok to my naked eye. I traced the ones that I
> could easily follow and they seemed ok (using a meter to test continuity).
> > > > >

> > > > > I am very much new to these radios (and radio repair in
> general). Is there anything else I should be looking for? I appreciate
> your help!
> > > > >
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> > > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan
> Riley" wrote:
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> > > > > > Tyler, your TS-520SE wonÃfÂfÃ,Â¢ÃfÂ,Ã,ÂEURÃfÂ,Ã,Â^(TM)t have
> a FIX3-11, that is just the place I located
> > > > > > the problem in my TS-820S. Sorry, I should have pointed that
> out.
> > > > > >
> > > > > > Your problem, however appears to be the same as mine was
> ÃfÂfÃ,Â¢ÃfÂ,Ã,ÂEUR" loss of cutoff
> > > > > > voltage to the sidetone oscillator. The sidetone oscillator
> runs when the key
> > > > > > is closed but it is cut off by a negative voltage applied
> when the key is open.
> > > > > >
> > > > > > In the TS-520SE, the sidetone oscillator is Q6 on the AF
> Unit (X49-008-01).
> > > > > > The ÃfÂfÃ,Â¢ÃfÂ,Ã,ÂEURÃfÂ,Ã,ÂoeKEYÃfÂfÃ,Â¢ÃfÂ,Ã,ÂEURÃfÂ,Ã,Â?
> terminal on that board should have a negative voltage of about
> > > > > > -65 vdc in the key-up condition (it should be the same as
> the open-circuit
> > > > > > voltage across your key contacts). Check there to see if the
> negative voltage
> > > > > > is present. I donÃfÂfÃ,Â¢ÃfÂ,Ã,ÂEURÃfÂ,Ã,Â^(TM)t know
> whether the TS-520SE uses a wire-wrap connection
> > > > > > at that point or not but if it does, then I suspect you will
> find it to be the
> > > > > > problem. If it is a bad wire-wrap connection, clean it good
> and solder it.
> > > > > >
> > > > > > If you donÃfÂfÃ,Â¢ÃfÂ,Ã,ÂEURÃfÂ,Ã,Â^(TM)t have the manuals
> for it, you can download them from GordonÃfÂfÃ,Â¢ÃfÂ,Ã,ÂEURÃfÂ,Ã,Â^(TM)s
> > > > > > website as I just did (thanks, Gordon!).
> > > > > >
> > > > > > Let us know what you find.
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> > > > > > Alan, KD5R
> > > > > >
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> > > > > > From: Tyler Frugia
> > > > > > Sent: Sunday, February 24, 2013 9:07 PM
> > > > > > To: mailto:TS-520_820_530_830%40yahoogroups.com

> > > > > > Subject: Re: [TS-520_820_530_830] ts520se sidetone question
> > > > > > >
> > > > > > >
> > > > > > > Hi Alan,
> > > > > > >
> > > > > > > Thanks for the email. Pardon my ignorance, but where would I
> find
> > > > > > > FIX3-11?
> > > > > > >
> > > > > > > I appreciate any help!
> > > > > > >
> > > > > > > 73,
> > > > > > >
> > > > > > > Tyler
> > > > > > > k7fru
> > > > > > >
> > > > > > > On Sun, Feb 24, 2013 at 6:52 PM, Alan Riley
> mailto:arr44%40suddenlink.net> wrote:
> > > > > > >
> > > > > > > > **
> > > > > > > >
> > > > > > > >
> > > > > > > > My TS-820S had the exact same problem when I bought it. I
> found the
> > > > > > > > problem to be a broken
> > > > > > > > contact on connector FIX3-11 not making connection to the
> pin on the pcb.
> > > > > > > >
> > > > > > > > 73,
> > > > > > > > Alan, KD5R
> > > > > > > >
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> > > > > > > > Sent: Saturday, February 23, 2013 11:09 PM
> > > > > > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > > > > > > Subject: [TS-520_820_530_830] ts520se sidetone question
> > > > > > > >
> > > > > > > >
> > > > > > > > Hello all. I'm a new owner of a kenwood hybrid. I
> absolutely love it.
> > > > > > > >
> > > > > > > > I searched the group to try and find an answer to my
> problem. There are
> > > > > > > > many similar posts but not quite what I am experiencing.
> > > > > > > >
> > > > > > > > If I have a key plugged in and switch to CW, I hear a
> constant sidetone.
> > > > > > > > If I put the radio in "send" there is no RF output, but I
> hear the tone. If
> > > > > > > > I press the key, it transmits as it should. The sidetone
> never stops until

> > > > > > > I unplug the key.
> > > > > > > >
> > > > > > > > This is just a standard straight key on a mono plug. I
> even tried plugin
> > > > > > > > in a plug with nothing attached and it does the same
> thing. Oddly enough,
> > > > > > > > it randomly will work fine. Today I left the rig turned on
> in CW mode for
> > > > > > > > about an hour. When I came back the tone was gone, but
> switching to "tune"
> > > > > > > > and back to CW caused the sidetone to come on and remain on.
> > > > > > > >
> > > > > > > > Any ideas? I took the case off and the plug is clean and
> looks brand new.
> > > > > > > >
> > > > > > > > 73
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41576. ?Anyone for an 820 repair challenge?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-03 16:42:28 UTC
From: ke1lg
Topic: 41576 Message: 41576

I have a really nice 820...stopped working. Finals and driver are fine, but the xmit/receive will start and stop as if the radio had a mind of it's own. Last time radio stopped working, it would not come back.It has been modified by the last owner. It has a mysterious pcb in the radio, and also has receive on 17 meters in the aux slot. I am unable to diagnose the issues. Looking for someone to repair the radio for me. Will ship and will, of course, pay for repair. I am in Maine.Please respond to hanson1448@...m if at all interested.
tnx,
de ke1lg
Steve in Maine

41577. Re: TS-830s and 599D Twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-03 17:01:25 UTC
From: w0szv
Topic: 41572 Message: 41577

Thanks to all who inquired. the 599D's have been sold.
Eldon
w0szv

--- In TS-520_820_530_830@yahoogroups.com, "w0szv" <skip4450@...> wrote:
>
> Hello fellow members. I have a unmodified working TS-830s and a set of 599D Twins with matching speaker . the 830s has a MC-50 Mic and the 599D's have a D-104 mic. the 599D reciever also has the 2mtr module installed. I would like to know what the members think these are worth as I don't want to overprice them but at the same time don't want to be lowballed into giving them away. They are both excess to my needs and I would ask that you reply thru e-mail and not the reflector to keep from clogging it up with unnecessary info.
> thanks
> Eldon Scott
> w0szv
>

41578. Re: [TS-520_820_530_830] Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-04 02:17:46 UTC
From: Alan Riley
Topic: 41132 Message: 41578

Hi Tyler,

I was wondering how you had made out with it. Sorry to hear you are still having a problem. Let me study the schematic for a while and I'll get back with you.

Alan, KD5R

From: tfrugia81
Sent: Tuesday, April 02, 2013 9:56 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: ts520se sidetone question

Hi Alan,

Over the past month or so I have fooled with the TS-520se trying to pin down this issue. I've poked and wiggled all of the connections and terminals on the RF, IF and generator boards. I've actually poked just about every one in the entire unit, but nothing seems to make a difference. After a random amount of time everything just goes back to normal, and then after a short time it starts doing it again.

It seems to be doing it more frequent now. I'm nervous to event attempt a qso on it. Can you think of any other things I should look for?

One other clue, when this is happening if I turn the RF gain fully CCW, the meter only goes up to around 1/3 of the full meter (http://content.screencast.com/users/Tyler81/folders/Jing/media/1253a282-fe21-4f48-8288-0b171fd729b1/00000812.png). When the problem stops (I can send/receive again) the meter peaks when I turn the RF gain all of the way CCW.

Thanks for any help,

Tyler
k7fru

--- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley" <arr44@...> wrote:
>
> This problem could be a little harder to track down. If you havenâ☐☐t done
> so already, make sure all board mounting screws are tight â☐" loosen them
> up a little first and then retighten. If you have a quality spray contact
> cleaner such as DeoxIT D5, you could clean the MODE and FUNCTION
> switch contacts, followed by blowing them dry with compressed air, but
> I really donâ☐☐t think it is a switch contact issue.
>
> Since you have already found one bad solder connection, it is very possible
> that there may another one that is temperature sensitive causing this
> problem. It is affecting both the receive and transmit functions so that
> narrows it down a bit.
>

> I think I would concentrate on the RF, IF, and GENERATOR board connections.
> Using a hair dryer to warm each board a little might point you to the general
> area of the problem but you canâ□□t concentrate the heat well enough to really
> isolate the problem. Donâ□□t use a soldering iron for this since the rig will
> need to have power applied. ***The RF unit has dangerous voltages
> applied***.
>
> Using an insulated tool such as a wooden popsickle stick, gently wiggle
> the wires at the soldered connections with the rig powered up. There
> could also be an issue with a component lead not making reliable contact
> but check the wire connections to the terminals first.
>
> If this doesnâ□□t work, we will try something else. Also, there are other forum
> members with more experience on these rigs than I have, so feel free to
> jump in.
>
> 73,
> Alan, KD5R
>
> From: tfrugia81
> Sent: Friday, March 01, 2013 5:22 PM
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Subject: [TS-520_820_530_830] Re: ts520se sidetone question
>
>
> One more observation. When the receive is out, if I put the mode to TUNE and the function switch to VFO, I can hear white noise just as normal. Any other combination of MODE and FUNCTION cause it to have no receive.
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, "tfrugia81" wrote:
> >
> > I'm not sure why my reply to this didn't show last night, but for the record the KEY terminal was loose. Soldering it back together solved the sidetone issue. Thanks Alan!
> >
> > Regarding the loss of receive audio. When it happens if I tune to the 25 kHz calibrator I do not hear the tone. When the receive finally comes back I DO hear the tone, but while it's dropped out I do not hear it. I can still hear other stations in SSB, but I have to turn the volume up all of the way and even then it's barely audible.
> >
> > I also tried keying the microphone several times. I can hear the relays clicking but I do not get any RF output while this is happening. Once the receive comes back everything works normal again. I also tried cycling the receive antenna switch. It has something wedged in to keep it "up" all of the time. I will take that out and see if toggling the switch makes a difference.
> >
> > Oddly, once the radio has been on for a while this issue doesn't seem to happen at all. But it's really frustrating sometimes!
> >
> > Thanks again for your help,
> >
> >
> > Tyler

> > k7fru
> >
> >
> >
> > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley" wrote:
> > >
> > > Well, the video tells me you may have a bad TR relay causing the intermittent
> > > loss of receive audio. You can check for this by turning on the internal 25 kHz
> > > calibrator. If it is the TR relay, the signal from the internal calibrator will still
> > > be at itÃ¢Â□Â□s normal level even though the received signal off of the antenna has
> > > dropped out. Connect a microphone and key it briefly a few times and see if
> > > the signal from the antenna returns. In addition, exercise the external receive
> > > antenna switch on the rear of the rig since the receive signal path goes through
> > > it too.
> > >
> > > On the constant sidetone issue, look closely at all soldered connections in
> > > the sidetone circuit and especially any wire-wrap connections. You should
> > > be able to track down the problem there with your voltmeter. Also, make
> > > sure the board mounting screws are tight.
> > >
> > > 73,
> > > Alan, KD5R
> > >
> > >
> > >
> > > From: tfrugia81
> > > Sent: Tuesday, February 26, 2013 12:42 PM
> > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > Subject: [TS-520_820_530_830] Re: ts520se sidetone question
> > >
> > >
> > > Thanks again for the help. I will test this tonight.
> > >
> > > Here is an issue I'm having as well, could this be related? I would think not, but thought I'd send it anyway - http://www.youtube.com/watch?v=AAWdikZZt58
> > >
> > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley" wrote:
> > > >
> > > > Ok, good. The purpose of this Ã□Â¢Ã□Â□"63 vdc is to inhibit the sidetone oscillator
> > > > when your key contacts are open. It does this by reverse biasing diode D3,
> > > > thus turning it off and interrupting the feedback path necessary for Q6 to
> > > > oscillate.
> > > >
> > > > It appears that your Ã□Â¢Ã□Â□"63 volts is either not reaching the diode or else the
> > > > diode is shorted. A positive voltage of about +100 vdc enters the AF board
> > > > at the Ã□Â¢Ã□Â□Ã□Â□STBÃ□Â¢Ã□Â□Ã□Â□ terminal. This +100v and the voltage at the Ã□Â¢Ã□Â□Ã□Â□KEYÃ□Â¢Ã□Â□Ã□Â□ terminal
> > > > (-63v key up, 0v key down) are combined through resistors R35 and R36
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> > > > such that the negative voltage is not quite able to overcome the positive voltage.
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> > > > Measure the voltage at the anode of D3 under key up and key down conditions.
> > > > Also, if you are using an analog meter or a digital meter with a diode test
> > > > function, measure resistance both directions across D3 (be sure there is
> > > > no voltage present on the diode when you do this).
> > > >
> > > > Let us know what you find.
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> > > > I am very much new to these radios (and radio repair in general). Is there anything else I should be looking for? I appreciate your help!
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> > > > > the problem in my TS-820S. Sorry, I should have pointed that out.
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> > > > > website as I just did (thanks, Gordon!).
> > > > >
> > > > > Let us know what you find.
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41579. Re: ?Anyone for an 820 repair challenge?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-04 13:34:01 UTC
From: roberteleazer@rocketmail.com
Topic: 41576 Message: 41579

Well, from the sounds of it, its probably nothing very complicated. Bad switches and relays come to mind as do loose connectors. It's possible that it might be something wrong with the carrier board - they always seem to have some kind of problem if not adjusted in a while. And it could well be a power supply problem, also not uncommon.

What are the characteristics of the failure? Do you get any noise from the speaker at all? Does the meter needle move?

I assume this situation was the case for all bands and modes?

Let us know!

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "ke1lg" <hanson1448@...> wrote:
>
> I have a really nice 820...stopped working. Finals and driver are fine, but the xmit/receive will start and stop as if the radio had a mind of it's own. Last time radio stopped working, it would not come back.It has been modified by the last owner. It has a mysterious pcb in the radio, and also has receive on 17 meters in the aux slot. I am unable to diagnose the issues. Looking for someone to repair the radio for me. Will ship and will, of course, pay for repair. I am in Maine.Please respond to hanson1448@... if at all interested.
> tnx,
> de ke1lg
> Steve in Maine
>

41580. Re: [TS-520_820_530_830] Re: ?Anyone for an 820 repair challenge?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-04 15:46:35 UTC
From: Joseph Stiles
Topic: 41576 Message: 41580

Steve,

  I tend to agree with Mike. The relays have gone through thousands of cycles during their life...they can and will cause the problem(s) you state.
Both can be removed and, the contacts cleaned, as stated. I have "fixed" numerous problems on the 820 series by cleaning BOTH relays. Just do
one at a time..and retest.

  If I may suggest..IF you plan on keeping this rig for a long time...invest in 2 new..or known good relays and, 1 known good driver and,
one pair of known good finals. Not to mention some DEOXIT and "canned air."

73 Joe
WB7UQU

From: "roberteleazer@..." <roberteleazer@rocketmail.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, April 4, 2013 6:34 AM
Subject: [TS-520_820_530_830] Re: ?Anyone for an 820 repair challenge?

Well, from the sounds of it, its probably nothing very complicated. Bad switches and relays come to mind as do loose connectors. It's possible that it might be something wrong with the carrier board - they always seem to have some kind of problem if not adjusted in a while. And it could well be a power supply problem, also not uncommon.

What are the characteristics of the failure? Do you get any noise from the speaker at all? Does the meter needle move?

I assume this situation was the case for all bands and modes?

Let us know!

Robert
WB5WSV

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> tnx,
> de ke1lg

> Steve in Maine
>

[Non-text portions of this message have been removed]

41581. TV502/506 Cables

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-05 01:33:03 UTC
From: Rick
Topic: 41581 Message: 41581

I have a couple of questions about this (TV-502/506) connecting cable. I understand one of them (the 502, I think) has a pigtail with a RCA plug on it. Does this mean the cables for the two transverters are different? Needless to say, these cables are not available or I haven't been able to locate one, so, I need to make them. Can someone suggest a cable type to use and where I can find it?

I'm not quite ready to start building the cables I just want to get all my ducks in a row.

Thanks,

Rick/K5IAR

[Non-text portions of this message have been removed]

41582. Looking for some advice

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-05 01:31:34 UTC
From: Jim Showker
Topic: 40127 Message: 41582

Hi Terry,
Haven't talked to you in a while. Hope you're doing ok. I can tell you that you are missed on the Yahoo group.

I have an 830S that was in pretty bad shape, with a med amount of corrosion. It had all kinds of problems in receive that I have pretty much worked out. There were some bad 3SK73's, and I actually found a source for them. It has an ALC problem. I can get an almost decent reading, but it immediately starts to drop. Even with a new driver tube, it drops the same. I've seen several that do this, but they drop slowly. This drops very quickiy. I think the ALC level might be ok if it didn't drop down. It does stabilize, sort of but at a low level. It's usable on the lower bands, 15M and down, but the CAR is set at 9-10 or above on 15M. I have to set the CAR at too high levels on all the bands, from about 5-6 on 180M to 9--10 on 15M. On 24 and 28 I can't even get an ALC reading. I have rebuilt the B/Sw and that seems to be good. All driver coils have an affect when adjusted. I can put the VTVM on the driver out and get decent level, with both the drive and coil adjusts affecting level on all bands. 49-50v seems to be where the ALC starts to work. Not sure, cause my VTVM is not accurate.

This one is driving me crazy, I can't find anything. If you have any ideas, I would appreciate it.

Best,
Jim
>

[Non-text portions of this message have been removed]

41583. Re: Looking for some advice

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-05 04:03:10 UTC
From: Terry Wagoner
Topic: 40127 Message: 41583

Hi Jim: I am doing fine.

Well lets start with your VTVM.
1. Do you mean you are using a 11 meg ohm input VTVM and a single germanium diode RF probe to measure RF drive levels? If so, inorder to run Tx Level Diagrams you need 2 different RF probes. One with single diode and one with multiple diodes. Cant use a single diode probe to measure output of 12BY7A Driver tube as RF drive voltage will exceed PIV of diode and wreck the probe. May even be a problem on control grids of the 6146 finals. Should be pretty easy to cal your VTVM to get reasonably accurate readings. Not sure what issue is here.

2. I use a Boonton 92E RF Millivolt meter or an O-scope to run TX Level Diagrams. I also have a HP-410C VTVM which I use to measure ALC/AGC bus voltage as it has over 100 Meg input Z and wont pull down the voltage. It has the factory AC/RF probe which can be used for RF drive measurements, but I prefer to use the Boonton.

3. Quick refresher on how you get ALC indication while loading the rig. Need sufficient RF drive level to 6146 control grids to overcome the dc operating bias offset. When this occurs grid current flows on positive peaks of the RF envelope. This current flows thru FG lead back thru base bias resistors of ALC amp Q19 on Audio Board turning it on hard. Q19 is hanging on the ALC bus line and acts like a variable load resistor. This bus is high impedance and cant stand any load on it. When Q19 turns on it pulls the ALC bus line down from 3.6vdc to approx 2.6vdc. The ALC bus voltage is fed to Gate 2 of TIF amp Q29 on IF board. Lowering the control voltage to Gate 2 of Q29 reduces the TIF signal output level. Lowering TIF level lowers RF drive to the TX Mixer on RF board.

The ALC meter is a FET based reverse reading voltmeter monitoring the ALC bus line voltage. With 3.6 vdc on the ALC bus the meter reads zero. The minute the ALC bus voltage starts dropping from 3.6vdc the meter starts moving up scale. FSD will be at approx 2.7vdc on the bus.
Ignore the black rectangular ALC box when loading the rig. It has absolutely nothing to do with loading the rig. Set Car Pot to give yourself a good indication to peak the Driver tube grid and plate tuned circuits to resonance. I usually do that around 2/3 to 3/4 full scale. If indication pegs just reduce CAR pot to get needle off the peg.

6146 TX operating bias is approx -62vdc. Need grid current to flow on positive going peaks of the RF drive level to produce ALC indication. 44 rf volts x 1.414 = 62 peak RF volts. So with 44 RF volts of drive on control grids of 6146 final you will have just reached the operating bias offset and no grid current will flow and no ALC indication. At approx 49 Rf volts you will have max grid current and max ALC indication as you will have driven the 3.6vdc ALC bus voltage down to approx 2.7 vdc.

4. No ALC indication on 24mhz and 28mhz means you do not have RF drive level over approx 44 volts. You can verify that by measuring RF drive level at 6146 control grids. Now question is why and if have good Driver tube the usual reason is bad bandswitch contacts on the RF board. May see some peaking action on Mixer and Drive coils but not sufficient due to high

resistance band switch contacts.

5. As to Car Level. I would measure it at CV terminal Conn 8 Pin 1 and run pot thru its range and make sure you have 0 thru 9vdc. Then get on Cathode of D30 Balanced Modulator Diode with a mini-grabber and measure Car Level voltage there. Should be 0 thru approx 0.60vdc and stable to forward bias the diodes. If voltage is sagging here then Carrier output from Balanced Mod will drift low during key down. This is very unlikely but easy to check.

6. Next measure and monitor TIF signal at IF board Conn 6 Pin 3 and at RF board Conn 7 Pin 2. Again I would use O-scope for this. It should be approx 15 mv rms or approx 44 volts P-P.

7. Next measure output of TX Mixer on RF board at TP-4. Should be approx 2.5 to 3.0 rf volts. Much higher levels is a problem.

8. Next measure Driver tube output at Plate or at DRV terminal. Should be approx 55 to 65 RF volts. Service manual shows 77.5 but I have never seen one that high. I think highest I have ever measured was 68 rf volts.

9. Lastly measure rf drive at 6146 control grids Pin 5. Should be approx 48 to 49 rf volts.

10. Might want to measure/monitor dc bias voltage on 6146 Pin 5 key down as well. It should be approx -62vdc and not moving around. If it goes slowly lower then will require more RF drive voltage to overcome the higher dc offset. If it is drifting down need to troubleshoot -C and I would start by cleaning bias pot.

11. Lastly there is one trick you can do. Connect approx 3 vdc from your bench supply or two flash lite batteries to ALC bus. This temporary low Z power supply will hold the ALC bus voltage up and not allow it to control the TIF amp. Then run your TX Level Diagrams and see if you have normal rf drive levels that do not fall off key down. If you do then it tells you there is a problem with the ALC bus line. Something is pulling it down. If RF drive falls off at some stage with ALC defeated then you need to troubleshoot that stage by taking DC operating voltages.

I guess what I am saying is monitor RF drive levels with RF Millivolt meter or O-scope at TIF to the Finals and see where the level is falling down.

Sorry so long suggest we take this off list if need to continue troubleshooting.

73s Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Jim Showker <jshowker@...> wrote:
>
> Hi Terry,
> Haven't talked to you in a while. Hope you're doing ok. I can tell
> you that you are missed on the Yahoo group.
>
> I have an 830S that was in pretty bad shape, with a med amount of
> corrosion. It had all kinds of problems in receive that I have pretty
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> source for them. It has an ALC problem. I can get an almost decent
> reading, but it immediately starts to drop. Even with a new driver tube,
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> good. All driver coils have an affect when adjusted. I can put the
> VTVM on the driver out and get decent level, with both the drive and
> coil adjusts affecting level on all bands. 49-50v seems to be where the
> ALC starts to work. Not sure, cause my VTVM is not accurate.
>
> This one is driving me crazy, I can't find anything. If you have any
> ideas, I would appreciate it.
>
> Best,
> Jim
> >
>
>
>
> [Non-text portions of this message have been removed]
>

41584. Re: Looking for some advice

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-05 04:23:26 UTC
From: Terry Wagoner
Topic: 40127 Message: 41584

Jim : Clarification Step 10. I meant to say if the bias voltage drifts higher or more negative then it will take higher level of RF to produce ALC indication. For example -65vdc bias requires more RF drive than -62vdc bias. 65/1.414 = 46 rf volts. Need greater that 46 rf rms volts if operating bias drifts from -62 to -65 key down.

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Hi Jim: I am doing fine.
>
> Well lets start with your VTVM.
> 1. Do you mean you are using a 11 meg ohm input VTVM and a single germanium diode RF probe to measure RF drive levels? If so, inorder to run Tx Level Diagrams you need 2 different RF probes. One with single diode and one with multiple diodes. Cant use a single diode probe to measure output of 12BY7A Driver tube as RF drive voltage will exceed PIV of diode and wreck the probe. May even be a problem on control grids of the 6146 finals. Should be pretty easy to cal your VTVM to get reasonably accurate readings. Not sure what issue is here.
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> >
> > Best,
> > Jim
> > >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

41585. Re: TV502/506 Cables

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-05 15:42:41 UTC
From: james27613
Topic: 41581 Message: 41585

hi Rick,

I added the rca pigtail to the cable that came with
my used tv-506, center pin to pin #5 on the transverter
plug and shield on rca cable to pin #12 on the plug.

I just disconnect the pigtail and put a short piece of
tubing over the end so it don't short out on anything
when I use the tv-506.

the cables are identical except for the 2m pigtail.

I used some thin coax and an old serial cable to make up
the cables.

I have the 12 pin connectors on ebay, search for kenwood transverter.

73 james ke4drn

41586. Re: Liquidating my Kenwood Station Equipment.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-05 15:32:57 UTC
From: w5djahf40
Topic: 41533 Message: 41586

Hi Tom;
Am interested in the speaker if not spoken for already. Please advise and you asking for.
Tks Don/w5dja@...

--- In TS-520_820_530_830@yahoogroups.com, Ted Wright <n3zrx@...> wrote:
>
> Hi Tom
> How much for the speaker ??
> ted n3zrx
> sceneryguru wrote:
> >
> > Good Morning Group:
> >
> > If you saw my earlier post, you are aware that I am in the process of
> > liquidating my Kenwood station equipment. To those members who took
> > advantage of my offer to sale... Thank You!. And to the entire Group,
> > Thank You for indulging me.
> >
> > The following units are unspoken for and are destined to go to auction
> > this evening, Thursday, March 28, 2013. This is the equivalent of a
> > "Last-Call."
> >
> > Kenwood AT-230 antenna tuner 7.2 x 5.3 x 11.5 inches 7.5 lbs.
> > The Kenwood AT-230 antenna tuner covers the 9 amateur bands from 1.8
> > to 30 MHz. Through power is 200 watts maximum. It has power scales for
> > 20 and 200 watts. Rear panel jacks: Input is SO-239 [UHF]. Antenna
> > Output 1 is SO-239 [UHF], Antenna Output 2 is SO-239 [UHF], Antenna
> > Output 3 is wire connection and ground. The AT-230 is compatible with
> > the TS-520/30S series and TS-820/30S series.
> > "Quite possibly one of the best small tuners ever made"
> >
> > Kenwood SP-230 external speaker 7.2 x 5.3 x 11.5 inches 4.0 lbs.
> > features filtration. There is a switch on the front panel to select
> > input A or B. The headphone jack on the front panel is
> > post-filtration. 8 ohms maximum input 2 watts. Compatible with all
> > Kenwood models.
> >
> > Kenwood TS-820S Amateur HF Transceiver 13.3 x 6 x 14 inches 35.2 lbs.
> > is designed for SSB and CW modes in the 160 through 10 meter ham
> > bands. It also features receive of WWV at 15 MHz. Power input is 200W
> > PEP SSB and 160W DC CW. (This transceiver does not have general
> > coverage receive). The TS-820S can transceive with the Kenwood R-820
> > receiver.
> >
> > tnx es 73 / 76

> >
> > Tom G, Sr.
> > K3SSB
> >
> >
> >
> > No virus found in this message.
> > Checked by AVG - www.avg.com <http://www.avg.com>
> > Version: 2013.0.3267 / Virus Database: 3161/6209 - Release Date: 03/27/13
> >
>
>
>
>
> -----
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> Checked by AVG - www.avg.com
> Version: 2013.0.3267 / Virus Database: 3161/6215 - Release Date: 03/30/13
>
> [Non-text portions of this message have been removed]
>

41587. DC out connector for DG-5

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-05 17:48:12 UTC
From: n3kvl
Topic: 41587 Message: 41587

Hi All,

I need a source for the DC out connector for my TS-520S.

And a recommendation on a good solder RCA connector source.

Thanks

41588. Re: DC out connector for DG-5

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-06 13:25:36 UTC
From: Bob
Topic: 41587 Message: 41588

I have a good DG-5 connector for the 520S...
2-pin with the screws...
Sell for $6.00 plus $2.00 postage...
Bob
****

--- In TS-520_820_530_830@yahoogroups.com, "n3kvl" <n3kvl@...> wrote:
>
> Hi All,
>
> I need a source for the DC out connector for my TS-520S.
>
> And a recommendation on a good solder RCA connector source.
>
> Thanks
>

41589. Re: DC out connector for DG-5

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-06 13:54:47 UTC
From: grc1939
Topic: 41587 Message: 41589

The power cord from an old Remington electric shaver works perfectly. Be sure to observe polarity.

--- In TS-520_820_530_830@yahoogroups.com, "Bob" <ke5ftf@...> wrote:
>
> I have a good DG-5 connector for the 520S...
> 2-pin with the screws...
> Sell for $6.00 plus $2.00 postage...
> Bob
> **********
>
> --- In TS-520_820_530_830@yahoogroups.com, "n3kvl" <n3kvl@> wrote:
> >
> > Hi All,
> >
> > I need a source for the DC out connector for my TS-520S.
> >
> > And a recommendation on a good solder RCA connector source.
> >
> > Thanks
> >
>

41590. Re: Liquidating my Kenwood Station Equipment.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-06 11:25:16 UTC
From: Nick
Topic: 41533 Message: 41590

Tom
I am interested in the AT-230.
How much are you asking for it?
Nick KJ4SBO

41591. Re: Neutralization of the finals in the TS830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-06 14:24:50 UTC
From: hpdd709
Topic: 41591 Message: 41591

Hello Folks,

I know what neutralization is and what this is attempting to accomplish.

I just brought a TS830 back to life with recaping the power supply and so forth along with recaping the RF final cage. Radio works great with outstanding reports on audio quality and with Rf output @ 115 Watts with a new 12BY7A driver and new 6146B tubes.
On the subject of neutralization of the 6146B tubes when replaced. With reference to the Kenwood instruction manual and using a RF volt meter, of which I don't have, Plan B is to use external receiver, both the TX and RX tuned to 28.5 mhz using a dummy load on the transmitter and the SG switch in the On position and adjusting the TC-1 control - I can't get a minimum S meter reading on the external receiver - in fact - no change at all.
So what I did while adjusting the TC-1 control - monitored the output and saw an increase in power of about 1 - 2 watts.
As mentioned, the radio works as it is supposed to and love the older technology as I am also old.

Any suggestions would be greatly appreciated, love the hobby as I do and all the operators.

73,

Mike George K3MG

41592. Re: [TS-520_820_530_830] Re: DC out connector for DG-5

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-06 14:41:37 UTC
From: Alvin Chipmunk
Topic: 41587 Message: 41592

Hello Bob,

Ok. Sounds good. Paypal ok and is it the actual connector?

Archie
(N3KVL)

From: Bob <ke5ftf@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, April 6, 2013 9:25 AM
Subject: [TS-520_820_530_830] Re: DC out connector for DG-5

I have a good DG-5 connector for the 520S...
2-pin with the screws...
Sell for $6.00 plus $2.00 postage...
Bob
****

--- In TS-520_820_530_830@yahoogroups.com, "n3kvl" <n3kvl@...> wrote:
>
> Hi All,
>
> I need a source for the DC out connector for my TS-520S.
>
> And a recommendation on a good solder RCA connector source.
>
> Thanks
>

[Non-text portions of this message have been removed]

41593. Re: [TS-520_820_530_830] Re: Neutralization of the finals in the TS830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-06 18:15:45 UTC
From: Joseph Stiles
Topic: 41591 Message: 41593

Mike,

Congrats on your accomplisment so far. I have not been successful using the secondary receiver method either.

If I may suggest: buy orbuild a simple RF probe for use with a DMM...or obtain an old fashioned VTVM and build a probe for that..you
will be glad you did as, it's/their use is needed for various alignment steps and, is just handy to have around Some guys use o'scopes.

I am not positive but, I do not think you will be able to observe a "null" using the procedure you described. The "SG" switch should be OFF. Also, how far apart
is the second receiver and the rig under test? You may have to move it closer. For this step, I built a simple "dummy load" out of a single 1 watt non inductive resistor
wired to a PL-259 plug and use a test lead with two "mini-grabbers, the RF probe is built into one of the "grabbers."

You can build an RF probe for less than $1.00 - $2.00 not counting housing.(old pens are free.) There are numerous plans out there

73 Joe
WB7UQU

From: hpdd709 <hpdd709@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, April 6, 2013 7:24 AM
Subject: [TS-520_820_530_830] Re: Neutralization of the finals in the TS830

Hello Folks,

I know what neutralization is and what this is attempting to accomplish.

I just brought a TS830 back to life with recaping the power supply and so forth along with recaping the RF final cage. Radio works great with outstanding reports on audio quality and with Rf output @ 115 Watts with a new 12BY7A driver and new 6146B tubes.
On the subject of neutralization of the 6146B tubes when replaced. With reference to the Kenwood instruction manual and using a RF volt meter, of which I don't have, Plan B is to use external receiver, both the TX and RX tuned to 28.5 mhz using a dummy load on the transmitter and the SG switch in the On position and adjusting the TC-1 control - I can't get a minimum S meter reading on the external receiver - in fact - no change at all.
So what I did while adjusting the TC-1 control - monitored the output and saw an increase in power of about 1 - 2 watts.
As mentioned, the radio works as it is supposed to and love the older technology as I am also old.

Any suggestions would be greatly appreciated, love the hobby as I do and all the operators.

73,

Mike George K3MG

[Non-text portions of this message have been removed]

41594. In need of RF board X44-1360-00

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-06 18:21:16 UTC
From: bbrummans
Topic: 41594 Message: 41594

Hello everyone,

I'm in need of an RF board for my KW Hybrid.
Board # X44-1360-00.

Both the TS-530 and TS-830 have these. If you have one available please e-mail me at BBrummans@...

Shipping would be to 49417 and my preferred payment method is Paypal.

73
Bart
KB8BAB

41595. Re: DG-5 Replacement

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-06 18:32:41 UTC
From: jpnast2004
Topic: 33931 Message: 41595

I too would be interested in 2 of these red LED segments version. I have two defunct DG-5 waiting to come back to life...

I have been using the C520 (http://www.aade.com/C520/C520.htm) for the past 6 years and it has worked well. But would prefer a more "original" version with my Kenwoods.

-Jeff
KC0MKS

--- In TS-520_820_530_830@yahoogroups.com, Bob <bob4analog@...> wrote:
>
>
> It'll be interesting to see Tim's development when he gets it done...keep us posted.
>
> 73,
>
> Bob, KD5MHQ
>
> --- On Fri, 6/22/12, lu8eq <gperazzoli@...> wrote:
>
> Hello Charlie, I've seen before aade dfd frequency counters on the web and read good reviews like yours and Bob's.
>
> I am actually interested in Tim's development because I have a broken DG5 counter, and would like to resurrect it.
>
> 73 de Guido, LU8EQ
>

41596. Re: In need of RF board X44-1360-00

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-06 18:29:07 UTC
From: Michael George
Topic: 41594 Message: 41596

Hi Bart,

If you can't get a RF board locally so too speak. You might try the web page: hifissb.com This group is from the UK and I just recently ordered out an audio board for a TS830 that went up in smoke. These folks deal in surplus radio equipment boards and so.

Hope this helps.

Mike/K3MG

[Non-text portions of this message have been removed]

41597. Re: [TS-520_820_530_830] Re: Liquidating my Kenwood Station Equipment.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-06 20:33:38 UTC
From: Mark Gilger
Topic: 41533 Message: 41597

Nick,
If your still searching for an AT-230, I have one that I'll be selling.
Mark, WB0IQK

At 07:25 AM 4/6/2013, Nick wrote:
>
>
>Tom
>I am interested in the AT-230.
>How much are you asking for it?
>Nick KJ4SBO
>
>

[Non-text portions of this message have been removed]

41598. Re: DC out connector for DG-5

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-06 23:01:25 UTC
From: Bob
Topic: 41587 Message: 41598

Just to make sure we are on the same page...
I have the 2-pin male socket that is mounted on the back panel....
Just email me at.... ke5ftf at mail.com
Bob
****

--- In TS-520_820_530_830@yahoogroups.com, Alvin Chipmunk <n3kvl@...> wrote:
>
> Hello Bob,
>
> Ok. Â Sounds good. Â Paypal ok and is it the actual connector?
>
> Archie
> (N3KVL)
>
>
> _____
> From: Bob <ke5ftf@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Saturday, April 6, 2013 9:25 AM
> Subject: [TS-520_820_530_830] Re: DC out connector for DG-5
>
>
> Â
> I have a good DG-5 connector for the 520S...
> 2-pin with the screws...
> Sell for $6.00 plus $2.00 postage...
> Bob
> **********
>
> --- In TS-520_820_530_830@yahoogroups.com, "n3kvl" <n3kvl@> wrote:
> >
> > Hi All,
> >
> > I need a source for the DC out connector for my TS-520S.
> >
> > And a recommendation on a good solder RCA connector source.
> >
> > Thanks
> >
>
>
>
>
> [Non-text portions of this message have been removed]

>

41599. RE: [TS-520_820_530_830] In need of RF board X44-1360-00

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-06 22:02:48 UTC
From: fpath fpath
Topic: 41594 Message: 41599

Bart,

Give Bob KE5FTF a try, I was put on to him from a couple of members on this forum. I've found him to be good on price, quality and speed on getting purchases out.

73's
Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: cocobean64@...
Date: Sat, 6 Apr 2013 18:21:16 +0000
Subject: [TS-520_820_530_830] In need of RF board X44-1360-00

Hello everyone,

I'm in need of an RF board for my KW Hybrid.
Board # X44-1360-00.

Both the TS-530 and TS-830 have these. If you have one available please e-mail me at BBrummans@...

Shipping would be to 49417 and my preferred payment method is Paypal.

73
Bart
KB8BAB

[Non-text portions of this message have been removed]

41600. TS-530S & SM-220

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-07 00:08:35 UTC
From: WL
Topic: 41600 Message: 41600

Gentlemen,
Question: Is it possible to connect the SM-220 with a TS-530S so that the band scope function can be utilized?
Respectfully,
Butch Lewis
KØPSA

41601. Re: In need of RF board X44-1360-00

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-07 01:35:37 UTC
From: bartbrummans
Topic: 41594 Message: 41601

I did already Dave, unfortunately he's out of stock :(
But thanks for the tip.
73
Bart
KB8BAB

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
> Bart,
>
> Give Bob KE5FTF a try, I was put on to him from a couple of members on this forum. I've found him to be good on price, quality and speed on getting purchases out.
>
> 73's
> Dave
> VK5PDL
>
>
>
>
> To: TS-520_820_530_830@yahoogroups.com
> From: cocobean64@...
> Date: Sat, 6 Apr 2013 18:21:16 +0000
> Subject: [TS-520_820_530_830] In need of RF board X44-1360-00
>
>
>
>
>
> Hello everyone,
>
> I'm in need of an RF board for my KW Hybrid.
> Board # X44-1360-00.
>
> Both the TS-530 and TS-830 have these. If you have one available please e-mail me at BBrummans@...
>
> Shipping would be to 49417 and my preferred payment method is Paypal.
>
> 73
> Bart
> KB8BAB
>
>
>

>
>
>
> [Non-text portions of this message have been removed]
>

41602. RE: [TS-520_820_530_830] TS-530S & SM-220

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-07 01:31:17 UTC
From: fpath fpath
Topic: 41600 Message: 41602

Butch,

It can be done, I have done it to both of my 530's and just removed it from both only due to other issues I had to find and correct, that wasn't related to the IF ports. The pan display works well, but it does tend to desensitize the radio by about 6db, my sensitivity increase by 6db when I uninstalled the mod without undertaking the RF board alignment procedure. When installing the IF2 port (to monitor incoming audio\CW patterns) the display is distorted. A good friend of mine is helping me with another issue at the moment and once this has been sorted will be trying out a new take off point for the IF ports thzt he has worked out. The modification is for the 8.803MHz reference (BS8).

73's
Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: nscb56a@...
Date: Sun, 7 Apr 2013 00:08:35 +0000
Subject: [TS-520_820_530_830] TS-530S & SM-220

Gentlemen,
Question: Is it possible to connect the SM-220 with a TS-530S so that the band scope function can be utilized?
Respectfully,
Butch Lewis
K?PSA

[Non-text portions of this message have been removed]

41603. Re: In need of RF board X44-1360-00

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-07 16:51:11 UTC
From: bartbrummans
Topic: 41594 Message: 41603

Mike,

Thanks, I looked on their site, did not see anything, but dropped them a note anyway.

Bart/KB8BAB

--- In TS-520_820_530_830@yahoogroups.com, Michael George <hpdd709@...> wrote:
>
> Hi Bart,
>
> If you can't get a RF board locally so too speak. You might try the web
> page: hifissb.com This group is from the UK and I just recently ordered out
> an audio board for a TS830 that went up in smoke. These folks deal in
> surplus radio equipment boards and so.
>
> Hope this helps.
>
> Mike/K3MG
>
>
> [Non-text portions of this message have been removed]
>

41604. KENWOOD HYBRID USER NET (April 7th, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-07 18:29:54 UTC
From: mvgilger
Topic: 41604 Message: 41604

The Saturday's net on 40 meter we had 16 stations checking with good band conditions. There were 2 new stations checking in. Out of those, there was:

2 running TS-520(x)
1 running TS-530(x)
4 running TS-820(x)
1 running TS-830S

I was running my TS-940s. The rest were running non hybrids of one model or another.

The Sunday's net on 20 meter we had 9 stations checking in under very poor band conditions. We had 1 new check-in, WB4ODM

Out of those, there was:

4 running TS-520(x)
0 running TS-530(x)
2 running TS-820(x)
3 running TS-830S

I was running my TS-940s. The rest were running non hybrids of one model or another.

We have been having several people checking in regularly with their TS-430, TS-440, and TS-940's, which of course is not a hybrid, although over 30+ years old. Everyone is welcome as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a net control station, please send me an email. Currently it's just myself, WB2KNR and WB0SGA. I would like to get several more. If we do, we can alternate so everyone might be on a 3-4 week rotation. It's a lot of fun and a good way to make sure you station is optimized.

For anyone that has not heard, we have a new web site that WB4HFN is hosting. He currently has a very nice site for Drake, Collins and Heathkit and now Kenwood Hybrids. Good quality manuals plus sale flyers and brochures will be found here, along with user supplied information for all Hybrids.

His URL is:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754 check-ins, Sunday total 563 check-ins

November 2012, Saturday's, net total = 47, Sundays total = 20
December 2012, Saturday's, net total = 74, Sunday's total = 70
January 2013, Saturday's, net total = 93, Sunday's total = 87
February 2013, Saturday's net total = 103, Sundays total = 87
March 2013, Saturday's, net total = 112, Sunday's total =39

April 2013, Saturday's net total = 16, Sunday's total = 9 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

41605. where can i purchase 820S digital display X54-1310-00

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-07 21:53:33 UTC
From: james_b123
Topic: 41605 Message: 41605

hi - I have an 820S and after cleaning the vfo, one digit in my digital display stopped working - part number X54-1310-00
I assume the tube is gone - does anyone know where I can purchase one ?
thanks
James

41606. replacement cord for sp-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-07 14:23:17 UTC
From: vbslim@ymail.com
Topic: 41606 Message: 41606

Anyone have any idea on resources where I could find or make a replacement cord for the SP-520?

Thanks

41608. TS 520 problems

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-08 07:04:18 UTC
From: bgolpmp
Topic: 41608 Message: 41608

OK I am getting s little lost in this rig. I received a ts 520 to use as long as I want to but I have to get it running. He told me there was a mod done to make it run on am. I think I am close and maybe my problems are all linked.

I have nothing coming out of the speaker when I put the rig into cw mode. I can send a cw carrier but I have to have the rec/send switch in the send mode.

When I am on USB/LSB all I get of the speaker is white noise on all bands.

If I press the WWV button then I can hear the time, airplane weather reports and some cw. The s meter actually moves!

I tuned the rig on a dummy load and get 100+ watts out on 80, 40, and 20 but only get about 50 out on 15 and a little less than that on 10.

I really want to get this on the air and do some cw work!!!!

Thanks

Andy

41609. Re: where can i purchase 820S digital display X54-1310-00

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-08 19:45:33 UTC
From: bartbrummans
Topic: 41605 Message: 41609

Try Bob Mansker ..ke5ftf

He stocks quite a few parts for the kenwood Hybrids....

KE5FTF@...

73
Bart
KB8BAB

--- In TS-520_820_530_830@yahoogroups.com, "james_b123" <james_b123@...> wrote:
>
> hi - I have an 820S and after cleaning the vfo, one digit in my digital display stopped working - part number X54-1310-00
> I assume the tube is gone - does anyone know where I can purchase one ?
> thanks
> James
>

41610. Re: TS 520 problems

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-08 19:57:22 UTC
From: roberteleazer@rocketmail.com
Topic: 41608 Message: 41610

Andy:

The good news is that a common problem with the TS-520 is that when you switch on WWV the switch does not come back all the way when you switch off, leaving the rest of the bands seemingly inoperative in receive. So try putting a little (teeny tiny), CRC QD Electronic Cleaner, LPS-1, or Deoxit on that switch and work it back and forth (DO NOT USE WD-40, LIQUID WRENCH, PB BLASTER, or CRC LECTO MOTIVE CLEANER!)

The bad news is that "mod done to make it work on AM" probably means it has been converted for CB use and that entails some changes to the IF board and other boards.

So try cleaning the WWV swicth frist and see what that does for you.

Lower output on 10M is not uncommon.

Good Luck!

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "bgolpmp" <amckenna1@...> wrote:
>
> OK I am getting s little lost in this rig. I received a ts 520 to use as long as I want to but I have to get it running. He told me there was a mod done to make it run on am. I think I am close and maybe my problems are all linked.
>
> I have nothing coming out of the speaker when I put the rig into cw mode. I can send a cw carrier but I have to have the rec/send switch in the send mode.
>
> When I am on USB/LSB all I get of the speaker is white noise on all bands.
>
> If I press the WWV button then I can hear the time, airplane weather reports and some cw. The s meter actually moves!
>
> I tuned the rig on a dummy load and get 100+ watts out on 80, 40, and 20 but only get about 50 out on 15 and a little less than that on 10.
>
> I really want to get this on the air and do some cw work!!!!
>
> Thanks
>
> Andy
>

41611. TS-520S Cathode and Screen Resistors

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-08 19:38:22 UTC
From: n7bes
Topic: 41611 Message: 41611

This is my first post so please bear with me, I did some searching through the previous threads here and couldn't easily find exactly what I was looking for.

I have a TS-520S that is not putting out what it is supposed to (only getting about 40 watts out). After a bit of digging found that the final cathode and screen resistors were cracked/blown. I bought one of the resister kits from one of the hybrid repair guys for the common final resistors that get burned out when someone goofs up (prior owner ran full power with bad coax... couldn't figure out why he kept popping fuses until he found the bad coax). So I now have 2 questions....

1. I was able to easily replace the 10 ohm and 100 ohm cathode and screen resistors. The resistor kit I got also comes with a 470 ohm 1W 5% resistor. After looking over the final as well as the schematics, I am not sure where this is supposed to go. Can anyone shed some light on where this resister is intended to go?

2. After replacing the 10 and 100 ohm resistors (and a proper tune) I am still only getting 40-50 watts into a 50 ohm dummy load. After further review I am finding mention that if the resistors are blown that it may be necessary to replace C7, C8, and L1 in the final as well, so I have ordered a kit with these 3 parts from the same vendor. So the question is is this the best next course of action? Anything else I should be replacing? (already have a fresh set of tubes in) If this doesn't work what is the next step? full re-cap? or?

Thank you,
Bryan
N7BES

41613. Re: TS 520 problems

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-08 20:33:50 UTC
From: bgolpmp
Topic: 41608 Message: 41613

Robert

Thanks for the reply and I will try that tonight. Is there anywhere I can find out what someone could have done to get the am mod to this rig?? I have spent the last few days on Google looking for answers but have not been able to come across any answers on how the cb mod is done: Some people say just replace a few crystals and others say it is a big job to get it done.
I would like to try and work it backwards as I believe I have most of the shings at least the easy ones done. I have spent hours looking at the schematic and should know this rig inside and out when I am done!!!!

Thanks
73's
Andy n9zga

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> Andy:
>
> The good news is that a common problem with the TS-520 is that when you switch on WWV the switch does not come back all the way when you switch off, leaving the rest of the bands seemingly inoperative in receive. So try putting a little (teeny tiny), CRC QD Electronic Cleaner, LPS-1, or Deoxit on that switch and work it back and forth (DO NOT USE WD-40, LIQUID WRENCH, PB BLASTER, or CRC LECTO MOTIVE CLEANER!)
>
> The bad news is that "mod done to make it work on AM" probably means it has been converted for CB use and that entails some changes to the IF board and other boards.
>
> So try cleaning the WWV swicth frist and see what that does for you.
>
> Lower output on 10M is not uncommon.
>
> Good Luck!
>
> Robert
> WB5WSV
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "bgolpmp" <amckenna1@> wrote:
> >
> > OK I am getting s little lost in this rig. I received a ts 520 to use as long as I want to but I have to get it running. He told me there was a mod done to make it run on am. I think I am close and maybe my problems are all linked.
> >
> > I have nothing coming out of the speaker when I put the rig into cw mode. I can send a

cw carrier but I have to have the rec/send switch in the send mode.
> >
> > When I am on USB/LSB all I get of the speaker is white noise on all bands.
> >
> > If I press the WWV button then I can hear the time, airplane weather reports and some cw. The s meter actually moves!
> >
> > I tuned the rig on a dummy load and get 100+ watts out on 80, 40, and 20 but only get about 50 out on 15 and a little less than that on 10.
> >
> > I really want to get this on the air and do some cw work!!!!
> >
> > Thanks
> >
> > Andy
> >
>

41614. Re: [TS-520_820_530_830] TS-520S Cathode and Screen Resistors

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-08 21:06:42 UTC
From: John Donnelly
Topic: 41611 Message: 41614

It's on the audio board

Jack Donnelly KV4JX
Ball Ground Video Productions
308 Calusa Place

Ball Ground, GA 30107
Phone 678-592-9974www.ballgroundvideo.com

From: n7bes <bryanthegoon@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, April 8, 2013 3:38 PM
Subject: [TS-520_820_530_830] TS-520S Cathode and Screen Resistors

This is my first post so please bear with me, I did some searching through the previous threads here and couldn't easily find exactly what I was looking for.

I have a TS-520S that is not putting out what it is supposed to (only getting about 40 watts out). After a bit of digging found that the final cathode and screen resistors were cracked/blown. I bought one of the resister kits from one of the hybrid repair guys for the common final resistors that get burned out when someone goofs up (prior owner ran full power with bad coax... couldn't figure out why he kept popping fuses until he found the bad coax). So I now have 2 questions....

1. I was able to easily replace the 10 ohm and 100 ohm cathode and screen resistors. The resistor kit I got also comes with a 470 ohm 1W 5% resistor. After looking over the final as well as the schematics, I am not sure where this is supposed to go. Can anyone shed some light on where this resister is intended to go?

2. After replacing the 10 and 100 ohm resistors (and a proper tune) I am still only getting 40-50 watts into a 50 ohm dummy load. After further review I am finding mention that if the resistors are blown that it may be necessary to replace C7, C8, and L1 in the final as well, so I have ordered a kit with these 3 parts from the same vendor. So the question is is this the best next course of action? Anything else I should be replacing? (already have a fresh set of tubes in) If this doesn't work what is the next step? full re-cap? or?

Thank you,
Bryan
N7BES

[Non-text portions of this message have been removed]

41615. DK-520 adapter value

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-08 22:18:24 UTC
From: kevin
Topic: 41615 Message: 41615

Does anyone have an idea how much a DK-520 Adapter for the DG-5 digital display is worth?

I am selling a DG-5 on EBay and have the DK-520 on a non working TS-520 that I am also considering selling. One of my bidders is inquiring about buying just the adapter and I am clueless as to it's value.

41616. Re: [TS-520_820_530_830] TS-520S Cathode and Screen Resistors

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-08 23:03:21 UTC
From: Joseph Stiles
Topic: 41611 Message: 41616

Bryan,

  It is either R-5 or R-6, can't remember which, on the RECTIFIER BOARD. I suggest "metering" them out first. If within specs..you can leave them alone...unless you just have to replace them.

Replacement of C-7, C-8, and/or L-1 is NOT automatic if the aforementioned resistors have blown.

 I would first: obtain KNOWN good set of finals and driver tube. Then re-run your tune-up procedure. Those parts can take quite a bit of punishment.
Testing final amplifier tubes in a "tubes tester" will show you if it is shorted...etc..etc....but it will NOT tell you if it will properly function in the "real RF environment."
That's one reason to stay with factory specs for wattage on the screen and cathode resistors...they blow first!
The previous "owner" may have "adjusted" some of the coils. Check the ""basic" alignment in the operators manual, including "neutralization."
Check your HV (high voltage). you can do this via the front panel meter. put meter select switch to "HV" flip send switch to SEND, read meter.
You should see 850 to 900+ volts, much less indicates a possible failure of one or both HV caps.
When properly tuned up for "full power,"...you should see about 800 volts, Ip of approx 225 and about 100 or so watts (if watt meter used.)

I won't get into the re-cap vs not to re-cap issue

73 Joe
WB7UQU

From: n7bes <bryanthegoon@...m>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, April 8, 2013 12:38 PM
Subject: [TS-520_820_530_830] TS-520S Cathode and Screen Resistors

This is my first post so please bear with me, I did some searching through the previous threads here and couldn't easily find exactly what I was looking for.

I have a TS-520S that is not putting out what it is supposed to (only getting about 40 watts out). After a bit of digging found that the final cathode and screen resistors were cracked/blown. I bought one of the resister kits from one of the hybrid repair guys for the common final resistors that get burned out when someone goofs up (prior owner ran full power with bad coax... couldn't figure out why he kept popping fuses until he found the bad coax). So I now have 2 questions....

1. I was able to easily replace the 10 ohm and 100 ohm cathode and screen resistors. The resistor kit I got also comes with a 470 ohm 1W 5% resistor. After looking over the final as well as the schematics, I am not sure where this is supposed to go. Can anyone shed some light on where this resister is intended to go?

2. After replacing the 10 and 100 ohm resistors (and a proper tune) I am still only getting 40-50 watts into a 50 ohm dummy load. After further review I am finding mention that if the resistors are blown that it may be necessary to replace C7, C8, and L1 in the final as well, so I have ordered a kit with these 3 parts from the same vendor. So the question is is this the best next course of action? Anything else I should be replacing? (already have a fresh set of tubes in) If this doesn't work what is the next step? full re-cap? or?

Thank you,
Bryan
N7BES

[Non-text portions of this message have been removed]

41617. WTB: VFO for 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-09 00:46:35 UTC
From: Jeff Blaine
Topic: 41617 Message: 41617

If you have a VFO that needs to find a new home, please contact me directly.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

[Non-text portions of this message have been removed]

41618. Re: TS-520S Cathode and Screen Resistors

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-09 02:03:48 UTC
From: w5rkl
Topic: 41611 Message: 41618

Bryan,

What steps have you taken that makes you think you should replace C7, C8, and L1? What evidence have you found that identify those 3 components as the source of your low RF output problem?

Have you checked the 520's alignment using the service manual? Are the driver and final tubes good? Do you have a spare know good driver and pair of final tubes you can swap to verify it's not the tubes? Have you checked the Rectifier Unit's voltages to ensure they are correct?

Those steps should be taken FIRST before ANY COMPONENT(S) is/are replaced!

73
Mike

--- In TS-520_820_530_830@yahoogroups.com, "n7bes" <bryanthegoon@...> wrote:
>
> This is my first post so please bear with me, I did some searching through the previous threads here and couldn't easily find exactly what I was looking for.
>
> I have a TS-520S that is not putting out what it is supposed to (only getting about 40 watts out). After a bit of digging found that the final cathode and screen resistors were cracked/blown. I bought one of the resister kits from one of the hybrid repair guys for the common final resistors that get burned out when someone goofs up (prior owner ran full power with bad coax... couldn't figure out why he kept popping fuses until he found the bad coax). So I now have 2 questions....
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>
>
> Thank you,
> Bryan
> N7BES
>

41619. Re: [TS-520_820_530_830] DK-520 adapter value

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-09 02:41:01 UTC
From: Jim Lamanteer
Topic: 41615 Message: 41619

I WILL OFFER U $35.00 FOR IT I KNOW U CAN BUILD THEM FAIRLY CHEAP. I DONT KNOW HOW MUCH IN DEMAND THEY ARE BUT I COULD USE IT. IF THIS SOUNDS OK TO U PLEASE LET ME KNOW. THANKS JIMMY.

From: kevin <kmx888@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, April 8, 2013 6:18 PM
Subject: [TS-520_820_530_830] DK-520 adapter value

Does anyone have an idea how much a DK-520 Adapter for the DG-5 digital display is worth?

I am selling a DG-5 on EBay and have the DK-520 on a non working TS-520 that I am also considering selling. One of my bidders is inquiring about buying just the adapter and I am clueless as to it's value.

[Non-text portions of this message have been removed]

41621. Re: [TS-520_820_530_830] DK-520 adapter value

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-09 04:21:43 UTC
From: Jim Lamanteer
Topic: 41615 Message: 41621

KEVIN WHAT ARE U LOOKING TO GET FOR THE NONWORKING 520 MAYBE WE CAN STRIKE UP A DEAL FOR ALL??? JIMMY.WB2KNR

From: kevin <kmx888@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, April 8, 2013 6:18 PM
Subject: [TS-520_820_530_830] DK-520 adapter value

Does anyone have an idea how much a DK-520 Adapter for the DG-5 digital display is worth?

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[Non-text portions of this message have been removed]

41622. Re: [TS-520_820_530_830] Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-09 06:09:56 UTC
From: Alan Riley
Topic: 41132 Message: 41622

Tyler, I really haven't been able to come up with anything specific from looking over the TS-520SE schematic. I think I would next compare the power supply voltages leaving the FIX CH AVR unit under both normal conditions and when the rig is acting up.

Obviously there are many points on the boards themselves where DC voltages could be measured and compared either with voltages measured under normal conditions or with the schematic values but if you could get your hands on an oscilloscope it would make locating the problem a lot easier. Whatever is causing your receive problem is also causing your transmit problem.

I am still leaning toward a bad connection somewhere in the shared circuitry. If there are any socketed components, wiggle them gently. Press lightly on soldered components.

Alan, KD5R

From: tfrugia81
Sent: Tuesday, April 02, 2013 9:56 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: ts520se sidetone question

Hi Alan,

Over the past month or so I have fooled with the TS-520se trying to pin down this issue. I've poked and wiggled all of the connections and terminals on the RF, IF and generator boards. I've actually poked just about every one in the entire unit, but nothing seems to make a difference. After a random amount of time everything just goes back to normal, and then after a short time it starts doing it again.

It seems to be doing it more frequent now. I'm nervous to event attempt a qso on it. Can you think of any other things I should look for?

One other clue, when this is happening if I turn the RF gain fully CCW, the meter only goes up to around 1/3 of the full meter (http://content.screencast.com/users/Tyler81/folders/Jing/media/1253a282-fe21-4f48-8288-0b171fd729b1/00000812.png). When the problem stops (I can send/receive again) the meter peaks when I turn the RF gain all of the way CCW.

Thanks for any help,

Tyler
k7fru

--- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley" <arr44@...> wrote:
>
> This problem could be a little harder to track down. If you havenâ☐☐t done
> so already, make sure all board mounting screws are tight â☐" loosen them
> up a little first and then retighten. If you have a quality spray contact
> cleaner such as DeoxIT D5, you could clean the MODE and FUNCTION

> switch contacts, followed by blowing them dry with compressed air, but
> I really donâ☐☐t think it is a switch contact issue.
>
> Since you have already found one bad solder connection, it is very possible
> that there may another one that is temperature sensitive causing this
> problem. It is affecting both the receive and transmit functions so that
> narrows it down a bit.
>
> I think I would concentrate on the RF, IF, and GENERATOR board connections.
> Using a hair dryer to warm each board a little might point you to the general
> area of the problem but you canâ☐☐t concentrate the heat well enough to really
> isolate the problem. Donâ☐☐t use a soldering iron for this since the rig will
> need to have power applied. ***The RF unit has dangerous voltages
> applied***.
>
> Using an insulated tool such as a wooden popsickle stick, gently wiggle
> the wires at the soldered connections with the rig powered up. There
> could also be an issue with a component lead not making reliable contact
> but check the wire connections to the terminals first.
>
> If this doesnâ☐☐t work, we will try something else. Also, there are other forum
> members with more experience on these rigs than I have, so feel free to
> jump in.
>
> 73,
> Alan, KD5R
>
> From: tfrugia81
> Sent: Friday, March 01, 2013 5:22 PM
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Subject: [TS-520_820_530_830] Re: ts520se sidetone question
>
>
> One more observation. When the receive is out, if I put the mode to TUNE and the function switch to VFO, I can hear white noise just as normal. Any other combination of MODE and FUNCTION cause it to have no receive.
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, "tfrugia81" wrote:
> >
> > I'm not sure why my reply to this didn't show last night, but for the record the KEY terminal was loose. Soldering it back together solved the sidetone issue. Thanks Alan!
> >
> > Regarding the loss of receive audio. When it happens if I tune to the 25 kHz calibrator I do not hear the tone. When the receive finally comes back I DO hear the tone, but while it's dropped out I do not hear it. I can still hear other stations in SSB, but I have to turn the volume up all of the way and even then it's barely audible.
> >
> > I also tried keying the microphone several times. I can hear the relays clicking but I do not get any RF output while this is happening. Once the receive comes back everything works normal again. I also tried cycling the receive antenna switch. It has something wedged in to keep it "up" all of the time. I will take that out and see if toggling the switch makes a difference.

> >
> > Oddly, once the radio has been on for a while this issue doesn't seem to happen at all. But it's really frustrating sometimes!
> >
> > Thanks again for your help,
> >
> >
> > Tyler
> > k7fru
> >
> >
> >
> > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley" wrote:
> > >
> > > Well, the video tells me you may have a bad TR relay causing the intermittent
> > > loss of receive audio. You can check for this by turning on the internal 25 kHz
> > > calibrator. If it is the TR relay, the signal from the internal calibrator will still
> > > be at itÃ¢Â□Â□s normal level even though the received signal off of the antenna has
> > > dropped out. Connect a microphone and key it briefly a few times and see if
> > > the signal from the antenna returns. In addition, exercise the external receive
> > > antenna switch on the rear of the rig since the receive signal path goes through
> > > it too.
> > >
> > > On the constant sidetone issue, look closely at all soldered connections in
> > > the sidetone circuit and especially any wire-wrap connections. You should
> > > be able to track down the problem there with your voltmeter. Also, make
> > > sure the board mounting screws are tight.
> > >
> > > 73,
> > > Alan, KD5R
> > >
> > >
> > >
> > > From: tfrugia81
> > > Sent: Tuesday, February 26, 2013 12:42 PM
> > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > Subject: [TS-520_820_530_830] Re: ts520se sidetone question
> > >
> > >
> > > Thanks again for the help. I will test this tonight.
> > >
> > > Here is an issue I'm having as well, could this be related? I would think not, but thought I'd send it anyway - http://www.youtube.com/watch?v=AAWdikZZt58
> > >
> > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley" wrote:
> > > >
> > > > Ok, good. The purpose of this Ã□Â¢Ã□Â□"63 vdc is to inhibit the sidetone oscillator
> > > > when your key contacts are open. It does this by reverse biasing diode D3,
> > > > thus turning it off and interrupting the feedback path necessary for Q6 to

> > > > oscillate.
> > > >
> > > > It appears that your Ã□Â¢Ã□Â□"63 volts is either not reaching the diode or else the
> > > > diode is shorted. A positive voltage of about +100 vdc enters the AF board
> > > > at the Ã□Â¢Ã□Â□Ã□Â□STBÃ□Â¢Ã□Â□Ã□Â□ terminal. This +100v and the voltage at the Ã□Â¢Ã□Â□Ã□Â□KEYÃ□Â¢Ã□Â□Ã□Â□ terminal
> > > > (-63v key up, 0v key down) are combined through resistors R35 and R36
> > > > such that D3 is forward biased when your key contacts are closed but
> > > > when the key contacts open, the Ã□Â¢Ã□Â□"63v Ã□Â¢Ã□Â□Ã□Â□overpowersÃ□Â¢Ã□Â□Ã□Â□ the positive voltage,
> > > > killing the oscillator.
> > > >
> > > > One other possibility would be for the R35 and/or R36 values to have changed
> > > > such that the negative voltage is not quite able to overcome the positive voltage.
> > > >
> > > > Measure the voltage at the anode of D3 under key up and key down conditions.
> > > > Also, if you are using an analog meter or a digital meter with a diode test
> > > > function, measure resistance both directions across D3 (be sure there is
> > > > no voltage present on the diode when you do this).
> > > >
> > > > Let us know what you find.
> > > >
> > > > 73,
> > > > Alan, KD5R
> > > >
> > > >
> > > > From: tfrugia81
> > > > Sent: Monday, February 25, 2013 8:20 PM
> > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > > Subject: [TS-520_820_530_830] Re: ts520se sidetone question
> > > >
> > > >
> > > > Got it, thank you for the clarification.
> > > >
> > > > I measured voltage at the KEY terminal on the AF board, and it indeed has -63ish volts DC with the key open. All of the connections on the AF board look ok to my naked eye. I traced the ones that I could easily follow and they seemed ok (using a meter to test continuity).
> > > >
> > > > I am very much new to these radios (and radio repair in general). Is there anything else I should be looking for? I appreciate your help!
> > > >
> > > > 73
> > > >
> > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley" wrote:
> > > > >
> > > > > Tyler, your TS-520SE wonÃ□Â□Ã□Â¢Ã□Â□Ã□Â□Ã□Â□Ã□Â□t have a FIX3-11, that is just the place I located
> > > > > the problem in my TS-820S. Sorry, I should have pointed that out.
> > > > >

> > > > > Your problem, however appears to be the same as mine was Ã□Â□Ã□Â¢Ã□Â□Ã□Â□" loss of cutoff
> > > > > voltage to the sidetone oscillator. The sidetone oscillator runs when the key
> > > > > is closed but it is cut off by a negative voltage applied when the key is open.
> > > > >
> > > > > In the TS-520SE, the sidetone oscillator is Q6 on the AF Unit (X49-008-01).
> > > > > The Ã□Â□Ã□Â¢Ã□Â□Ã□Â□Ã□Â□Ã□Â□KEYÃ□Â□Ã□Â¢Ã□Â□Ã□Â□Ã□Â□Ã□Â□ terminal on that board should have a negative voltage of about
> > > > > -65 vdc in the key-up condition (it should be the same as the open-circuit
> > > > > voltage across your key contacts). Check there to see if the negative voltage
> > > > > is present. I donÃ□Â□Ã□Â¢Ã□Â□Ã□Â□Ã□Â□Ã□Â□t know whether the TS-520SE uses a wire-wrap connection
> > > > > at that point or not but if it does, then I suspect you will find it to be the
> > > > > problem. If it is a bad wire-wrap connection, clean it good and solder it.
> > > > >
> > > > > If you donÃ□Â□Ã□Â¢Ã□Â□Ã□Â□Ã□Â□Ã□Â□t have the manuals for it, you can download them from GordonÃ□Â□Ã□Â¢Ã□Â□Ã□Â□Ã□Â□Ã□Â□s
> > > > > website as I just did (thanks, Gordon!).
> > > > >
> > > > > Let us know what you find.
> > > > >
> > > > > 73,
> > > > > Alan, KD5R
> > > > >
> > > > >
> > > > >
> > > > > From: Tyler Frugia
> > > > > Sent: Sunday, February 24, 2013 9:07 PM
> > > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > > > Subject: Re: [TS-520_820_530_830] ts520se sidetone question
> > > > >
> > > > >
> > > > > Hi Alan,
> > > > >
> > > > > Thanks for the email. Pardon my ignorance, but where would I find
> > > > > FIX3-11?
> > > > >
> > > > > I appreciate any help!
> > > > >
> > > > > 73,
> > > > >
> > > > > Tyler
> > > > > k7fru
> > > > >
> > > > > On Sun, Feb 24, 2013 at 6:52 PM, Alan Riley mailto:arr44%40suddenlink.net> wrote:
> > > > >
> > > > > > **
> > > > > >
> > > > > >
> > > > > > My TS-820S had the exact same problem when I bought it. I found the

> > > > > > problem to be a broken
> > > > > > contact on connector FIX3-11 not making connection to the pin on the pcb.
> > > > > >
> > > > > > > 73,
> > > > > > > Alan, KD5R
> > > > > >
> > > > > > > From: tfrugia81
> > > > > > > Sent: Saturday, February 23, 2013 11:09 PM
> > > > > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > > > > > Subject: [TS-520_820_530_830] ts520se sidetone question
> > > > > >
> > > > > >
> > > > > > > Hello all. I'm a new owner of a kenwood hybrid. I absolutely love it.
> > > > > >
> > > > > > > I searched the group to try and find an answer to my problem. There are
> > > > > > > many similar posts but not quite what I am experiencing.
> > > > > >
> > > > > > > If I have a key plugged in and switch to CW, I hear a constant sidetone.
> > > > > > > If I put the radio in "send" there is no RF output, but I hear the tone. If
> > > > > > > I press the key, it transmits as it should. The sidetone never stops until
> > > > > > > I unplug the key.
> > > > > >
> > > > > > > This is just a standard straight key on a mono plug. I even tried plugin
> > > > > > > in a plug with nothing attached and it does the same thing. Oddly enough,
> > > > > > > it randomly will work fine. Today I left the rig turned on in CW mode for
> > > > > > > about an hour. When I came back the tone was gone, but switching to "tune"
> > > > > > > and back to CW caused the sidetone to come on and remain on.
> > > > > >
> > > > > > > Any ideas? I took the case off and the plug is clean and looks brand new.
> > > > > >
> > > > > > > 73
> > > > > >
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41623. Re: TS-520S Cathode and Screen Resistors

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-09 05:49:55 UTC
From: n7bes
Topic: 41611 Message: 41623

Joe,

Thank you for the reply, I will check R-5 and R-6 on the Rectifier board the next time I crack the case open. The 4 resistors on the final board were definitely blown (physically cracked and out of spec on the meter) so they were replaced.

One thing that I forgot to mention (and part of what led me down the path of C-7,C-8,L-1) was that while tuning IP current fluctuates, once tuned it will start around 225 mA when I flip the send switch and then drop, over the matter of a couple seconds to 150 mA. Some information I had found online suggested that these may be the issue (especially if it is known that the resistors popped). Output power also fluctuates with the plate current.

I did replace the tubes (all 3) with what were supposed to be a "known good" set, but I have no way of truly confirming that, is there any way to confirm short of finding someone else local with a hybrid and talking them into giving the tubes a spin in their rig?

And I definitely stayed within factory spec for the resistors, I was aware that they are essentially sized to be fuses of a sort.

I will look into doing the alignment/neutralization procedure, I do know that the prior owner did not make those adjustments (prior owner is my grandfather).

On the HV reading, I am currently (after tune-up) getting 750 Volts on the meter when set to HV. Is this far enough off to suspect the HV caps?

Thank you again for taking the time to respond.

Thank you and 73s
Bryan
N7BES

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Bryan,
>
> Â It is either R-5 or R-6, can't remember which, on the RECTIFIER BOARD. I suggest "metering" them out first. If within specs..you can leave them alone...unless
> you just have to replace them.
>
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> Â I would first: obtain KNOWN good set of finals and driver tube. Then re-run your tune-up procedure. Those parts can take quite a bit of punishment.
> Testing final amplifier tubes in a "tubes tester" will show you if it is shorted...etc..etc....but it will NOT tell you if it will properly function in the
> "real RF environment."

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> You should see 850 to 900+ volts, much less indicates a possible failure of one or both HV caps.
> When properly tuned up for "full power,"...you should see about 800 volts, Ip of approx 225 and about 100 or so watts (if watt meter used.)
>
> I won't get into the re-cap vs not to re-cap issue
>
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: n7bes <bryanthegoon@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, April 8, 2013 12:38 PM
> Subject: [TS-520_820_530_830] TS-520S Cathode and Screen Resistors
>
>
> Â
> This is my first post so please bear with me, I did some searching through the previous threads here and couldn't easily find exactly what I was looking for.
>
> I have a TS-520S that is not putting out what it is supposed to (only getting about 40 watts out). After a bit of digging found that the final cathode and screen resistors were cracked/blown. I bought one of the resister kits from one of the hybrid repair guys for the common final resistors that get burned out when someone goofs up (prior owner ran full power with bad coax... couldn't figure out why he kept popping fuses until he found the bad coax). So I now have 2 questions....
>
> 1. I was able to easily replace the 10 ohm and 100 ohm cathode and screen resistors. The resistor kit I got also comes with a 470 ohm 1W 5% resistor. After looking over the final as well as the schematics, I am not sure where this is supposed to go. Can anyone shed some light on where this resister is intended to go?
>
> 2. After replacing the 10 and 100 ohm resistors (and a proper tune) I am still only getting 40-50 watts into a 50 ohm dummy load. After further review I am finding mention that if the resistors are blown that it may be necessary to replace C7, C8, and L1 in the final as well, so I have ordered a kit with these 3 parts from the same vendor. So the question is is this the best next course of action? Anything else I should be replacing? (already have a fresh set of tubes in) If this doesn't work what is the next step? full

re-cap? or?
>
> Thank you,
> Bryan
> N7BES
>
>
>
>
> [Non-text portions of this message have been removed]
>

41624. Re: TS-520S Cathode and Screen Resistors

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-09 06:08:10 UTC
From: n7bes
Topic: 41611 Message: 41624

Hi Mike,

Thank you for the response. I forgot to mention in the first email, what led me down the path of C7, C8, and L1 was that IP current fluctuates, once tuned it will start around 225 mA and then drop, over the matter of a couple seconds to 150 mA. Some information I had found online suggested that these 3 may be the issue (especially if it is known that the resistors popped which they physically did)

I will look into doing the alignment process. I have switched out the tubes with a set that is "supposedly" known good, but I have no way of confirming, I do get similar results with both tubes (the new set does get me 5-10 watts more than the old set did, so 50-60 watts instead of 40-50 watts)

I will also check the rectifier voltages.

Thank you and 73,
Bryan
N7BES

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Bryan,
>
> What steps have you taken that makes you think you should replace C7, C8, and L1? What evidence have you found that identify those 3 components as the source of your low RF output problem?
>
> Have you checked the 520's alignment using the service manual? Are the driver and final tubes good? Do you have a spare know good driver and pair of final tubes you can swap to verify it's not the tubes? Have you checked the Rectifier Unit's voltages to ensure they are correct?
>
> Those steps should be taken FIRST before ANY COMPONENT(S) is/are replaced!
>
> 73
> Mike
>
>
>
>
>
>
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "n7bes" <bryanthegoon@> wrote:

> >
> > This is my first post so please bear with me, I did some searching through the previous threads here and couldn't easily find exactly what I was looking for.
> >
> > I have a TS-520S that is not putting out what it is supposed to (only getting about 40 watts out). After a bit of digging found that the final cathode and screen resistors were cracked/blown. I bought one of the resister kits from one of the hybrid repair guys for the common final resistors that get burned out when someone goofs up (prior owner ran full power with bad coax... couldn't figure out why he kept popping fuses until he found the bad coax). So I now have 2 questions....
> >
> > 1. I was able to easily replace the 10 ohm and 100 ohm cathode and screen resistors. The resistor kit I got also comes with a 470 ohm 1W 5% resistor. After looking over the final as well as the schematics, I am not sure where this is supposed to go. Can anyone shed some light on where this resister is intended to go?
> >
> > 2. After replacing the 10 and 100 ohm resistors (and a proper tune) I am still only getting 40-50 watts into a 50 ohm dummy load. After further review I am finding mention that if the resistors are blown that it may be necessary to replace C7, C8, and L1 in the final as well, so I have ordered a kit with these 3 parts from the same vendor. So the question is is this the best next course of action? Anything else I should be replacing? (already have a fresh set of tubes in) If this doesn't work what is the next step? full re-cap? or?
> >
> >
> > Thank you,
> > Bryan
> > N7BES
> >
>

41625. Re: [TS-520_820_530_830] Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-09 15:39:34 UTC
From: Tyler Frugia
Topic: 41132 Message: 41625

Hi Mike and Alan,

Thanks for the help. So far I have checked RL1 and RL2, both are seated well and appear to be brand new (I did not attempt to clean them yet though).

With the help of another ham, I believe I have the problem pinpointed to a bad zener diode on the FIX-AVR board. I am picking up a replacement tonight and will hopefully have this problem resolved. If so I will let the group know the solution in case anyone else runs into the problem!

73!

-Tyler
k7fru

On Mon, Apr 8, 2013 at 11:09 PM, Alan Riley <arr44@...> wrote:

> **
>
>
> Tyler, I really haven’t been able to come up with anything specific from
> looking over the
> TS-520SE schematic. I think I would next compare the power supply voltages
> leaving the
> FIX CH AVR unit under both normal conditions and when the rig is acting up.
>
> Obviously there are many points on the boards themselves where DC voltages
> could be
> measured and compared either with voltages measured under normal
> conditions or with
> the schematic values but if you could get your hands on an oscilloscope it
> would make
> locating the problem a lot easier. Whatever is causing your receive
> problem is also causing
> your transmit problem.
>
> I am still leaning toward a bad connection somewhere in the shared
> circuitry. If there are
> any socketed components, wiggle them gently. Press lightly on soldered
> components.
>
> Alan, KD5R
>
> From: tfrugia81
> Sent: Tuesday, April 02, 2013 9:56 PM

>
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: ts520se sidetone question
>
> Hi Alan,
>
> Over the past month or so I have fooled with the TS-520se trying to pin
> down this issue. I've poked and wiggled all of the connections and
> terminals on the RF, IF and generator boards. I've actually poked just
> about every one in the entire unit, but nothing seems to make a difference.
> After a random amount of time everything just goes back to normal, and then
> after a short time it starts doing it again.
>
> It seems to be doing it more frequent now. I'm nervous to event attempt a
> qso on it. Can you think of any other things I should look for?
>
> One other clue, when this is happening if I turn the RF gain fully CCW,
> the meter only goes up to around 1/3 of the full meter (
> http://content.screencast.com/users/Tyler81/folders/Jing/media/1253a282-fe21-4f48-8288-0
b171fd729b1/00000812.png).
> When the problem stops (I can send/receive again) the meter peaks when I
> turn the RF gain all of the way CCW.
>
> Thanks for any help,
>
> Tyler
> k7fru
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley" <arr44@...>
> wrote:
> >
> > This problem could be a little harder to track down. If you havenâ€™t
> done
> > so already, make sure all board mounting screws are tight â€" loosen them
> > up a little first and then retighten. If you have a quality spray contact
> > cleaner such as DeoxIT D5, you could clean the MODE and FUNCTION
> > switch contacts, followed by blowing them dry with compressed air, but
> > I really donâ€™t think it is a switch contact issue.
> >
> > Since you have already found one bad solder connection, it is very
> possible
> > that there may another one that is temperature sensitive causing this
> > problem. It is affecting both the receive and transmit functions so that
> > narrows it down a bit.
> >
> > I think I would concentrate on the RF, IF, and GENERATOR board
> connections.
> > Using a hair dryer to warm each board a little might point you to the
> general
> > area of the problem but you canâ€™t concentrate the heat well enough to

> really
> > isolate the problem. Donâ€™t use a soldering iron for this since the rig
> will
> > need to have power applied. ***The RF unit has dangerous voltages
> > applied***.
> >
> > Using an insulated tool such as a wooden popsickle stick, gently wiggle
> > the wires at the soldered connections with the rig powered up. There
> > could also be an issue with a component lead not making reliable contact
> > but check the wire connections to the terminals first.
> >
> > If this doesnâ€™t work, we will try something else. Also, there are
> other forum
> > members with more experience on these rigs than I have, so feel free to
> > jump in.
> >
> > 73,
> > Alan, KD5R
> >
> > From: tfrugia81
> > Sent: Friday, March 01, 2013 5:22 PM
> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > Subject: [TS-520_820_530_830] Re: ts520se sidetone question
> >
> >
> > One more observation. When the receive is out, if I put the mode to TUNE
> and the function switch to VFO, I can hear white noise just as normal. Any
> other combination of MODE and FUNCTION cause it to have no receive.
> >
> > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "tfrugia81" wrote:
> > >
> > > I'm not sure why my reply to this didn't show last night, but for the
> record the KEY terminal was loose. Soldering it back together solved the
> sidetone issue. Thanks Alan!
> > >
> > > Regarding the loss of receive audio. When it happens if I tune to the
> 25 kHz calibrator I do not hear the tone. When the receive finally comes
> back I DO hear the tone, but while it's dropped out I do not hear it. I can
> still hear other stations in SSB, but I have to turn the volume up all of
> the way and even then it's barely audible.
> > >
> > > I also tried keying the microphone several times. I can hear the
> relays clicking but I do not get any RF output while this is happening.
> Once the receive comes back everything works normal again. I also tried
> cycling the receive antenna switch. It has something wedged in to keep it
> "up" all of the time. I will take that out and see if toggling the switch
> makes a difference.
> > >
> > > Oddly, once the radio has been on for a while this issue doesn't seem
> to happen at all. But it's really frustrating sometimes!

> > >
> > > Thanks again for your help,
> > >
> > >
> > > Tyler
> > > k7fru
> > >
> > >
> > >
> > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley"
> wrote:
> > > >
> > > > Well, the video tells me you may have a bad TR relay causing the
> intermittent
> > > > loss of receive audio. You can check for this by turning on the
> internal 25 kHz
> > > > calibrator. If it is the TR relay, the signal from the internal
> calibrator will still
> > > > be at itÃ¢Â€Â™s normal level even though the received signal off of
> the antenna has
> > > > dropped out. Connect a microphone and key it briefly a few times and
> see if
> > > > the signal from the antenna returns. In addition, exercise the
> external receive
> > > > antenna switch on the rear of the rig since the receive signal path
> goes through
> > > > it too.
> > > >
> > > > On the constant sidetone issue, look closely at all soldered
> connections in
> > > > the sidetone circuit and especially any wire-wrap connections. You
> should
> > > > be able to track down the problem there with your voltmeter. Also,
> make
> > > > sure the board mounting screws are tight.
> > > >
> > > > 73,
> > > > Alan, KD5R
> > > >
> > > >
> > > >
> > > > From: tfrugia81
> > > > Sent: Tuesday, February 26, 2013 12:42 PM
> > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > > Subject: [TS-520_820_530_830] Re: ts520se sidetone question
> > > >
> > > >
> > > > Thanks again for the help. I will test this tonight.
> > > >
> > > > Here is an issue I'm having as well, could this be related? I would

> think not, but thought I'd send it anyway -
> http://www.youtube.com/watch?v=AAWdikZZt58
> > > >
> > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley"
> wrote:
> > > > > >
> > > > > Ok, good. The purpose of this ÃƒÂ¢Ã‚Â€"63 vdc is to inhibit the
> sidetone oscillator
> > > > > when your key contacts are open. It does this by reverse biasing
> diode D3,
> > > > > thus turning it off and interrupting the feedback path necessary
> for Q6 to
> > > > > oscillate.
> > > > > >
> > > > > It appears that your ÃƒÂ¢Ã‚Â€"63 volts is either not reaching the
> diode or else the
> > > > > diode is shorted. A positive voltage of about +100 vdc enters the
> AF board
> > > > > at the ÃƒÂ¢Ã‚Â€Ã‚œSTBÃƒÂ¢Ã‚Â€Ã‚Â terminal. This +100v and the
> voltage at the ÃƒÂ¢Ã‚Â€Ã‚œKEYÃƒÂ¢Ã‚Â€Ã‚Â terminal
> > > > > (-63v key up, 0v key down) are combined through resistors R35 and
> R36
> > > > > such that D3 is forward biased when your key contacts are closed
> but
> > > > > when the key contacts open, the ÃƒÂ¢Ã‚Â€"63v
> ÃƒÂ¢Ã‚Â€Ã‚œoverpowersÃƒÂ¢Ã‚Â€Ã‚Â the positive voltage,
> > > > > killing the oscillator.
> > > > > >
> > > > > One other possibility would be for the R35 and/or R36 values to
> have changed
> > > > > such that the negative voltage is not quite able to overcome the
> positive voltage.
> > > > > >
> > > > > Measure the voltage at the anode of D3 under key up and key down
> conditions.
> > > > > Also, if you are using an analog meter or a digital meter with a
> diode test
> > > > > function, measure resistance both directions across D3 (be sure
> there is
> > > > > no voltage present on the diode when you do this).
> > > > > >
> > > > > Let us know what you find.
> > > > > >
> > > > > 73,
> > > > > Alan, KD5R
> > > > > >
> > > > > >
> > > > > From: tfrugia81
> > > > > Sent: Monday, February 25, 2013 8:20 PM
> > > > > To: mailto:TS-520_820_530_830%40yahoogroups.com

> > > > > Subject: [TS-520_820_530_830] Re: ts520se sidetone question
> > > > >
> > > > >
> > > > > Got it, thank you for the clarification.
> > > > >
> > > > > I measured voltage at the KEY terminal on the AF board, and it
> indeed has -63ish volts DC with the key open. All of the connections on the
> AF board look ok to my naked eye. I traced the ones that I could easily
> follow and they seemed ok (using a meter to test continuity).
> > > > >
> > > > > I am very much new to these radios (and radio repair in general).
> Is there anything else I should be looking for? I appreciate your help!
> > > > >
> > > > > 73
> > > > >
> > > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley"
> wrote:
> > > > > >
> > > > > > Tyler, your TS-520SE wonÃƒÂƒÃ‚Â¢Ã‚Â€Ã‚Â™t have a
> FIX3-11, that is just the place I located
> > > > > > the problem in my TS-820S. Sorry, I should have pointed that out.
> > > > > >
> > > > > > Your problem, however appears to be the same as mine was
> ÃƒÂƒÃ‚Â¢Ã‚Â€" loss of cutoff
> > > > > > voltage to the sidetone oscillator. The sidetone oscillator runs
> when the key
> > > > > > is closed but it is cut off by a negative voltage applied when
> the key is open.
> > > > > >
> > > > > > In the TS-520SE, the sidetone oscillator is Q6 on the AF Unit
> (X49-008-01).
> > > > > > The ÃƒÂƒÃ‚Â¢Ã‚Â€Ã‚Â“KEYÃƒÂƒÃ‚Â¢Ã‚Â€Ã‚Â terminal
> on that board should have a negative voltage of about
> > > > > > -65 vdc in the key-up condition (it should be the same as the
> open-circuit
> > > > > > voltage across your key contacts). Check there to see if the
> negative voltage
> > > > > > is present. I donÃƒÂƒÃ‚Â¢Ã‚Â€Ã‚Â™t know whether the
> TS-520SE uses a wire-wrap connection
> > > > > > at that point or not but if it does, then I suspect you will
> find it to be the
> > > > > > problem. If it is a bad wire-wrap connection, clean it good and
> solder it.
> > > > > >
> > > > > > If you donÃƒÂƒÃ‚Â¢Ã‚Â€Ã‚Â™t have the manuals for it, you
> can download them from GordonÃƒÂƒÃ‚Â¢Ã‚Â€Ã‚Â™s
> > > > > > website as I just did (thanks, Gordon!).
> > > > > >
> > > > > > Let us know what you find.
> > > > > >

> > > > > > 73,
> > > > > > Alan, KD5R
> > > > > >
> > > > > >
> > > > > >
> > > > > > From: Tyler Frugia
> > > > > > Sent: Sunday, February 24, 2013 9:07 PM
> > > > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > > > > Subject: Re: [TS-520_820_530_830] ts520se sidetone question
> > > > > >
> > > > > >
> > > > > > Hi Alan,
> > > > > >
> > > > > > Thanks for the email. Pardon my ignorance, but where would I find
> > > > > > FIX3-11?
> > > > > >
> > > > > > I appreciate any help!
> > > > > >
> > > > > > 73,
> > > > > >
> > > > > > Tyler
> > > > > > k7fru
> > > > > >
> > > > > > On Sun, Feb 24, 2013 at 6:52 PM, Alan Riley mailto:
> arr44%40suddenlink.net> wrote:
> > > > > >
> > > > > > **
> > > > > >
> > > > > >
> > > > > > My TS-820S had the exact same problem when I bought it. I
> found the
> > > > > > problem to be a broken
> > > > > > contact on connector FIX3-11 not making connection to the pin
> on the pcb.
> > > > > >
> > > > > > 73,
> > > > > > Alan, KD5R
> > > > > >
> > > > > > From: tfrugia81
> > > > > > Sent: Saturday, February 23, 2013 11:09 PM
> > > > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > > > > Subject: [TS-520_820_530_830] ts520se sidetone question
> > > > > >
> > > > > >
> > > > > > Hello all. I'm a new owner of a kenwood hybrid. I absolutely
> love it.
> > > > > >
> > > > > > I searched the group to try and find an answer to my problem.
> There are
> > > > > > many similar posts but not quite what I am experiencing.

> > > > > > >
> > > > > > > > If I have a key plugged in and switch to CW, I hear a constant
> sidetone.
> > > > > > > > If I put the radio in "send" there is no RF output, but I hear
> the tone. If
> > > > > > > > I press the key, it transmits as it should. The sidetone never
> stops until
> > > > > > > > I unplug the key.
> > > > > > > >
> > > > > > > > This is just a standard straight key on a mono plug. I even
> tried plugin
> > > > > > > > in a plug with nothing attached and it does the same thing.
> Oddly enough,
> > > > > > > > it randomly will work fine. Today I left the rig turned on in
> CW mode for
> > > > > > > > about an hour. When I came back the tone was gone, but
> switching to "tune"
> > > > > > > > and back to CW caused the sidetone to come on and remain on.
> > > > > > > >
> > > > > > > > Any ideas? I took the case off and the plug is clean and looks
> brand new.
> > > > > > > >
> > > > > > > > 73
> > > > > > > >
> > > > > > > > [Non-text portions of this message have been removed]
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41626. Headset for TS-520s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-09 15:34:48 UTC
From: dscolson1949
Topic: 41626 Message: 41626

Hi,

Can someone point me to a headset that is compatible with the TS-520S

Thanks

Dave KB1WOD

41627. Re: [TS-520_820_530_830] Re: TS-520S Cathode and Screen Resistors

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-09 18:50:40 UTC
From: Joseph Stiles
Topic: 41611 Message: 41627

Bryan,

I know a couple of guys will beat me for this...but.....if you have, or are going to have, the replacement parts for the ones you suspect
may be faulty...replace them.

Inspect around the 12by7a driver tube socket...and the final tubes...for poor or "dry" looking solder joints. With magnification and bright light helps.

The 750VDC is too low. Measure the output of each HV cap...with a DMM/VTVM ...be careful there's lot's of HV there that will SK you. Compare the "resting/receiving" HV with the HV you get at full power and key down...should be usually no more that 10-12% drop...or as some say "sag."

Another check or two, is to tune up for full power(into dummyload), ..meter select switch to "RF" ...key rig...falling output usually indicates failing driver.

meter select switch to "Ip"...key rig.....usually indicates failing finals.

These are just some basic tests...but..helps narrow things down.
Does the fluctuation of the Ip happen on all bands or just one or two?

73 Joe
WB7UQU

From: n7bes <bryanthegoon@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, April 8, 2013 10:49 PM
Subject: [TS-520_820_530_830] Re: TS-520S Cathode and Screen Resistors

Joe,

Thank you for the reply, I will check R-5 and R-6 on the Rectifier board the next time I crack the case open. The 4 resistors on the final board were definitely blown (physically cracked and out of spec on the meter) so they were replaced.

One thing that I forgot to mention (and part of what led me down the path of C-7,C-8,L-1) was that while tuning IP current fluctuates, once tuned it will start around 225 mA when I flip the send switch and then drop, over the matter of a couple seconds to 150 mA. Some information I had found online suggested that these may be the issue (especially if it is known that the resistors popped). Output power also fluctuates with the plate current.

I did replace the tubes (all 3) with what were supposed to be a "known good" set, but I have no way of truly confirming that, is there any way to confirm short of finding someone else local with a hybrid and talking them into giving the tubes a spin in their rig?

And I definitely stayed within factory spec for the resistors, I was aware that they are essentially sized to be fuses of a sort.

I will look into doing the alignment/neutralization procedure, I do know that the prior owner did not make those adjustments (prior owner is my grandfather).

On the HV reading, I am currently (after tune-up) getting 750 Volts on the meter when set to HV. Is this far enough off to suspect the HV caps?

Thank you again for taking the time to respond.

Thank you and 73s
Bryan
N7BES

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Bryan,
>
> Â It is either R-5 or R-6, can't remember which, on the RECTIFIER BOARD. I suggest "metering" them out first. If within specs..you can leave them alone...unless
> you just have to replace them.
>
> Replacement of C-7, C-8, and/or L-1 is NOT automatic if the aforementioned resistors have blown.
>
> Â I would first: obtain KNOWN good set of finals and driver tube. Then re-run your tune-up procedure. Those parts can take quite a bit of punishment.
> Testing final amplifier tubes in a "tubes tester" will show you if it is shorted...etc..etc....but it will NOT tell you if it will properly function in the
> "real RF environment."
> That's one reason to stay with factory specs for wattage on the screen and cathode resistors...they blow first!
> The previous "owner" may have "adjusted" some of the coils. Check the ""basic" alignment in the operators manual, including "neutralization."
> Check your HV (high voltage). you can do this via the front panel meter. put meter select switch to "HV" flip send switch to SEND, read meter.
> You should see 850 to 900+ volts, much less indicates a possible failure of one or both HV caps.
> When properly tuned up for "full power,"...you should see about 800 volts, Ip of approx 225 and about 100 or so watts (if watt meter used.)
>
> I won't get into the re-cap vs not to re-cap issue
>
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>

> _____
> From: n7bes <bryanthegoon@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, April 8, 2013 12:38 PM
> Subject: [TS-520_820_530_830] TS-520S Cathode and Screen Resistors
>
>
> Â
> This is my first post so please bear with me, I did some searching through the previous threads here and couldn't easily find exactly what I was looking for.
>
> I have a TS-520S that is not putting out what it is supposed to (only getting about 40 watts out). After a bit of digging found that the final cathode and screen resistors were cracked/blown. I bought one of the resister kits from one of the hybrid repair guys for the common final resistors that get burned out when someone goofs up (prior owner ran full power with bad coax... couldn't figure out why he kept popping fuses until he found the bad coax). So I now have 2 questions....
>
> 1. I was able to easily replace the 10 ohm and 100 ohm cathode and screen resistors. The resistor kit I got also comes with a 470 ohm 1W 5% resistor. After looking over the final as well as the schematics, I am not sure where this is supposed to go. Can anyone shed some light on where this resister is intended to go?
>
> 2. After replacing the 10 and 100 ohm resistors (and a proper tune) I am still only getting 40-50 watts into a 50 ohm dummy load. After further review I am finding mention that if the resistors are blown that it may be necessary to replace C7, C8, and L1 in the final as well, so I have ordered a kit with these 3 parts from the same vendor. So the question is is this the best next course of action? Anything else I should be replacing? (already have a fresh set of tubes in) If this doesn't work what is the next step? full re-cap? or?
>
> Thank you,
> Bryan
> N7BES
>
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

41628. Re: [TS-520_820_530_830] Re: TS-520S Cathode and Screen Resistors

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-09 20:20:18 UTC
From: Mike
Topic: 41611 Message: 41628

I agree with Joe, follow his voltage and physical inspecting checks.

You can calculate the transmitter's actual RF DC input and output power by using some simple high school math formulas and the meter indications staring you right in the face every time you tune the transmitter!!

You have to calculate the DC input power firstand that's done using the following formula:

HV x IP = DC input power

For example, lets say the transmitter is tuned up to full power output. Using the above formula and the HV meter reading is 775VDC and a cathode (IP) meter indication is 220ma, at full output, what's the final amplifier's DC input power?

775 x .220 = 170.5 watts

Next, you calculate the power output at the rear antenna SO-239 connector. Since the average efficiency percentage of the Class AB1 final amplifier in ALL Kenwood hybrids is 55%, we simply subtract 45% from 170.5 watts and we get

170.5 - 45% = 93.7 watts output at the rear SO-239 antenna connector.

The formula for calculating amplifier efficiency percentage is:

Pout / Pin = amplifier efficiency percentage

93.7 / 170.5 = .55

or

55%!!!

As you can see you don't need to spend a lot of money on some fancy expensive lighted peak reading watt meter just to know what your 520's final amplifier's input and output RF poweris. Just use some simple math calculations and a few moments of your time, that's all you need to do.

Just some information you may not have thought about.

73
Mike

On 4/9/2013 1:50 PM, Joseph Stiles wrote:
>
> Bryan,
>

> I know a couple of guys will beat me for this...but.....if you
> have, or are going to have, the replacement parts for the ones you suspect
> may be faulty...replace them.
>
> Inspect around the 12by7a driver tube socket...and the final
> tubes...for poor or "dry" looking solder joints. With magnification
> and bright light helps.
>
> The 750VDC is too low. Measure the output of each HV cap...with a
> DMM/VTVM ...be careful there's lot's of HV there that will SK you.
> Compare the "resting/receiving" HV with the HV you get at full power
> and key down...should be usually no more that 10-12% drop...or as some
> say "sag."
>
> Another check or two, is to tune up for full power(into dummyload),
> ..meter select switch to "RF" ...key rig...falling output usually
> indicates failing driver.
>
> meter select switch to "Ip"...key rig.....usually indicates failing
> finals.
>
> These are just some basic tests...but..helps narrow things down.
> Does the fluctuation of the Ip happen on all bands or just one or two?
>
>
> 73 Joe
> WB7UQU
>
> _____
> From: n7bes <bryanthegoon@... <mailto:bryanthegoon%40yahoo.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Monday, April 8, 2013 10:49 PM
> Subject: [TS-520_820_530_830] Re: TS-520S Cathode and Screen Resistors
>
>
>
>
>
> Joe,
>
> Thank you for the reply, I will check R-5 and R-6 on the Rectifier
> board the next time I crack the case open. The 4 resistors on the
> final board were definitely blown (physically cracked and out of spec
> on the meter) so they were replaced.
>
> One thing that I forgot to mention (and part of what led me down the
> path of C-7,C-8,L-1) was that while tuning IP current fluctuates, once
> tuned it will start around 225 mA when I flip the send switch and then
> drop, over the matter of a couple seconds to 150 mA. Some information
> I had found online suggested that these may be the issue (especially

> if it is known that the resistors popped). Output power also
> fluctuates with the plate current.
>
> I did replace the tubes (all 3) with what were supposed to be a "known
> good" set, but I have no way of truly confirming that, is there any
> way to confirm short of finding someone else local with a hybrid and
> talking them into giving the tubes a spin in their rig?
>
> And I definitely stayed within factory spec for the resistors, I was
> aware that they are essentially sized to be fuses of a sort.
>
> I will look into doing the alignment/neutralization procedure, I do
> know that the prior owner did not make those adjustments (prior owner
> is my grandfather).
>
> On the HV reading, I am currently (after tune-up) getting 750 Volts on
> the meter when set to HV. Is this far enough off to suspect the HV caps?
>
> Thank you again for taking the time to respond.
>
> Thank you and 73s
> Bryan
> N7BES
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles
> <stilesjoseph@...> wrote:
> >
> > Bryan,
> >
> > Â It is either R-5 or R-6, can't remember which, on the RECTIFIER
> BOARD. I suggest "metering" them out first. If within specs..you can
> leave them alone...unless
> > you just have to replace them.
> >
> > Replacement of C-7, C-8, and/or L-1 is NOT automatic if the
> aforementioned resistors have blown.
> >
> > Â I would first: obtain KNOWN good set of finals and driver tube.
> Then re-run your tune-up procedure. Those parts can take quite a bit
> of punishment.
> > Testing final amplifier tubes in a "tubes tester" will show you if
> it is shorted...etc..etc....but it will NOT tell you if it will
> properly function in the
> > "real RF environment."
> > That's one reason to stay with factory specs for wattage on the
> screen and cathode resistors...they blow first!
> > The previous "owner" may have "adjusted" some of the coils. Check
> the ""basic" alignment in the operators manual, including
> "neutralization."

> > Check your HV (high voltage). you can do this via the front panel
> meter. put meter select switch to "HV" flip send switch to SEND, read
> meter.
> > You should see 850 to 900+ volts, much less indicates a possible
> failure of one or both HV caps.
> > When properly tuned up for "full power,"...you should see about 800
> volts, Ip of approx 225 and about 100 or so watts (if watt meter used.)
> >
> > I won't get into the re-cap vs not to re-cap issue
> >
> >
> >
> > Â
> > 73Â Joe
> > WB7UQU
> >
> >
> >
> > _____
> > From: n7bes <bryanthegoon@...>
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Monday, April 8, 2013 12:38 PM
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> the final cathode and screen resistors were cracked/blown. I bought
> one of the resister kits from one of the hybrid repair guys for the
> common final resistors that get burned out when someone goofs up
> (prior owner ran full power with bad coax... couldn't figure out why
> he kept popping fuses until he found the bad coax). So I now have 2
> questions....
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> screen resistors. The resistor kit I got also comes with a 470 ohm 1W
> 5% resistor. After looking over the final as well as the schematics, I
> am not sure where this is supposed to go. Can anyone shed some light
> on where this resister is intended to go?
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> > 2. After replacing the 10 and 100 ohm resistors (and a proper tune)
> I am still only getting 40-50 watts into a 50 ohm dummy load. After
> further review I am finding mention that if the resistors are blown
> that it may be necessary to replace C7, C8, and L1 in the final as

> well, so I have ordered a kit with these 3 parts from the same vendor.
> So the question is is this the best next course of action? Anything
> else I should be replacing? (already have a fresh set of tubes in) If
> this doesn't work what is the next step? full re-cap? or?
> >
> > Thank you,
> > Bryan
> > N7BES
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> >
> > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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41629. Re: DK-520 adapter value

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-09 20:25:06 UTC
From: kevin
Topic: 41615 Message: 41629

Jimmy,
The 520 was a working unit. It did not like the faceplate. I found a very good faceplate and was in the process of replacing it and a couple of lights. Once I got into it I found some burned wire by the transformer. It had been repaired obviously but it looked like an accident or smoke waiting to happen. I tried to replace the wires but really should have stripped the radio down further to do a good job. I also lubed the VFO and the knob and dial are not reassembled. At the end of the day the radio did not work. Something I did with the soldering of the transformer wires no doubt. The transformer itself if good. It is currently sitting with the face removed. It does have the adapter for the DG-5. I also have a non working DG-5 that I am quite sure will never work. It looked like the previous owner tried to re-flow the solder on the boards and made a mess of it.

If you want the rig with the adapter and do not make me put the face etc. back on I will let it go for $100 plus shipping.

I also have a 520-X (yes the X is correct, right on the label), think it was for overseas. It is only good for parts that much I can tell you 100%. It can go for $50 plus shipping.

I have a guy who is bidding on a very nice DG-5 that I have on EBay that wants to buy the adapter. The auction is over in a few hours and if there is any way you can respond soon it would be helpful.
Thanks
Kevin
KD0ILM

--- In TS-520_820_530_830@yahoogroups.com, Jim Lamanteer <jimlamanteer@...> wrote:
>
> KEVINÂ WHAT ARE U LOOKING TO GET FOR THE NONWORKING 520 MAYBE WE CAN STRIKE UP A DEAL FOR ALL??? JIMMY.WB2KNR
>
>
>
> _____
> From: kevin <kmx888@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, April 8, 2013 6:18 PM
> Subject: [TS-520_820_530_830] DK-520 adapter value
>
>
>
> Â
>
> Does anyone have an idea how much a DK-520 Adapter for the DG-5 digital display is worth?
>
> I am selling a DG-5 on EBay and have the DK-520 on a non working TS-520 that I am also considering selling. One of my bidders is inquiring about buying just the adapter and I am clueless as to it's value.

>
>
>
>
> [Non-text portions of this message have been removed]
>

41630. sorry for the for sale post

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-09 20:26:40 UTC
From: kevin
Topic: 41630 Message: 41630

Sorry boys I meant to send my previous post as an email

41631. CW Filter trimmer

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-09 21:21:32 UTC
From: jon_g4fut
Topic: 41631 Message: 41631

My pal has a 830s which refuses to TX or RX on CW. My past experience with other boat anchors suggests to me that the CW filter passband requires adjusting. However I cannot for the life of me find such a trimmer beside the filters. I believe that the CW uses the SSB filter. Can anyone suggest where the trimmer, (if there really is one!) might be please?
Peace and love to all
Jon G4FUT

41632. Re: [TS-520_820_530_830] CW Filter trimmer

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-09 21:51:54 UTC
From: Mike
Topic: 41631 Message: 41632

Jon,

The TS-830 does not have any filter bandpass trimmers that some other boat anchor may have. I do NOT recommend you compare a TS-830 with some other boat anchor transceiver. Even though the 830 is a SSB and CW transceiver, it is NOT the same as other boat anchor transceivers.

Have you physically checked to see if a CW filters is/are actually installed? If the CW filter is missing then most likely the previous owner sold the CW filter separately and didn't revert the filter wiring back to the no CW filter installed connections (see page 24 in the 830 operator's manual). If the CW filter is missing simply reverse the wiring changes shown in the manual and the 830 should operate in CW mode without the filter.

73
Mike

On 4/9/2013 4:21 PM, jon_g4fut wrote:
>
> My pal has a 830s which refuses to TX or RX on CW. My past experience
> with other boat anchors suggests to me that the CW filter passband
> requires adjusting. However I cannot for the life of me find such a
> trimmer beside the filters. I believe that the CW uses the SSB filter.
> Can anyone suggest where the trimmer, (if there really is one!) might
> be please?
> Peace and love to all
> Jon G4FUT
>
>

[Non-text portions of this message have been removed]

41633. Re: CW Filter trimmer

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-09 22:31:05 UTC
From: jon_g4fut
Topic: 41631 Message: 41633

Many thanks Mike. Thats very useful information. I'll pass it onto the owner. I'm sure the filter is fitted to his set. I have the same problem (almost) in that the narrow CW on one of my 830s (I have 2) has gradually stopped receiving. Last week, the signal was very soft indeed, now there is none. When I had that problem with my old FTdx401 ...(many years ago) it used to be the crsytal lattice trimmer needed tweaking but as you say, the kenwoods don't have that.
Againb many thanks
Jon G4FUT

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> Jon,
>
> The TS-830 does not have any filter bandpass trimmers that some other
> boat anchor may have. I do NOT recommend you compare a TS-830 with some
> other boat anchor transceiver. Even though the 830 is a SSB and CW
> transceiver, it is NOT the same as other boat anchor transceivers.
>
> Have you physically checked to see if a CW filters is/are actually
> installed? If the CW filter is missing then most likely the previous
> owner sold the CW filter separately and didn't revert the filter wiring
> back to the no CW filter installed connections (see page 24 in the 830
> operator's manual). If the CW filter is missing simply reverse the
> wiring changes shown in the manual and the 830 should operate in CW mode
> without the filter.
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>
> 73
> Mike
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>
>
>
> On 4/9/2013 4:21 PM, jon_g4fut wrote:
> >
> > My pal has a 830s which refuses to TX or RX on CW. My past experience
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> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

41634. Re: [TS-520_820_530_830] Re: DK-520 adapter value

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-09 22:31:08 UTC
From: Jim Lamanteer
Topic: 41615 Message: 41634

KEVIN ILL TAKE THE RADIO WITH THE ADAPTER FOR SURE. ILL LET U KNOW ABOUT THE 2ND ONE. DO U HAVE A CONTACT PHONE NUMBER I CAN REACH U AT?? THANKS JIMMY.

From: kevin <kmx888@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, April 9, 2013 4:25 PM
Subject: [TS-520_820_530_830] Re: DK-520 adapter value

Jimmy,
The 520 was a working unit. It did not like the faceplate. I found a very good faceplate and was in the process of replacing it and a couple of lights. Once I got into it I found some burned wire by the transformer. It had been repaired obviously but it looked like an accident or smoke waiting to happen. I tried to replace the wires but really should have stripped the radio down further to do a good job. I also lubed the VFO and the knob and dial are not reassembled. At the end of the day the radio did not work. Something I did with the soldering of the transformer wires no doubt. The transformer itself if good. It is currently sitting with the face removed. It does have the adapter for the DG-5. I also have a non working DG-5 that I am quite sure will never work. It looked like the previous owner tried to re-flow the solder on the boards and made a mess of it.

If you want the rig with the adapter and do not make me put the face etc. back on I will let it go for $100 plus shipping.

I also have a 520-X (yes the X is correct, right on the label), think it was for overseas. It is only good for parts that much I can tell you 100%. It can go for $50 plus shipping.

I have a guy who is bidding on a very nice DG-5 that I have on EBay that wants to buy the adapter. The auction is over in a few hours and if there is any way you can respond soon it would be helpful.
Thanks
Kevin
KD0ILM

--- In mailto:TS-520_820_530_830%40yahoogroups.com, Jim Lamanteer <jimlamanteer@...> wrote:
>
> KEVINÂ WHAT ARE U LOOKING TO GET FOR THE NONWORKING 520 MAYBE WE CAN STRIKE UP A DEAL FOR ALL??? JIMMY.WB2KNR
>
>
>
> ---
> From: kevin <kmx888@...>
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Monday, April 8, 2013 6:18 PM

> Subject: [TS-520_820_530_830] DK-520 adapter value
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> Does anyone have an idea how much a DK-520 Adapter for the DG-5 digital display is worth?
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> [Non-text portions of this message have been removed]
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[Non-text portions of this message have been removed]

41635. Re: [TS-520_820_530_830] Re: CW Filter trimmer

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-10 02:56:59 UTC
From: Mike
Topic: 41631 Message: 41635

Have you checked/verified the presence of the filter select diode
switching voltage on the IF Unit when the desired filter(s) have been
selected by the Mode switch?

Loss of the filter select diode voltage will result in loss of signal
path through the filters. If both SSB and CW filter select diode voltage
is missing on the IF Unit board's SSB or CW terminals then none of the
SSB and CW filters will be selected. The transmit and receive signals
both flow through the filter's input and output diodes and if the diode
select voltage is missing then there will be no signals, either transmit
or receive, flowing through the filters resulting in the 830 appearing
to be dead.

73
Mike

On 4/9/2013 5:31 PM, jon_g4fut wrote:
>
> Many thanks Mike. Thats very useful information. I'll pass it onto the
> owner. I'm sure the filter is fitted to his set. I have the same
> problem (almost) in that the narrow CW on one of my 830s (I have 2)
> has gradually stopped receiving. Last week, the signal was very soft
> indeed, now there is none. When I had that problem with my old FTdx401
> ...(many years ago) it used to be the crsytal lattice trimmer needed
> tweaking but as you say, the kenwoods don't have that.
> Againb many thanks
> Jon G4FUT
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@...> wrote:
> >
> > Jon,
> >
> > The TS-830 does not have any filter bandpass trimmers that some other
> > boat anchor may have. I do NOT recommend you compare a TS-830 with some
> > other boat anchor transceiver. Even though the 830 is a SSB and CW
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> >
> > [Non-text portions of this message have been removed]
> >
>
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[Non-text portions of this message have been removed]

41636. Re: [TS-520_820_530_830] Re: TS-520S Cathode and Screen Resistors

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-10 21:06:23 UTC
From: Joseph Stiles
Topic: 41611 Message: 41636

Bryan,

The latter part of my post may not be clear: meter select switch to Ip....key rig...falling Ip...(plate current) usually indicates failing finals.

73 Joe
WB7UQU

From: Joseph Stiles <stilesjoseph@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, April 9, 2013 11:50 AM
Subject: Re: [TS-520_820_530_830] Re: TS-520S Cathode and Screen Resistors

Bryan,

I know a couple of guys will beat me for this...but.....if you have, or are going to have, the replacement parts for the ones you suspect
may be faulty...replace them.

Inspect around the 12by7a driver tube socket...and the final tubes...for poor or "dry" looking solder joints. With magnification and bright light helps.

The 750VDC is too low. Measure the output of each HV cap...with a DMM/VTVM ...be careful there's lot's of HV there that will SK you. Compare the "resting/receiving" HV with the HV you get at full power and key down...should be usually no more that 10-12% drop...or as some say "sag."

Another check or two, is to tune up for full power(into dummyload), ..meter select switch to "RF" ...key rig...falling output usually indicates failing driver.

meter select switch to "Ip"...key rig.....usually indicates failing finals.

These are just some basic tests...but..helps narrow things down.
Does the fluctuation of the Ip happen on all bands or just one or two?

73 Joe
WB7UQU

From: n7bes <bryanthegoon@...m>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, April 8, 2013 10:49 PM
Subject: [TS-520_820_530_830] Re: TS-520S Cathode and Screen Resistors

Joe,

Thank you for the reply, I will check R-5 and R-6 on the Rectifier board the next time I crack the case open. The 4 resistors on the final board were definitely blown (physically cracked and out of spec on the meter) so they were replaced.

One thing that I forgot to mention (and part of what led me down the path of C-7,C-8,L-1) was that while tuning IP current fluctuates, once tuned it will start around 225 mA when I flip the send switch and then drop, over the matter of a couple seconds to 150 mA. Some information I had found online suggested that these may be the issue (especially if it is known that the resistors popped). Output power also fluctuates with the plate current.

I did replace the tubes (all 3) with what were supposed to be a "known good" set, but I have no way of truly confirming that, is there any way to confirm short of finding someone else local with a hybrid and talking them into giving the tubes a spin in their rig?

And I definitely stayed within factory spec for the resistors, I was aware that they are essentially sized to be fuses of a sort.

I will look into doing the alignment/neutralization procedure, I do know that the prior owner did not make those adjustments (prior owner is my grandfather).

On the HV reading, I am currently (after tune-up) getting 750 Volts on the meter when set to HV. Is this far enough off to suspect the HV caps?

Thank you again for taking the time to respond.

Thank you and 73s
Bryan
N7BES

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
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> Bryan,
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> Â It is either R-5 or R-6, can't remember which, on the RECTIFIER BOARD. I suggest "metering" them out first. If within specs..you can leave them alone...unless
> you just have to replace them.
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> Replacement of C-7, C-8, and/or L-1 is NOT automatic if the aforementioned resistors have blown.
>
> Â I would first: obtain KNOWN good set of finals and driver tube. Then re-run your tune-up procedure. Those parts can take quite a bit of punishment.
> Testing final amplifier tubes in a "tubes tester" will show you if it is shorted...etc..etc....but it will NOT tell you if it will properly function in the
> "real RF environment."
> That's one reason to stay with factory specs for wattage on the screen and cathode resistors...they blow first!
> The previous "owner" may have "adjusted" some of the coils. Check the ""basic" alignment in the operators manual, including "neutralization."
> Check your HV (high voltage). you can do this via the front panel meter. put meter select switch to "HV" flip send switch to SEND, read meter.
> You should see 850 to 900+ volts, much less indicates a possible failure of one or both HV caps.

> When properly tuned up for "full power,"...you should see about 800 volts, Ip of approx 225 and about 100 or so watts (if watt meter used.)
>
> I won't get into the re-cap vs not to re-cap issue
>
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: n7bes <bryanthegoon@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, April 8, 2013 12:38 PM
> Subject: [TS-520_820_530_830] TS-520S Cathode and Screen Resistors
>
>
> Â
> This is my first post so please bear with me, I did some searching through the previous threads here and couldn't easily find exactly what I was looking for.
>
> I have a TS-520S that is not putting out what it is supposed to (only getting about 40 watts out). After a bit of digging found that the final cathode and screen resistors were cracked/blown. I bought one of the resister kits from one of the hybrid repair guys for the common final resistors that get burned out when someone goofs up (prior owner ran full power with bad coax... couldn't figure out why he kept popping fuses until he found the bad coax). So I now have 2 questions....
>
> 1. I was able to easily replace the 10 ohm and 100 ohm cathode and screen resistors. The resistor kit I got also comes with a 470 ohm 1W 5% resistor. After looking over the final as well as the schematics, I am not sure where this is supposed to go. Can anyone shed some light on where this resister is intended to go?
>
> 2. After replacing the 10 and 100 ohm resistors (and a proper tune) I am still only getting 40-50 watts into a 50 ohm dummy load. After further review I am finding mention that if the resistors are blown that it may be necessary to replace C7, C8, and L1 in the final as well, so I have ordered a kit with these 3 parts from the same vendor. So the question is is this the best next course of action? Anything else I should be replacing? (already have a fresh set of tubes in) If this doesn't work what is the next step? full re-cap? or?
>
> Thank you,
> Bryan
> N7BES
>
>
>

>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41637. TS 520 modified to work on 11 meters

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-11 02:35:13 UTC
From: Drummer4hire
Topic: 41637 Message: 41637

I picked up another TS 520 on Ebay a few weeks ago and got it tuned up and working because it was not transmitting when I got it .....Someone has the 28.000 set to do 11 meters and all other bands are ok .....does anyone know where to start to put this thing back on track? I would like to get it back on ten meters if possible Because I would like to have it for a second radio for field days and special events.(the 28:500 and 28:900 are working fine)

41638. Re: [TS-520_820_530_830] TS 520 modified to work on 11 meters

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-11 03:23:20 UTC
From: Alan Barber
Topic: 41637 Message: 41638

look on worldwidedx.com there is a thread on converting the TS 520S

--- On Wed, 4/10/13, Drummer4hire <dale@...> wrote:

From: Drummer4hire <dale@...>
Subject: [TS-520_820_530_830] TS 520 modified to work on 11 meters
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, April 10, 2013, 9:35 PM

I picked up another TS 520 on Ebay a few weeks ago and got it tuned up and working because it was not transmitting when I got it .....Someone has the 28.000 set to do 11 meters and all other bands are ok .....does anyone know where to start to put this thing back on track? I would like to get it back on ten meters if possible Because I would like to have it for a second radio for field days and special events.(the 28:500 and 28:900 are working fine)

[Non-text portions of this message have been removed]

41639. Re: [TS-520_820_530_830] TS 520 modified to work on 11 meters

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-11 04:02:01 UTC
From: Joseph Stiles
Topic: 41637 Message: 41639

Drummer4hire, pse to id with call.

You will need to inspect closely the crystals that I think are on the "OSC" board. It's been a bit since I had a 520 open. With the rig upside down....the "OSC" or HET(hetrodyne) board should be the most forward and have 7 or so crystals attached to it. Compare the crystal(s) for the band in question to what is listed in the service manual.....I think it's X-7 frequency is 37.995Mhz. More than likely a different crystal is there...with a value about 1.0 to 1.5 Mhz lower.
If this is the case...you will have to get a replacement...International Crystals...is a good place to look...or just live with it.

I gotta hand it to you...I don't want to lug around a 520...my 820 and 830 are bad enough..hihi

Also, I think that I have a picture or two in the files section dealing with this subject. I'll go and try to find them and let you know.

73 Joe
WB7UQU

From: Drummer4hire <dale@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, April 10, 2013 7:35 PM
Subject: [TS-520_820_530_830] TS 520 modified to work on 11 meters

I picked up another TS 520 on Ebay a few weeks ago and got it tuned up and working because it was not transmitting when I got it .....Someone has the 28.000 set to do 11 meters and all other bands are ok .....does anyone know where to start to put this thing back on track? I would like to get it back on ten meters if possible Because I would like to have it for a second radio for field days and special events.(the 28:500 and 28:900 are working fine)

[Non-text portions of this message have been removed]

41640. 520S VFO

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-11 04:07:17 UTC
From: yioutta_99
Topic: 41640 Message: 41640

Hi Gang,

I read up on the why the VFo might have some dead spots, so i went in and opened the hatch and sprayed some Diox on the plates of the cap. After a few choice words i got the plate back on the VFO cover and fired it up. The Dead spot problem was gone. it worked like a charm. i did noticed that i was now drifting a bit..and its never drifted on me before. and on air check confirmed that. AND that i was off Freq by about 25KC. I went on the WWV to try and calibrate it. I thought i was suppose to adjust TC1 on the marker board. but that doesnt seem to help me much.. Is there another TC1? There is a trimmer in the can of the VFO is that the one I want? How do i put the trimmer TC1 on the marker board back to rights?

Thanks Guys

Steve
N7LWF

41641. Re: [TS-520_820_530_830] TS 520 modified to work on 11 meters

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-11 04:09:47 UTC
From: Joseph Stiles
Topic: 41637 Message: 41641

Drummer.....check this out:

TS-520 OSC BOARD CB HACK in the photo section

73 Joe
WB7UQU

From: Joseph Stiles <stilesjoseph@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wednesday, April 10, 2013 9:02 PM
Subject: Re: [TS-520_820_530_830] TS 520 modified to work on 11 meters

Drummer4hire, pse to id with call.

  You will need to inspect closely the crystals that I think are on the "OSC" board. It's been a bit since I had a 520 open. With the rig upside down....the "OSC" or HET(hetrodyne) board should be the most forward and have 7 or so crystals attached to it. Compare the crystal(s) for the band in question to what is listed in the service manual.....I think it's X-7 frequency is 37.995Mhz. More than likely a different crystal is there...with a value about 1.0 to 1.5 Mhz lower.
  If this is the case...you will have to get a replacement...International Crystals...is a good place to look...or just live with it.

   I gotta hand it to you...I don't want to lug around a 520...my 820 and 830 are bad enough..hihi

   Also, I think that I have a picture or two in the files section dealing with this subject. I'll go and try to find them and let you know.

73 Joe
WB7UQU

From: Drummer4hire <dale@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, April 10, 2013 7:35 PM
Subject: [TS-520_820_530_830] TS 520 modified to work on 11 meters

I picked up another TS 520 on Ebay a few weeks ago and got it tuned up and working because it was not transmitting when I got it .....Someone has the 28.000 set to do 11 meters and all other bands are ok .....does anyone know where to start to put this thing back on track? I would like to get it back on ten meters if possible Because I would like to have it for a second radio for field days and special events.(the 28:500 and 28:900 are working fine)

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[Non-text portions of this message have been removed]

41642. Re: [TS-520_820_530_830] 520S VFO

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-11 04:10:53 UTC
From: W LEWIS
Topic: 41640 Message: 41642

Did you use compressed air to blow out the excess DeOxit?
Butch Lewis
KØPSA

--- On Wed, 4/10/13, yioutta_99 <yioutta_99@...> wrote:

From: yioutta_99 <yioutta_99@...>
Subject: [TS-520_820_530_830] 520S VFO
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, April 10, 2013, 11:07 PM

Hi Gang,

I read up on the why the VFo might have some dead spots, so i went in and opened the hatch and sprayed some Diox on the plates of the cap. After a few choice words i got the plate back on the VFO cover and fired it up. The Dead spot problem was gone. it worked like a charm. i did noticed that i was now drifting a bit..and its never drifted on me before. and on air check confirmed that. AND that i was off Freq by about 25KC. I went on the WWV to try and calibrate it. I thought i was suppose to adjust TC1 on the marker board. but that doesnt seem to help me much.. Is there another TC1? There is a trimmer in the can of the VFO is that the one I want? How do i put the trimmer TC1 on the marker board back to rights?

Thanks Guys

Steve
N7LWF

[Non-text portions of this message have been removed]

41643. Re: [TS-520_820_530_830] TS 520 modified to work on 11 meters

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-11 07:04:31 UTC
From: Mike
Topic: 41637 Message: 41643

Youwill need to replace the 11 meter modification crystal with the correct frequency 10 meter crystal. If you do not have the service manual for yourtransceiver, get it. You can download the operatorand service manual for your model of 520 at the following website:

www.n6wk.com/kenwood/

Do not attempt to service your model TS-520 without it. By the way, when you refer to your 520, make sure you use the correct model. There are 3 different models of TS-520. Look at the model label directly below the VFO, that's the correct model 520 you have. Download the correct operator and service manual at the above link that matches YOUR 520 model.

If the only modification that was done to put your 520 on 11 meters was to swap out the original ham band 28.0Mhz crystalthen you can purchase a new crystal, the 28.0Mhz crystal frequency is 36.895Mhz, from International Crystals in Oklahoma City, OK. Their website link is listed below.

http://www.icmfg.com/hamradio-manufacturers.html

They have an 800 number, toll free, you can call. The crystal price should be $23 plus shipping, either USPS or UPS. USPS is cheaper. Call their 800 number, select sales, then select sales representative Sara Gore, she will help you with your crystal purchase. They take all major credit cards. The typical wait time for the crystal can range from 1 to 2 weeks, that's normal. Don't think you'll get a new crystal from someone else any quicker and cheaper, they all have the same prices. I donot recommend you purchase a "used" crystal from eBay or a parts radio, you don't have a warranty and the used crystal could easily be off frequency due to age. I highly recommend International Crystals, I purchase ALL of my crystals from them and have never had a bad crystals yet and the accuracy and longevity of their crystals is excellent.

You should thoroughly check your 520 for any other modificationsand if any are found, remove the modifications so the circuit is back to its original design, BEFORE installing the new crystaland testing the transceiver for proper operation!

73
Mike
W5RKL

On 4/10/2013 9:35 PM, Drummer4hire wrote:
>
> I picked up another TS 520 on Ebay a few weeks ago and got it tuned up
> and working because it was not transmitting when I got it .....Someone

> has the 28.000 set to do 11 meters and all other bands are ok
> .....does anyone know where to start to put this thing back on track?
> I would like to get it back on ten meters if possible Because I would
> like to have it for a second radio for field days and special events.(
> the 28:500 and 28:900 are working fine)
>
>

[Non-text portions of this message have been removed]

41644. Re: [TS-520_820_530_830] 520S VFO

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-11 07:13:18 UTC
From: Mike
Topic: 41640 Message: 41644

Did you use generous amounts of compressed air or canned air after cleaning the VFO to completely remove any/all cleaner residue BEFORE you buttoned up the VFO? If you didn't then your problem is caused by the cleaner residue you didn't remove before you buttoned up the VFO. You need to remove ALL of the cleaner residue. Also you do not spray the plates of the VFO, you apply a small amount of cleaner to the rear of the VFO's variable capacitorshaft where the shaft to frame is located then rotate the VFO knob throughout it's travel several times. You then use generous amounts of compressed air or canned air to remove any/all cleaner residue, let the VFO sit for 3 to 5 minutes then test the VFO.

73
Mike
W5RKL

On 4/10/2013 11:07 PM, yioutta_99 wrote:
>
> Hi Gang,
>
> I read up on the why the VFo might have some dead spots, so i went in
> and opened the hatch and sprayed some Diox on the plates of the cap.
> After a few choice words i got the plate back on the VFO cover and
> fired it up. The Dead spot problem was gone. it worked like a charm. i
> did noticed that i was now drifting a bit..and its never drifted on me
> before. and on air check confirmed that. AND that i was off Freq by
> about 25KC. I went on the WWV to try and calibrate it. I thought i was
> suppose to adjust TC1 on the marker board. but that doesnt seem to
> help me much.. Is there another TC1? There is a trimmer in the can of
> the VFO is that the one I want? How do i put the trimmer TC1 on the
> marker board back to rights?
>
> Thanks Guys
>
> Steve
> N7LWF
>
>

[Non-text portions of this message have been removed]

41645. Re: 520S VFO

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-11 12:05:41 UTC
From: yioutta_99
Topic: 41640 Message: 41645

thanks mike,
no, i did not use compressed air. now that it has sat overnight, will it dissipate? or do i need to go back in and used compressed air? does compressed air remove residue?
i thought i was following k4eaa's directions pretty close.
I think the dial being off by 25k might be because i over cranked when i was working the plares back and forth. thinking i was in the middle when, i was really at one end. while looking in the radio.
--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> Did you use generous amounts of compressed air or canned air after
> cleaning the VFO to completely remove any/all cleaner residue BEFORE you
> buttoned up the VFO? If you didn't then your problem is caused by the
> cleaner residue you didn't remove before you buttoned up the VFO. You
> need to remove ALL of the cleaner residue. Also you do not spray the
> plates of the VFO, you apply a small amount of cleaner to the rear of
> the VFO's variable capacitorshaft where the shaft to frame is located
> then rotate the VFO knob throughout it's travel several times. You then
> use generous amounts of compressed air or canned air to remove any/all
> cleaner residue, let the VFO sit for 3 to 5 minutes then test the VFO.
>
> 73
> Mike
> W5RKL
>
>
>
> On 4/10/2013 11:07 PM, yioutta_99 wrote:
> >
> > Hi Gang,
> >
> > I read up on the why the VFo might have some dead spots, so i went in
> > and opened the hatch and sprayed some Diox on the plates of the cap.
> > After a few choice words i got the plate back on the VFO cover and
> > fired it up. The Dead spot problem was gone. it worked like a charm. i
> > did noticed that i was now drifting a bit..and its never drifted on me
> > before. and on air check confirmed that. AND that i was off Freq by
> > about 25KC. I went on the WWV to try and calibrate it. I thought i was
> > suppose to adjust TC1 on the marker board. but that doesnt seem to
> > help me much.. Is there another TC1? There is a trimmer in the can of
> > the VFO is that the one I want? How do i put the trimmer TC1 on the
> > marker board back to rights?
> >
> > Thanks Guys
> >
> > Steve

> > N7LWF
> >
> >
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> [Non-text portions of this message have been removed]
>

41646. Re: 520S VFO

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-11 12:07:09 UTC
From: yioutta_99
Topic: 41640 Message: 41646

no butch i didnt.

--- In TS-520_820_530_830@yahoogroups.com, W LEWIS <nscb56a@...> wrote:
>
> Did you use compressed air to blow out the excess DeOxit?
> Butch Lewis
> KÃ□PSA
>
> --- On Wed, 4/10/13, yioutta_99 <yioutta_99@...> wrote:
>
>
> From: yioutta_99 <yioutta_99@...>
> Subject: [TS-520_820_530_830] 520S VFO
> To: TS-520_820_530_830@yahoogroups.com
> Date: Wednesday, April 10, 2013, 11:07 PM
>
>
>
> Â
>
>
>
> Hi Gang,
>
> I read up on the why the VFo might have some dead spots, so i went in and opened the hatch and sprayed some Diox on the plates of the cap. After a few choice words i got the plate back on the VFO cover and fired it up. The Dead spot problem was gone. it worked like a charm. i did noticed that i was now drifting a bit..and its never drifted on me before. and on air check confirmed that. AND that i was off Freq by about 25KC. I went on the WWV to try and calibrate it. I thought i was suppose to adjust TC1 on the marker board. but that doesnt seem to help me much.. Is there another TC1? There is a trimmer in the can of the VFO is that the one I want? How do i put the trimmer TC1 on the marker board back to rights?
>
> Thanks Guys
>
> Steve
> N7LWF
>
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> [Non-text portions of this message have been removed]
>

41647. Re: [TS-520_820_530_830] Re: 520S VFO

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-11 14:56:59 UTC
From: Mike
Topic: 41640 Message: 41647

The cleaner most likely has evaporated over night but I don't wait that long, I remove any/all cleaner residue using forced air (canned air available at Walmart).

Anytime you use contact cleaner you should follow the cleaning process with forced air whether from an air compressor or from canned air to remove any/all cleaner residue. Never use more than is necessary to perform the cleaning of any electrical connection. Read the warnings on the cleaner's can BEFORE you use it. Most cleaning requires only a small amount of cleaner. I never recommend nor have used WD-40 as a cleaning agent. For pots I recommend DeoXit F5 fader lub cleaner and lubricant and still only use small amounts. I have used DoXit D5 on frozen "mechanical" mechanisms such as band switch bearings. I then apply a small amount of sewing machine oil to the bearing for lubrication. Frozen pots can "some times" be fixed using D5 applied at the pot's shaft point where it enters the front of the pot and allowed to "soak" into the bearing race for a few minutes. The shaft is then rotated until the shaft rotates freely. I then use forced air (canned air) to remove the residue then apply F5 Fader cleaner and lubricant to the pot. This doesn't always work especially if the pot's resistive element has been physically damaged.

The initial problem you have experienced in the VFO is instability that's caused by a very dirty variable capacitor shaft to frame DC connection at the rear of the variable capacitor. This requires applying small amounts of contact cleaner at this point then rotating the capacitor throughout its range several times. Depending on how dirty this DC connection is you may need to repeat the cleaning process more than once. Applying contact cleaner to the "plates" is not following K4EAA's instructions I'm sorry to say.

73
Mike
W5RKL

On 4/11/2013 7:05 AM, yioutta_99 wrote:
>
> thanks mike,
> no, i did not use compressed air. now that it has sat overnight, will
> it dissipate? or do i need to go back in and used compressed air? does
> compressed air remove residue?
> i thought i was following k4eaa's directions pretty close.
> I think the dial being off by 25k might be because i over cranked when
> i was working the plares back and forth. thinking i was in the middle
> when, i was really at one end. while looking in the radio.
> --- In TS-520_820_530_830@yahoogroups.com

> <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@...> wrote:
> >
> > Did you use generous amounts of compressed air or canned air after
> > cleaning the VFO to completely remove any/all cleaner residue BEFORE
> you
> > buttoned up the VFO? If you didn't then your problem is caused by the
> > cleaner residue you didn't remove before you buttoned up the VFO. You
> > need to remove ALL of the cleaner residue. Also you do not spray the
> > plates of the VFO, you apply a small amount of cleaner to the rear of
> > the VFO's variable capacitorshaft where the shaft to frame is located
> > then rotate the VFO knob throughout it's travel several times. You then
> > use generous amounts of compressed air or canned air to remove any/all
> > cleaner residue, let the VFO sit for 3 to 5 minutes then test the VFO.
> >
> > 73
> > Mike
> > W5RKL
> >
> >
> >
> > On 4/10/2013 11:07 PM, yioutta_99 wrote:
> > >
> > > Hi Gang,
> > >
> > > I read up on the why the VFo might have some dead spots, so i went in
> > > and opened the hatch and sprayed some Diox on the plates of the cap.
> > > After a few choice words i got the plate back on the VFO cover and
> > > fired it up. The Dead spot problem was gone. it worked like a
> charm. i
> > > did noticed that i was now drifting a bit..and its never drifted
> on me
> > > before. and on air check confirmed that. AND that i was off Freq by
> > > about 25KC. I went on the WWV to try and calibrate it. I thought i
> was
> > > suppose to adjust TC1 on the marker board. but that doesnt seem to
> > > help me much.. Is there another TC1? There is a trimmer in the can of
> > > the VFO is that the one I want? How do i put the trimmer TC1 on the
> > > marker board back to rights?
> > >
> > > Thanks Guys
> > >
> > > Steve
> > > N7LWF
> > >
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> > >
> > >
> > >
> > > [Non-text portions of this message have been removed]
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[Non-text portions of this message have been removed]

41648. Broken TS 830S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-11 18:23:15 UTC
From: Garry W
Topic: 41648 Message: 41648

Hi

I just bought a TS830S and had it shipped by courrier. I guess something has 'happened' during shipping as on arrival, it came on for a second or so and then blew the fuse in the radio.

Not having a 5amp, I briefly replaced with a 10amp and it came on, didn't blow but there is something not right, I immediately switched off and will be getting some 5 amp fuses tomorrow.

Any obvious areas I should be checking over to 'fix' the problem?

I know for a fact the rig was working before it was sent as it was sent by a friend and he used it to talk to me only a couple of days ago.

thanks

Garry K5XGB/G0IHB/F5VDM

41649. Re: 520S VFO

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-11 18:49:56 UTC
From: yioutta_99
Topic: 41640 Message: 41649

I guess I took ken"s info to heart: "A health dose of contact cleaner, working the cap between its extremes several times, followed by a quality lube applied to the contacts will prepare this important cap for the next 25-35 years."

The unit has sat overnight already. I will power up tonight and see if its still drifts. If so, Blow it out. But I dont know if blowing it out at this point would help.

If steady, how do i get the the 25 KC marker back to rights, is it a matter of just lining up the dails to a 25 incriment,say at 0 and 0 and then adjusting the TCI until the tone 0 beats.

Then how to get the VFO back on freq? Is it possible that it drifted that far out and will come back once the residue problem is resolved, or is it more of a matter of adjustment?

The main problem with this rig is has been trouble free for 30 years and wasnt much need to touch it. :)

Thanks again

Steve
--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> The cleaner most likely has evaporated over night but I don't wait that
> long, I remove any/all cleaner residue using forced air (canned air
> available at Walmart).
>
> Anytime you use contact cleaner you should follow the cleaning process
> with forced air whether from an air compressor or from canned air to
> remove any/all cleaner residue. Never use more than is necessary to
> perform the cleaning of any electrical connection. Read the warnings on
> the cleaner's can BEFORE you use it. Most cleaning requires only a small
> amount of cleaner. I never recommend nor have used WD-40 as a cleaning
> agent. For pots I recommend DeoXit F5 fader lub cleaner and lubricant
> and still only use small amounts. I have used DoXit D5 on frozen
> "mechanical" mechanisms such as band switch bearings. I then apply a
> small amount of sewing machine oil to the bearing for lubrication.
> Frozen pots can "some times" be fixed using D5 applied at the pot's
> shaft point where it enters the front of the pot and allowed to "soak"
> into the bearing race for a few minutes. The shaft is then rotated until
> the shaft rotates freely. I then use forced air (canned air) to remove
> the residue then apply F5 Fader cleaner and lubricant to the pot. This
> doesn't always work especially if the pot's resistive element has been
> physically damaged.
>
> The initial problem you have experienced in the VFO is instability
> that's caused by a very dirty variable capacitor shaft to frame DC

> connection at the rear of the variable capacitor. This requires applying
> small amounts of contact cleaner at this point then rotating the
> capacitor throughout its range several times. Depending on how dirty
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> W5RKL
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> On 4/11/2013 7:05 AM, yioutta_99 wrote:
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41650. Re: [TS-520_820_530_830] Re: 520S VFO

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-11 18:58:06 UTC
From: Joseph Stiles
Topic: 41640 Message: 41650

Steve,

I agree with Mike. The "cleaner" may have dissipated but, the junk you were trying to clean off/out probably did not.

Unfortunately...I suggest that you do it again.....do NOT button up the "side door" on the VFO...until you are certain that
all is well.

DeOxit products can be found at some electronics houses...and even music stores...especially ones that deal with
electric guitars and amplifiers. "canned air" you can find that "walmart"....I buy at costco....I go through a lot...just like
beer...I buy in 6 pack...or more...hihi

73 Joe
WB7UQU

From: Mike <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, April 11, 2013 7:56 AM
Subject: Re: [TS-520_820_530_830] Re: 520S VFO

The cleaner most likely has evaporated over night but I don't wait that long, I remove any/all cleaner residue using forced air (canned air available at Walmart).

Anytime you use contact cleaner you should follow the cleaning process with forced air whether from an air compressor or from canned air to remove any/all cleaner residue. Never use more than is necessary to perform the cleaning of any electrical connection. Read the warnings on the cleaner's can BEFORE you use it. Most cleaning requires only a small amount of cleaner. I never recommend nor have used WD-40 as a cleaning agent. For pots I recommend DeoXit F5 faderlub cleaner and lubricant and still only use small amounts. I have used DoXit D5 on frozen "mechanical" mechanisms such as band switch bearings. I then apply a small amount of sewing machine oil to the bearing for lubrication. Frozen pots can "some times" be fixed using D5 applied at the pot's shaft point where it enters the front of the pot and allowed to "soak" into the bearing race for a few minutes. The shaft is then rotated until the shaft rotates freely. I then use forced air (canned air) to remove the residue then apply F5 Fader cleaner and lubricant to the pot. This doesn't always work especially if the pot's resistive element has been physically damaged.

The initial problem you have experienced in the VFO is instability
that's caused by a very dirty variable capacitor shaft to frame DC
connection at the rear of the variable capacitor. This requires applying
small amounts of contact cleaner at this point then rotating the
capacitor throughout its range several times. Depending on how dirty
this DC connection is you may need to repeat the cleaning process more
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On 4/11/2013 7:05 AM, yioutta_99 wrote:
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41651. Re: [TS-520_820_530_830] Broken TS 830S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-11 19:06:30 UTC
From: Jude Domanski
Topic: 41648 Message: 41651

Hi Garry,

My first guess would be that something was jarred during transport, causing a short. I'd carefully disassemble and inspect.

73, Jude

--- On Thu, 4/11/13, Garry W <walker.garry@...> wrote:

From: Garry W <walker.garry@...>
Subject: [TS-520_820_530_830] Broken TS 830S
To: TS-520_820_530_830@yahoogroups.com
Date: Thursday, April 11, 2013, 1:23 PM

Hi

I just bought a TS830S and had it shipped by courrier. I guess something has 'happened' during shipping as on arrival, it came on for a second or so and then blew the fuse in the radio.

Not having a 5amp, I briefly replaced with a 10amp and it came on, didn't blow but there is something not right, I immediately switched off and will be getting some 5 amp fuses tomorrow.

Any obvious areas I should be checking over to 'fix' the problem?

I know for a fact the rig was working before it was sent as it was sent by a friend and he used it to talk to me only a couple of days ago.

thanks

Garry K5XGB/G0IHB/F5VDM

[Non-text portions of this message have been removed]

41652. Re: [TS-520_820_530_830] Re: 520S VFO

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-11 19:10:19 UTC
From: Alvin Chipmunk
Topic: 41640 Message: 41652

To extend the deoxit discussion a bit......

What product (number) is advised for use on a rather stiff dial? I really don't like spraying anything down with a can other than old carbs (joke)

TheVFO I recently acquired is tight. I haven't remove the dial yet (nee a fine screwdriver) but it looks like there is a friction ring inside that might be dried out? The gears are very very clean and no oxides on the case at all.

My enthusiasm for resurrecting this one cease temporarily when the connecting cable went faulty. It was very rigid and not flexible at all. Working it resulted in a separation of the small coaxial wire. I doubt I want to keep fixing it so I may redo the cable entirely for something more flexy....

Archie

From: Joseph Stiles <stilesjoseph@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Thursday, April 11, 2013 2:58 PM
Subject: Re: [TS-520_820_530_830] Re: 520S VFO

Steve,

I agree with Mike. The "cleaner" may have dissipated but, the junk you were trying to clean off/out probably did not.

Unfortunately...I suggest that you do it again.....do NOT button up the "side door" on the VFO...until you are certain that
all is well.

DeOxit products can be found at some electronics houses...and even music stores...especially ones that deal with
electric guitars and amplifiers. "canned air" you can find that "walmart"....I buy at costco....I go through a lot...just like
beer...I buy in 6 pack...or more...hihi

73 Joe
WB7UQU

From: Mike <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, April 11, 2013 7:56 AM
Subject: Re: [TS-520_820_530_830] Re: 520S VFO

The cleaner most likely has evaporated over night but I don't wait that long, I remove any/all cleaner residue using forced air (canned air

available at Walmart).

Anytime you use contact cleaner you should follow the cleaning process with forced air whether from an air compressor or from canned air to remove any/all cleaner residue. Never use more than is necessary to perform the cleaning of any electrical connection. Read the warnings on the cleaner's can BEFORE you use it. Most cleaning requires only a small amount of cleaner. I never recommend nor have used WD-40 as a cleaning agent. For pots I recommend DeoXit F5 faderlub cleaner and lubricant and still only use small amounts. I have used DoXit D5 on frozen "mechanical" mechanisms such as band switch bearings. I then apply a small amount of sewing machine oil to the bearing for lubrication. Frozen pots can "some times" be fixed using D5 applied at the pot's shaft point where it enters the front of the pot and allowed to "soak" into the bearing race for a few minutes. The shaft is then rotated until the shaft rotates freely. I then use forced air (canned air) to remove the residue then apply F5 Fader cleaner and lubricant to the pot. This doesn't always work especially if the pot's resistive element has been physically damaged.

The initial problem you have experienced in the VFO is instability that's caused by a very dirty variable capacitor shaft to frame DC connection at the rear of the variable capacitor. This requires applying small amounts of contact cleaner at this point then rotating the capacitor throughout its range several times. Depending on how dirty this DC connection is you may need to repeat the cleaning process more than once. Applying contact cleaner to the "plates" is not following K4EAA's instructions I'm sorry to say.

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W5RKL

On 4/11/2013 7:05 AM, yioutta_99 wrote:
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41653. Re: [TS-520_820_530_830] Re: 520S VFO

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-11 19:27:53 UTC
From: Mike
Topic: 41640 Message: 41653

Steve,

You failed to mention whether the dial is off frequency the same on all
bands. If the dials off the same on all bands then it's most likely
On 4/11/2013 1:49 PM, yioutta_99 wrote:
>
>
> I guess I took ken"s info to heart: "A health dose of contact cleaner,
> working the cap between its extremes several times, followed by a
> quality lube applied to the contacts will prepare this important cap
> for the next 25-35 years."
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> The unit has sat overnight already. I will power up tonight and see if
> its still drifts. If so, Blow it out. But I dont know if blowing it
> out at this point would help.
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> If steady, how do i get the the 25 KC marker back to rights, is it a
> matter of just lining up the dails to a 25 incriment,say at 0 and 0
> and then adjusting the TCI until the tone 0 beats.
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> Then how to get the VFO back on freq? Is it possible that it drifted
> that far out and will come back once the residue problem is resolved,
> or is it more of a matter of adjustment?
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> The main problem with this rig is has been trouble free for 30 years
> and wasnt much need to touch it. :)
>
> Thanks again
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> Steve
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[Non-text portions of this message have been removed]

41654. Re: [TS-520_820_530_830] Re: 520S VFO

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-11 19:47:24 UTC
From: Joseph Stiles
Topic: 41640 Message: 41654

Archie,

  Inside there are 3 ball bearings. The outside has the knurles...you can loosen or tighten it...to obtain the proper friction. I use a
non-petroleum based(synthetic) light weight lube...I apply it with a small bottle which has a long, small diameter tube. You can find them at hobby stores.
A few drops on the shaft that goes through the knurled
knob...rotate....rotate...rotate...will help a LOT!
  This part is packed with old grease....and sometimes just a bit of "fresh" will help.

73 Joe
WB7UQU

From: Alvin Chipmunk <n3kvl@yahoo.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Thursday, April 11, 2013 12:10 PM
Subject: Re: [TS-520_820_530_830] Re: 520S VFO

To extend the deoxit discussion a bit......

What product (number) is advised for use on a rather stiff dial? I really don't like spraying anything down with a can other than old carbs (joke)

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Archie

From: Joseph Stiles <stilesjoseph@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Thursday, April 11, 2013 2:58 PM
Subject: Re: [TS-520_820_530_830] Re: 520S VFO

Steve,

  I agree with Mike. The "cleaner" may have dissipated but, the junk you were trying to clean off/out probably did not.

  Unfortunately...I suggest that you do it again.....do NOT button up the "side door" on the VFO...until you are certain that

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From: Mike <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, April 11, 2013 7:56 AM
Subject: Re: [TS-520_820_530_830] Re: 520S VFO

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41655. Re: [TS-520_820_530_830] Re: 520S VFO

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-11 19:48:47 UTC
From: Mike
Topic: 41640 Message: 41655

I sent an response earlier that was incomplete so disregard it. I clicked on the SEND icon instead of cancel.

If the VFO is off frequency the same amount on all bands then I do not suspect, at this point, the VFO alignment adjustment is the source of your problem. I suspect the dial's "mechanical" alignment may very well be the source of your problem. Did you take the time to check the VFO's output frequency range using a frequency counter before you started tweaking and turning alignment components? I would not touch any electrical alignment pots, trimmers, etc, until you are absolutely sure the VFO is in fact off frequency.

73
Mike

On 4/11/2013 1:49 PM, yioutta_99 wrote:
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> I guess I took ken"s info to heart: "A health dose of contact cleaner,
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> > small amount of sewing machine oil to the bearing for lubrication.
> > Frozen pots can "some times" be fixed using D5 applied at the pot's
> > shaft point where it enters the front of the pot and allowed to "soak"
> > into the bearing race for a few minutes. The shaft is then rotated
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> > the shaft rotates freely. I then use forced air (canned air) to remove
> > the residue then apply F5 Fader cleaner and lubricant to the pot. This
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> > connection at the rear of the variable capacitor. This requires
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> > small amounts of contact cleaner at this point then rotating the
> > capacitor throughout its range several times. Depending on how dirty
> > this DC connection is you may need to repeat the cleaning process more
> > than once. Applying contact cleaner to the "plates" is not following
> > K4EAA's instructions I'm sorry to say.
> >
> > 73
> > Mike
> > W5RKL
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> >
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> > On 4/11/2013 7:05 AM, yioutta_99 wrote:
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> > > thanks mike,
> > > no, i did not use compressed air. now that it has sat overnight, will
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> > > compressed air remove residue?
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> > > i was working the plares back and forth. thinking i was in the middle

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> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@> wrote:
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> > > > Did you use generous amounts of compressed air or canned air after
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41656. TS-520 for parts

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-11 22:32:08 UTC
From: Stephen - AE2S
Topic: 41656 Message: 41656

Hi all,
I have a bunch of TS-520 parts listed on QRZ if anyone is looking for spare parts.

http://forums.qrz.com/showthread.php?386995-TS-520

Regards,
Steve - AE2S

41657. Re: 520S VFO

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-11 22:58:17 UTC
From: yioutta_99
Topic: 41640 Message: 41657

i suspect its also mechanical. i think was too enthusiastic when doing a complete sweep. on WWV. I am picking up the station below the 15.000 mark. the trimer i touched was on the marker board. so i need to get that back and then deal with the mechanics. any help would be great. i dont have a freq counter.

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> I sent an response earlier that was incomplete so disregard it. I
> clicked on the SEND icon instead of cancel.
>
> If the VFO is off frequency the same amount on all bands then I do not
> suspect, at this point, the VFO alignment adjustment is the source of
> your problem. I suspect the dial's "mechanical" alignment may very well
> be the source of your problem. Did you take the time to check the VFO's
> output frequency range using a frequency counter before you started
> tweaking and turning alignment components? I would not touch any
> electrical alignment pots, trimmers, etc, until you are absolutely sure
> the VFO is in fact off frequency.
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> 73
> Mike
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>
> On 4/11/2013 1:49 PM, yioutta_99 wrote:
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> >
> > I guess I took ken"s info to heart: "A health dose of contact cleaner,
> > working the cap between its extremes several times, followed by a
> > quality lube applied to the contacts will prepare this important cap
> > for the next 25-35 years."
> >
> > The unit has sat overnight already. I will power up tonight and see if
> > its still drifts. If so, Blow it out. But I dont know if blowing it
> > out at this point would help.
> >
> > If steady, how do i get the the 25 KC marker back to rights, is it a
> > matter of just lining up the dails to a 25 incriment,say at 0 and 0
> > and then adjusting the TCI until the tone 0 beats.
> >
> > Then how to get the VFO back on freq? Is it possible that it drifted
> > that far out and will come back once the residue problem is resolved,

> > or is it more of a matter of adjustment?
> >
> > The main problem with this rig is has been trouble free for 30 years
> > and wasnt much need to touch it. :)
> >
> > Thanks again
> >
> > Steve
> > --- In TS-520_820_530_830@...m
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@> wrote:
> > >
> > > The cleaner most likely has evaporated over night but I don't wait that
> > > long, I remove any/all cleaner residue using forced air (canned air
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> > > Anytime you use contact cleaner you should follow the cleaning process
> > > with forced air whether from an air compressor or from canned air to
> > > remove any/all cleaner residue. Never use more than is necessary to
> > > perform the cleaning of any electrical connection. Read the warnings on
> > > the cleaner's can BEFORE you use it. Most cleaning requires only a
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> > > amount of cleaner. I never recommend nor have used WD-40 as a cleaning
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41658. Re: [TS-520_820_530_830] Re: 520S VFO

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-11 21:56:46 UTC
From: Sal Cerda
Topic: 41640 Message: 41658

Same as the old boss
On Apr 11, 2013 1:58 PM, "Joseph Stiles" <stilesjoseph@...> wrote:

> **
>
>
> Steve,
>
> I agree with Mike. The "cleaner" may have dissipated but, the junk you
> were trying to clean off/out probably did not.
>
> Unfortunately...I suggest that you do it again.....do NOT button up the
> "side door" on the VFO...until you are certain that
> all is well.
>
> DeOxit products can be found at some electronics houses...and even music
> stores...especially ones that deal with
> electric guitars and amplifiers. "canned air" you can find that
> "walmart"....I buy at costco....I go through a lot...just like
> beer...I buy in 6 pack...or more...hihi
>
>
>
> 73 Joe
> WB7UQU
>
> _____
> From: Mike <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, April 11, 2013 7:56 AM
> Subject: Re: [TS-520_820_530_830] Re: 520S VFO
>
>
>
> The cleaner most likely has evaporated over night but I don't wait that
> long, I remove any/all cleaner residue using forced air (canned air
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> Anytime you use contact cleaner you should follow the cleaning process
> with forced air whether from an air compressor or from canned air to
> remove any/all cleaner residue. Never use more than is necessary to
> perform the cleaning of any electrical connection. Read the warnings on
> the cleaner's can BEFORE you use it. Most cleaning requires only a small
> amount of cleaner. I never recommend nor have used WD-40 as a cleaning
> agent. For pots I recommend DeoXit F5 faderlub cleaner and lubricant

> and still only use small amounts. I have used DoXit D5 on frozen
> "mechanical" mechanisms such as band switch bearings. I then apply a
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> this DC connection is you may need to repeat the cleaning process more
> than once. Applying contact cleaner to the "plates" is not following
> K4EAA's instructions I'm sorry to say.
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> 73
> Mike
> W5RKL
>
> On 4/11/2013 7:05 AM, yioutta_99 wrote:
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> > thanks mike,
> > no, i did not use compressed air. now that it has sat overnight, will
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41659. Transformer smoking

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-11 22:04:02 UTC
From: Garry Walker
Topic: 41659 Message: 41659

Hi. I plug in my ts830 and the transformer is smoking upon switch on. Is this fixable or is it time for a replacement? If I need to replace, anyone have a source at reasonable cost?

Thanks.

G

[Non-text portions of this message have been removed]

41660. pricing a TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-11 23:53:52 UTC
From: Michael
Topic: 41660 Message: 41660

Won't be selling on line so I thought this would be ok to ask. What would you price a good condition Ts-520 at for sale? $250 range?

Mike
KB1IUI

41661. Re: [TS-520_820_530_830] pricing a TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-12 00:01:53 UTC
From: KB1TCD
Topic: 41660 Message: 41661

I would say anywhere between $175 and $250 is what I've seen them going for.

73

Jose KB1TCD

41662. Re: [TS-520_820_530_830] Re: 520S VFO

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-12 00:11:06 UTC
From: Dave & Loraine
Topic: 41640 Message: 41662

The variable cap ground wiper contacts should not be lubed after Deoxit.

[Non-text portions of this message have been removed]

41663. Re: [TS-520_820_530_830] Re: 520S VFO

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-12 00:34:16 UTC
From: Mike
Topic: 41640 Message: 41663

You still haven't stated which model of 520 you have. Look directly below the VFO knob on the front panel and you will see a thick label identifying which 520 model you have. The model label will indicate one of the following:

TS-520
TS-520S
TS-520SE

You will need to have the correct service manual for the model of 520 you have.

As I have stated, if you do not have the correct service manual for the 520 you have then you should download it, free, at the following website:

www.n6wk.com/kenwood/

and use it when servicing your 520's dial calibration issue.

First tune in WWV and adjust the VFO for a zero beat. You may have to adjust the PRESELECTOR for a peak signal. A zero beat is when you tune WWV or any steady carrier signal, until the beat note tone becomes so low in frequency that you can't hear it in the speaker. At that point the signal is considered at "zero beat". When zero beat is achieved with WWV and without touching the VFO tuning, turn the Marker ON and adjust the Marker's TC1 so the Marker signal is also at zero beat. Once the Marker signal is at zero beat stop adjusting the Marker's TC1. From now on you will use the Marker as the signal source for setting the VFO for a zero beat and the sub dial's zero at 12 o'clock. It's best at this point to disconnect the antenna so no other signal(s) interferes with the Marker signal.

The sub dial is more than likely out of physical alignment. You will have to remove the VFO knob, the Khz dial plate, the shaft bearing, the felt washer, then physically adjust the sub dial so the sub dial's "zero" is at 12 o'clock while maintaining the Marker at zero beat. The transceiver must be powered up when performing this mechanical adjustment. Once the sub dial's zero is at 12 o'clock and the Marker is still at zero beat and without moving the VFO tuning shaft, reinstall the felt washer, the shaft bearing, the Khz dial plate, and the VFO knob. Test the dial to ensure it rotates properly and the Marker is at zero beat at each 25Khz sub dial label starting at zero sub dial setting. Remember, the VFO and dial are "analog" and they more than likely will NOT be exactly on every 25Khz dial mark but they should be quite close, providing the VFO trimmers have not be messed with by you. As I said before, you should never touch any of the VFO trimmer adjustments until you absolutely sure the VFO needs adjusting. Too many

hams mistakenly jump to conclusion, the ole "knee jerk reaction",
adjusting controls that quite often do not need adjusting.

73
Mike

On 4/11/2013 5:58 PM, yioutta_99 wrote:
>
> i suspect its also mechanical. i think was too enthusiastic when doing
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> > > > perform the cleaning of any electrical connection. Read the
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> > > > the cleaner's can BEFORE you use it. Most cleaning requires only a
> > > small
> > > > amount of cleaner. I never recommend nor have used WD-40 as a
> cleaning
> > > > agent. For pots I recommend DeoXit F5 fader lub cleaner and
> lubricant
> > > > and still only use small amounts. I have used DoXit D5 on frozen
> > > > "mechanical" mechanisms such as band switch bearings. I then apply a
> > > > small amount of sewing machine oil to the bearing for lubrication.
> > > > Frozen pots can "some times" be fixed using D5 applied at the pot's
> > > > shaft point where it enters the front of the pot and allowed to
> "soak"
> > > > into the bearing race for a few minutes. The shaft is then rotated
> > > until
> > > > the shaft rotates freely. I then use forced air (canned air) to
> remove
> > > > the residue then apply F5 Fader cleaner and lubricant to the
> pot. This
> > > > doesn't always work especially if the pot's resistive element
> has been
> > > > physically damaged.

> > > >
> > > > The initial problem you have experienced in the VFO is instability
> > > > that's caused by a very dirty variable capacitor shaft to frame DC
> > > > connection at the rear of the variable capacitor. This requires
> > > applying
> > > > small amounts of contact cleaner at this point then rotating the
> > > > capacitor throughout its range several times. Depending on how dirty
> > > > this DC connection is you may need to repeat the cleaning
> process more
> > > > than once. Applying contact cleaner to the "plates" is not following
> > > > K4EAA's instructions I'm sorry to say.
> > > >
> > > > 73
> > > > Mike
> > > > W5RKL
> > > >
> > > >
> > > >
> > > >
> > > > On 4/11/2013 7:05 AM, yioutta_99 wrote:
> > > > >
> > > > > thanks mike,
> > > > > no, i did not use compressed air. now that it has sat
> overnight, will
> > > > > it dissipate? or do i need to go back in and used compressed air?
> > > does
> > > > > compressed air remove residue?
> > > > > i thought i was following k4eaa's directions pretty close.
> > > > > I think the dial being off by 25k might be because i over cranked
> > > when
> > > > > i was working the plares back and forth. thinking i was in the
> middle
> > > > > when, i was really at one end. while looking in the radio.
> > > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@>
> wrote:
> > > > > >
> > > > > > Did you use generous amounts of compressed air or canned air
> after
> > > > > > cleaning the VFO to completely remove any/all cleaner residue
> > > BEFORE
> > > > > you
> > > > > > buttoned up the VFO? If you didn't then your problem is caused
> > > by the
> > > > > > cleaner residue you didn't remove before you buttoned up the
> > > VFO. You
> > > > > > need to remove ALL of the cleaner residue. Also you do not
> spray the

> > > > > > plates of the VFO, you apply a small amount of cleaner to the
> > > rear of
> > > > > > the VFO's variable capacitorshaft where the shaft to frame is
> > > located
> > > > > > then rotate the VFO knob throughout it's travel several times.
> > > You then
> > > > > > use generous amounts of compressed air or canned air to remove
> > > any/all
> > > > > > cleaner residue, let the VFO sit for 3 to 5 minutes then test
> > > the VFO.
> > > > > >
> > > > > > 73
> > > > > > Mike
> > > > > > W5RKL
> > > > > >
> > > > > >
> > > > > >
> > > > > > On 4/10/2013 11:07 PM, yioutta_99 wrote:
> > > > > >
> > > > > > Hi Gang,
> > > > > >
> > > > > > I read up on the why the VFo might have some dead spots, so i
> > > went in
> > > > > > and opened the hatch and sprayed some Diox on the plates of
> > > the cap.
> > > > > > After a few choice words i got the plate back on the VFO
> cover and
> > > > > > fired it up. The Dead spot problem was gone. it worked like a
> > > > > charm. i
> > > > > > did noticed that i was now drifting a bit..and its never
> drifted
> > > > > on me
> > > > > > before. and on air check confirmed that. AND that i was off
> > > Freq by
> > > > > > about 25KC. I went on the WWV to try and calibrate it. I
> > > thought i
> > > > > was
> > > > > > suppose to adjust TC1 on the marker board. but that doesnt
> seem to
> > > > > > help me much.. Is there another TC1? There is a trimmer in
> the
> > > can of
> > > > > > the VFO is that the one I want? How do i put the trimmer TC1
> > > on the
> > > > > > marker board back to rights?
> > > > > >
> > > > > > Thanks Guys
> > > > > >
> > > > > > Steve
> > > > > > N7LWF

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41664. TS 830S transformer

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-11 23:35:44 UTC
From: Garry W
Topic: 41664 Message: 41664

Looks like my transformer is smoking. Should I assume the transformer has had it or is there something else to check. If it's had it, can these things get rebuilt or can spares still be found.

thanks

Garry K5XGB / G0IHB / F5VDM

41665. Re: [TS-520_820_530_830] pricing a TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-12 00:05:48 UTC
From: michael Miller
Topic: 41660 Message: 41665

And of course, depending upon if there filters installed (ssb or cw) and exterior condition. W9MVM

BEST 73 and GODS BLESSINGS, MIKE & Princess Ruth.

>_____
> From: KB1TCD <kb1tcd@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Thursday, April 11, 2013 8:01 PM
>Subject: Re: [TS-520_820_530_830] pricing a TS-520
>
>
>
>
>I would say anywhere between $175 and $250 is what I've seen them going
>for.
>
>73
>
>Jose KB1TCD
>
>
>

[Non-text portions of this message have been removed]

41666. Re: [TS-520_820_530_830] TS-520 for parts

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-12 01:28:53 UTC
From: Peter Carr
Topic: 41656 Message: 41666

Hi Steve. I could use the CW filter from your 520. Mine is without one and I've wanted to try code. Let me know if it's still available.
Thanks & 73,
Pete Carr WW3O
wb3bqo@...

From: Stephen - AE2S <ae2s@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, April 11, 2013 6:32 PM
Subject: [TS-520_820_530_830] TS-520 for parts

Hi all,
I have a bunch of TS-520 parts listed on QRZ if anyone is looking for spare parts.

http://forums.qrz.com/showthread.php?386995-TS-520

Regards,
Steve - AE2S

[Non-text portions of this message have been removed]

41667. Re: [TS-520_820_530_830] TS 830S transformer

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-12 01:28:37 UTC
From: K1IKE-MAIL
Topic: 41664 Message: 41667

I would disconnect the secondary and see if you can isolate to problem to the transformer or a short in the secondary side circuitry.

73, joe, k1ike

On Apr 11, 2013, at 19:35, "Garry W" <walker.garry@...> wrote:

> Looks like my transformer is smoking. Should I assume the transformer has had it or is there something else to check. If it's had it, can these things get rebuilt or can spares still be found.
>
> thanks
>
> Garry K5XGB / G0IHB / F5VDM
>
>
>
> ------------------------------------
> Y
> Yahoo! Groups Links
>
>
>

41668. Re: Transformer smoking

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-12 01:32:33 UTC
From: n6wk_skcc3
Topic: 41659 Message: 41668

Put a Transformer saver in line before you go any further.
It tells how to build one in the Files section.
Disconnecting the secondaries and then reconnecting and testing them one at a time is good advice to locate the problem.

73,
Gordon
N6WK

--- In TS-520_820_530_830@yahoogroups.com, Garry Walker <walker.garry@...> wrote:
>
> Hi. I plug in my ts830 and the transformer is smoking upon switch on. Is
> this fixable or is it time for a replacement? If I need to replace, anyone
> have a source at reasonable cost?
>
> Thanks.
>
> G
>
>
> [Non-text portions of this message have been removed]
>

41669. RE: [TS-520_820_530_830] Transformer smoking

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-12 01:41:25 UTC
From: Brad Allen
Topic: 41659 Message: 41669

Of course it's fixable providing the transformer is not shorted out now. Do you have a call? What are your abilities to do such work? Have you got a schematic to isolate the problem? It seems to me if it is the primary smoking, it would blow a fuse. The secondary, well there are other components that would blow before smoking the transformer. The thing is that transformer is not going to smoke till a winding gets hot. I believe you should isolate the issue then find out why the fuse did not blow. Maybe check a little harder to find what is REALLY smoking in there. Transformer is not going to smoke when you plug it in. The load will blow a fuse first. Look deeper, maybe It's a capacitor or a power resistor (bleeder) that is smoking. Brad KB2CHY

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Garry Walker
Sent: Thursday, April 11, 2013 6:04 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Transformer smoking

Hi. I plug in my ts830 and the transformer is smoking upon switch on. Is this fixable or is it time for a replacement? If I need to replace, anyone have a source at reasonable cost?

Thanks.

G

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41670. Re: 520S VFO

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-12 01:47:59 UTC
From: yioutta_99
Topic: 41640 Message: 41670

Sorry, Its the 520S

I just took a listen, and its still drifting. i listen for a bit on 20 meters.

I am thinking there maybe some dislodged gunk, or residue in the VFO. i will blow it out first to see if it can stabilize, then go in for the adjustment you wrote out for me. i will see if i have a service manual in this computer, if not i will re down load.

THANK YOU for the help

steve
--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> You still haven't stated which model of 520 you have. Look directly
> below the VFO knob on the front panel and you will see a thick label
> identifying which 520 model you have. The model label will indicate one
> of the following:
>
> TS-520
> TS-520S
> TS-520SE
>
> You will need to have the correct service manual for the model of 520
> you have.
>
> As I have stated, if you do not have the correct service manual for the
> 520 you have then you should download it, free, at the following website:
>
> www.n6wk.com/kenwood/
>
> and use it when servicing your 520's dial calibration issue.
>
> First tune in WWV and adjust the VFO for a zero beat. You may have to
> adjust the PRESELECTOR for a peak signal. A zero beat is when you tune
> WWV or any steady carrier signal, until the beat note tone becomes so
> low in frequency that you can't hear it in the speaker. At that point
> the signal is considered at "zero beat". When zero beat is achieved with
> WWV and without touching the VFO tuning, turn the Marker ON and adjust
> the Marker's TC1 so the Marker signal is also at zero beat. Once the
> Marker signal is at zero beat stop adjusting the Marker's TC1. From now
> on you will use the Marker as the signal source for setting the VFO for
> a zero beat and the sub dial's zero at 12 o'clock. It's best at this
> point to disconnect the antenna so no other signal(s) interferes with
> the Marker signal.
>
> The sub dial is more than likely out of physical alignment. You will

> have to remove the VFO knob, the Khz dial plate, the shaft bearing, the
> felt washer, then physically adjust the sub dial so the sub dial's
> "zero" is at 12 o'clock while maintaining the Marker at zero beat. The
> transceiver must be powered up when performing this mechanical
> adjustment. Once the sub dial's zero is at 12 o'clock and the Marker is
> still at zero beat and without moving the VFO tuning shaft, reinstall
> the felt washer, the shaft bearing, the Khz dial plate, and the VFO
> knob. Test the dial to ensure it rotates properly and the Marker is at
> zero beat at each 25Khz sub dial label starting at zero sub dial
> setting. Remember, the VFO and dial are "analog" and they more than
> likely will NOT be exactly on every 25Khz dial mark but they should be
> quite close, providing the VFO trimmers have not be messed with by you.
> As I said before, you should never touch any of the VFO trimmer
> adjustments until you absolutely sure the VFO needs adjusting. Too many
> hams mistakenly jump to conclusion, the ole "knee jerk reaction",
> adjusting controls that quite often do not need adjusting.
>
> 73
> Mike
>
>
>
> On 4/11/2013 5:58 PM, yioutta_99 wrote:
> >
> > i suspect its also mechanical. i think was too enthusiastic when doing
> > a complete sweep. on WWV. I am picking up the station below the 15.000
> > mark. the trimer i touched was on the marker board. so i need to get
> > that back and then deal with the mechanics. any help would be great. i
> > dont have a freq counter.
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@> wrote:
> > >
> > > I sent an response earlier that was incomplete so disregard it. I
> > > clicked on the SEND icon instead of cancel.
> > >
> > > If the VFO is off frequency the same amount on all bands then I do not
> > > suspect, at this point, the VFO alignment adjustment is the source of
> > > your problem. I suspect the dial's "mechanical" alignment may very well
> > > be the source of your problem. Did you take the time to check the VFO's
> > > output frequency range using a frequency counter before you started
> > > tweaking and turning alignment components? I would not touch any
> > > electrical alignment pots, trimmers, etc, until you are absolutely sure
> > > the VFO is in fact off frequency.
> > >
> > > 73
> > > Mike
> > >
> > >
> > >

> > >
> > >
> > >
> > > On 4/11/2013 1:49 PM, yioutta_99 wrote:
> > > >
> > > >
> > > > I guess I took ken"s info to heart: "A health dose of contact
> > cleaner,
> > > > working the cap between its extremes several times, followed by a
> > > > quality lube applied to the contacts will prepare this important cap
> > > > for the next 25-35 years."
> > > >
> > > > The unit has sat overnight already. I will power up tonight and
> > see if
> > > > its still drifts. If so, Blow it out. But I dont know if blowing it
> > > > out at this point would help.
> > > >
> > > > If steady, how do i get the the 25 KC marker back to rights, is it a
> > > > matter of just lining up the dails to a 25 incriment,say at 0 and 0
> > > > and then adjusting the TCI until the tone 0 beats.
> > > >
> > > > Then how to get the VFO back on freq? Is it possible that it drifted
> > > > that far out and will come back once the residue problem is resolved,
> > > > or is it more of a matter of adjustment?
> > > >
> > > > The main problem with this rig is has been trouble free for 30 years
> > > > and wasnt much need to touch it. :)
> > > >
> > > > Thanks again
> > > >
> > > > Steve
> > > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@> wrote:
> > > > >
> > > > > The cleaner most likely has evaporated over night but I don't
> > wait that
> > > > > long, I remove any/all cleaner residue using forced air (canned air
> > > > > available at Walmart).
> > > > >
> > > > > Anytime you use contact cleaner you should follow the cleaning
> > process
> > > > > with forced air whether from an air compressor or from canned air to
> > > > > remove any/all cleaner residue. Never use more than is necessary to
> > > > > perform the cleaning of any electrical connection. Read the
> > warnings on
> > > > > the cleaner's can BEFORE you use it. Most cleaning requires only a
> > > > small
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> > > > > agent. For pots I recommend DeoXit F5 fader lub cleaner and
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> > > > > does
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> > > > > I think the dial being off by 25k might be because i over cranked
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> > > > > i was working the plares back and forth. thinking i was in the
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> > > > > when, i was really at one end. while looking in the radio.

> > > > > > --- In TS-520_820_530_830@yahoogroups.com
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> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@>
> > wrote:
> > > > > > > >
> > > > > > > > Did you use generous amounts of compressed air or canned air
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> > > > > > > > cleaning the VFO to completely remove any/all cleaner residue
> > > > > BEFORE
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> > > > > > > > the VFO's variable capacitorshaft where the shaft to frame is
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> > > > > > > > then rotate the VFO knob throughout it's travel several times.
> > > > You then
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> > > > any/all
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> > > > the VFO.
> > > > > > > >
> > > > > > > > 73
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> > > > > > > > W5RKL
> > > > > > > >
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> > > > > > > > On 4/10/2013 11:07 PM, yioutta_99 wrote:
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> > > > > > > > After a few choice words i got the plate back on the VFO
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> > > > > > > > the VFO is that the one I want? How do i put the trimmer TC1
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> > > > > > > marker board back to rights?
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> > > > > > > > Thanks Guys
> > > > > > > >
> > > > > > > > Steve
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> > > > > > > >
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41671. Re: TS 830S transformer

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-12 02:09:10 UTC
From: Bob
Topic: 41664 Message: 41671

If you end up needing the power transformer then I have them for the 830S...
Clean & functional with no funny smells...
Sell them for $50.00 plus $12.00 to mail...
Be sure to check the circuits as best as you can...
Bob
****

--- In TS-520_820_530_830@yahoogroups.com, "Garry W" <walker.garry@...> wrote:
>
> Looks like my transformer is smoking. Should I assume the transformer has had it or is there something else to check. If it's had it, can these things get rebuilt or can spares still be found.
>
> thanks
>
> Garry K5XGB / G0IHB / F5VDM
>

41672. Re: 520S VFO

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-12 03:39:29 UTC
From: yioutta_99
Topic: 41640 Message: 41672

UPDATE:
I re-cleaned and Blew out the VFO. Seems like the drifting stopped. i went on WWV and found i wasnt too far off the mark for some reason. So maybe the problem wasnt mechanical..maybe just left over gunk(?). I zero beated the marker, but when the band switch was on WWV I was not getting the tone every 25 KC..it was something around 30 some. I went on 20m to pick up the maritime net at 14.300 and i was real close on the dial. i was able to just adjust the outer plate. I turned the marker on and it was on every 25KC now. QSOed with a fellow in CA and got a freq check and i was about a 1/2 KC off.
I am wondering if have extra residue on the band switch (sprayed it the night before) good be part of the problem. and working a few times more cleaned it up.

Thanks guys

steve

--- In TS-520_820_530_830@yahoogroups.com, "yioutta_99" <yioutta_99@...> wrote:
>
>
> Sorry, Its the 520S
>
> I just took a listen, and its still drifting. i listen for a bit on 20 meters.
>
> I am thinking there maybe some dislodged gunk, or residue in the VFO. i will blow it out first to see if it can stabilize, then go in for the adjustment you wrote out for me. i will see if i have a service manual in this computer, if not i will re down load.
>
> THANK YOU for the help
>
> steve
> --- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@> wrote:
> >
> > You still haven't stated which model of 520 you have. Look directly
> > below the VFO knob on the front panel and you will see a thick label
> > identifying which 520 model you have. The model label will indicate one
> > of the following:
> >
> > TS-520
> > TS-520S
> > TS-520SE
> >
> > You will need to have the correct service manual for the model of 520
> > you have.
> >
> > As I have stated, if you do not have the correct service manual for the
> > 520 you have then you should download it, free, at the following website:
> >

> > www.n6wk.com/kenwood/
> >
> > and use it when servicing your 520's dial calibration issue.
> >
> > First tune in WWV and adjust the VFO for a zero beat. You may have to
> > adjust the PRESELECTOR for a peak signal. A zero beat is when you tune
> > WWV or any steady carrier signal, until the beat note tone becomes so
> > low in frequency that you can't hear it in the speaker. At that point
> > the signal is considered at "zero beat". When zero beat is achieved with
> > WWV and without touching the VFO tuning, turn the Marker ON and adjust
> > the Marker's TC1 so the Marker signal is also at zero beat. Once the
> > Marker signal is at zero beat stop adjusting the Marker's TC1. From now
> > on you will use the Marker as the signal source for setting the VFO for
> > a zero beat and the sub dial's zero at 12 o'clock. It's best at this
> > point to disconnect the antenna so no other signal(s) interferes with
> > the Marker signal.
> >
> > The sub dial is more than likely out of physical alignment. You will
> > have to remove the VFO knob, the Khz dial plate, the shaft bearing, the
> > felt washer, then physically adjust the sub dial so the sub dial's
> > "zero" is at 12 o'clock while maintaining the Marker at zero beat. The
> > transceiver must be powered up when performing this mechanical
> > adjustment. Once the sub dial's zero is at 12 o'clock and the Marker is
> > still at zero beat and without moving the VFO tuning shaft, reinstall
> > the felt washer, the shaft bearing, the Khz dial plate, and the VFO
> > knob. Test the dial to ensure it rotates properly and the Marker is at
> > zero beat at each 25Khz sub dial label starting at zero sub dial
> > setting. Remember, the VFO and dial are "analog" and they more than
> > likely will NOT be exactly on every 25Khz dial mark but they should be
> > quite close, providing the VFO trimmers have not be messed with by you.
> > As I said before, you should never touch any of the VFO trimmer
> > adjustments until you absolutely sure the VFO needs adjusting. Too many
> > hams mistakenly jump to conclusion, the ole "knee jerk reaction",
> > adjusting controls that quite often do not need adjusting.
> >
> > 73
> > Mike
> >
> >
> >
> > On 4/11/2013 5:58 PM, yioutta_99 wrote:
> > >
> > > i suspect its also mechanical. i think was too enthusiastic when doing
> > > a complete sweep. on WWV. I am picking up the station below the 15.000
> > > mark. the trimer i touched was on the marker board. so i need to get
> > > that back and then deal with the mechanics. any help would be great. i
> > > dont have a freq counter.
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@> wrote:

> > > >
> > > > I sent an response earlier that was incomplete so disregard it. I
> > > > clicked on the SEND icon instead of cancel.
> > > >
> > > > If the VFO is off frequency the same amount on all bands then I do not
> > > > suspect, at this point, the VFO alignment adjustment is the source of
> > > > your problem. I suspect the dial's "mechanical" alignment may very well
> > > > be the source of your problem. Did you take the time to check the VFO's
> > > > output frequency range using a frequency counter before you started
> > > > tweaking and turning alignment components? I would not touch any
> > > > electrical alignment pots, trimmers, etc, until you are absolutely sure
> > > > the VFO is in fact off frequency.
> > > >
> > > > 73
> > > > Mike
> > > >
> > > >
> > > >
> > > >
> > > >
> > > >
> > > > On 4/11/2013 1:49 PM, yioutta_99 wrote:
> > > > >
> > > > >
> > > > > I guess I took ken"s info to heart: "A health dose of contact
> > > cleaner,
> > > > > working the cap between its extremes several times, followed by a
> > > > > quality lube applied to the contacts will prepare this important cap
> > > > > for the next 25-35 years."
> > > > >
> > > > > The unit has sat overnight already. I will power up tonight and
> > > see if
> > > > > its still drifts. If so, Blow it out. But I dont know if blowing it
> > > > > out at this point would help.
> > > > >
> > > > > If steady, how do i get the the 25 KC marker back to rights, is it a
> > > > > matter of just lining up the dails to a 25 incriment,say at 0 and 0
> > > > > and then adjusting the TCI until the tone 0 beats.
> > > > >
> > > > > Then how to get the VFO back on freq? Is it possible that it drifted
> > > > > that far out and will come back once the residue problem is resolved,
> > > > > or is it more of a matter of adjustment?
> > > > >
> > > > > The main problem with this rig is has been trouble free for 30 years
> > > > > and wasnt much need to touch it. :)
> > > > >
> > > > > Thanks again
> > > > >
> > > > > Steve
> > > > > --- In TS-520_820_530_830@yahoogroups.com

> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@> wrote:
> > > > > >
> > > > > > The cleaner most likely has evaporated over night but I don't
> > > wait that
> > > > > > long, I remove any/all cleaner residue using forced air (canned air
> > > > > > available at Walmart).
> > > > > >
> > > > > > Anytime you use contact cleaner you should follow the cleaning
> > > process
> > > > > > with forced air whether from an air compressor or from canned air to
> > > > > > remove any/all cleaner residue. Never use more than is necessary to
> > > > > > perform the cleaning of any electrical connection. Read the
> > > warnings on
> > > > > > the cleaner's can BEFORE you use it. Most cleaning requires only a
> > > > > small
> > > > > > amount of cleaner. I never recommend nor have used WD-40 as a
> > > cleaning
> > > > > > agent. For pots I recommend DeoXit F5 fader lub cleaner and
> > > lubricant
> > > > > > and still only use small amounts. I have used DoXit D5 on frozen
> > > > > > "mechanical" mechanisms such as band switch bearings. I then apply a
> > > > > > small amount of sewing machine oil to the bearing for lubrication.
> > > > > > Frozen pots can "some times" be fixed using D5 applied at the pot's
> > > > > > shaft point where it enters the front of the pot and allowed to
> > > "soak"
> > > > > > into the bearing race for a few minutes. The shaft is then rotated
> > > > > until
> > > > > > the shaft rotates freely. I then use forced air (canned air) to
> > > remove
> > > > > > the residue then apply F5 Fader cleaner and lubricant to the
> > > pot. This
> > > > > > doesn't always work especially if the pot's resistive element
> > > has been
> > > > > > physically damaged.
> > > > > >
> > > > > > The initial problem you have experienced in the VFO is instability
> > > > > > that's caused by a very dirty variable capacitor shaft to frame DC
> > > > > > connection at the rear of the variable capacitor. This requires
> > > > > applying
> > > > > > small amounts of contact cleaner at this point then rotating the
> > > > > > capacitor throughout its range several times. Depending on how dirty
> > > > > > this DC connection is you may need to repeat the cleaning
> > > process more
> > > > > > than once. Applying contact cleaner to the "plates" is not following
> > > > > > K4EAA's instructions I'm sorry to say.
> > > > > >
> > > > > > 73
> > > > > > Mike
> > > > > > W5RKL

> > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > > On 4/11/2013 7:05 AM, yioutta_99 wrote:
> > > > > > >
> > > > > > > thanks mike,
> > > > > > > no, i did not use compressed air. now that it has sat
> > > overnight, will
> > > > > > > it dissipate? or do i need to go back in and used compressed air?
> > > > > does
> > > > > > > compressed air remove residue?
> > > > > > > i thought i was following k4eaa's directions pretty close.
> > > > > > > I think the dial being off by 25k might be because i over cranked
> > > > when
> > > > > > > i was working the plares back and forth. thinking i was in the
> > > middle
> > > > > > > when, i was really at one end. while looking in the radio.
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@>
> > > wrote:
> > > > > > > >
> > > > > > > > Did you use generous amounts of compressed air or canned air
> > > after
> > > > > > > cleaning the VFO to completely remove any/all cleaner residue
> > > > BEFORE
> > > > > > > you
> > > > > > > > buttoned up the VFO? If you didn't then your problem is caused
> > > > by the
> > > > > > > > cleaner residue you didn't remove before you buttoned up the
> > > > VFO. You
> > > > > > > > need to remove ALL of the cleaner residue. Also you do not
> > > spray the
> > > > > > > > plates of the VFO, you apply a small amount of cleaner to the
> > > > rear of
> > > > > > > > the VFO's variable capacitorshaft where the shaft to frame is
> > > > located
> > > > > > > > then rotate the VFO knob throughout it's travel several times.
> > > > You then
> > > > > > > > use generous amounts of compressed air or canned air to remove
> > > > any/all
> > > > > > > > cleaner residue, let the VFO sit for 3 to 5 minutes then test
> > > > the VFO.
> > > > > > > >
> > > > > > > > 73
> > > > > > > > Mike
> > > > > > > > W5RKL
> > > > > > > >

> > > > > > > >
> > > > > > > > >
> > > > > > > > > On 4/10/2013 11:07 PM, yioutta_99 wrote:
> > > > > > > > > >
> > > > > > > > > > Hi Gang,
> > > > > > > > > > >
> > > > > > > > > > I read up on the why the VFo might have some dead spots, so i
> > > > > went in
> > > > > > > > > > and opened the hatch and sprayed some Diox on the plates of
> > > > > the cap.
> > > > > > > > > > After a few choice words i got the plate back on the VFO
> > > cover and
> > > > > > > > > > fired it up. The Dead spot problem was gone. it worked like a
> > > > > > > > charm. i
> > > > > > > > > > did noticed that i was now drifting a bit..and its never
> > > drifted
> > > > > > > on me
> > > > > > > > > > before. and on air check confirmed that. AND that i was off
> > > > > Freq by
> > > > > > > > > > about 25KC. I went on the WWV to try and calibrate it. I
> > > > > thought i
> > > > > > > > > was
> > > > > > > > > > suppose to adjust TC1 on the marker board. but that doesnt
> > > seem to
> > > > > > > > help me much.. Is there another TC1? There is a trimmer in
> > > the
> > > > > > > can of
> > > > > > > > > the VFO is that the one I want? How do i put the trimmer TC1
> > > > > on the
> > > > > > > > > marker board back to rights?
> > > > > > > > > >
> > > > > > > > > > Thanks Guys
> > > > > > > > > > >
> > > > > > > > > > Steve
> > > > > > > > > > N7LWF
> > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > >

> > > > >
> > > >
> > > >
> > > >
> > > > [Non-text portions of this message have been removed]
> > > >
> > >
> > >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

41673. RE: [TS-520_820_530_830] TS 830S transformer

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-12 04:27:19 UTC
From: fpath fpath
Topic: 41664 Message: 41673

Garry,

Look and see if you can see anything going on and where smole is gcoming from, there iwll be signs for sure. If you do need a new transformer, try Bob KE5FTF, pretty good on price last time I saw him seeing one.

Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: walker.garry@gmail.com
Date: Thu, 11 Apr 2013 23:35:44 +0000
Subject: [TS-520_820_530_830] TS 830S transformer

Looks like my transformer is smoking. Should I assume the transformer has had it or is there something else to check. If it's had it, can these things get rebuilt or can spares still be found.

thanks

Garry K5XGB / G0IHB / F5VDM

[Non-text portions of this message have been removed]

41674. I think I broke it!!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-12 06:36:21 UTC
From: bgolpmp
Topic: 41674 Message: 41674

While working on my ts 520 tonight I hooked up some wires from the mode switch to the terminals they go to and when I turned the rig on it blew the fuse. I replaced the fuse and now all I get is a tone out of the speaker and the s-meter is about 3/4's of the way up.

What did I do???????

Thanks and 73's

41675. Re: [TS-520_820_530_830] Re: 520S VFO

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-12 12:10:36 UTC
From: Mike
Topic: 41640 Message: 41675

Steve,

To verify the VFO is operating on the correct frequency range you will need a frequency counter. If you can borrow one from a friend then connect the frequency counter to the "VFO" terminal on the IF Unit board. Tune the VFO to zero on the dial, the frequency counter should display "very close" to 5.500Mhz. Tune the VFO to 500 on the dial and the frequency counter should display "very close" to 4.999Mhz.

Don't stop after only checking 2 bands, 20 meters and JJY/WWV. You should also have checked all the other bands, 160, 80, 40, 15, and 10 meters, to ensure they too zero beat the Marker signal every 25Khz. If all the other ham bands zero beat the Marker signal ever 25Khz then it would appear the VFO is, in fact, operating over the proper 5.500Mhz to 4.999Mhz frequency range and you should NOT touch any internal frequency adjustments in the VFO!!!

You said that JJY/WWV and the Marker signal zero beat about every "30Khz". If that is in fact true then that indicates the JJY/WWV HET Oscillator 23.895Mhz crystal may be off frequency by 5Khz. You can purchase a replacement JJY/WWV HET Oscillator crystal, 23.895Mhz, at International Crystals in Oklahoma City, OK (see link below) for $23 plus USPS shipping.

http://www.icmfg.com/hamradio.html

They have an 800, toll free, number you can call. They take all major credit cards.

73
Mike
W5RKL

On 4/11/2013 10:39 PM, yioutta_99 wrote:
>
> UPDATE:
> I re-cleaned and Blew out the VFO. Seems like the drifting stopped. i
> went on WWV and found i wasnt too far off the mark for some reason. So
> maybe the problem wasnt mechanical..maybe just left over gunk(?). I
> zero beated the marker, but when the band switch was on WWV I was not
> getting the tone every 25 KC..it was something around 30 some. I went
> on 20m to pick up the maritime net at 14.300 and i was real close on
> the dial. i was able to just adjust the outer plate. I turned the
> marker on and it was on every 25KC now. QSOed with a fellow in CA and
> got a freq check and i was about a 1/2 KC off.
> I am wondering if have extra residue on the band switch (sprayed it
> the night before) good be part of the problem. and working a few times

> more cleaned it up.
>
> Thanks guys
>
> steve
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "yioutta_99"
> <yioutta_99@...> wrote:
> >
> >
> > Sorry, Its the 520S
> >
> > I just took a listen, and its still drifting. i listen for a bit on
> 20 meters.
> >
> > I am thinking there maybe some dislodged gunk, or residue in the
> VFO. i will blow it out first to see if it can stabilize, then go in
> for the adjustment you wrote out for me. i will see if i have a
> service manual in this computer, if not i will re down load.
> >
> > THANK YOU for the help
> >
> > steve
>

[Non-text portions of this message have been removed]

41676. Re: 520S VFO

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-12 12:18:07 UTC
From: yioutta_99
Topic: 41640 Message: 41676

i will see if i can find a freq counter at work. I think. oscope might do the job too. I wanted to also double check the freq on the on the marker board. the service manual says to clip on the MO...what is MO.
thanks for the tip with going through all the bands. And what freqs to look for.

steve

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> Steve,
>
> To verify the VFO is operating on the correct frequency range you will
> need a frequency counter. If you can borrow one from a friend then
> connect the frequency counter to the "VFO" terminal on the IF Unit
> board. Tune the VFO to zero on the dial, the frequency counter should
> display "very close" to 5.500Mhz. Tune the VFO to 500 on the dial and
> the frequency counter should display "very close" to 4.999Mhz.
>
> Don't stop after only checking 2 bands, 20 meters and JJY/WWV. You
> should also have checked all the other bands, 160, 80, 40, 15, and 10
> meters, to ensure they too zero beat the Marker signal every 25Khz. If
> all the other ham bands zero beat the Marker signal ever 25Khz then it
> would appear the VFO is, in fact, operating over the proper 5.500Mhz to
> 4.999Mhz frequency range and you should NOT touch any internal frequency
> adjustments in the VFO!!!
>
> You said that JJY/WWV and the Marker signal zero beat about every
> "30Khz". If that is in fact true then that indicates the JJY/WWV HET
> Oscillator 23.895Mhz crystal may be off frequency by 5Khz. You can
> purchase a replacement JJY/WWV HET Oscillator crystal, 23.895Mhz, at
> International Crystals in Oklahoma City, OK (see link below) for $23
> plus USPS shipping.
>
> http://www.icmfg.com/hamradio.html
>
> They have an 800, toll free, number you can call. They take all major
> credit cards.
>
> 73
> Mike
> W5RKL
>
>
>
>

> On 4/11/2013 10:39 PM, yioutta_99 wrote:
> >
> > UPDATE:
> > I re-cleaned and Blew out the VFO. Seems like the drifting stopped. i
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> > I am wondering if have extra residue on the band switch (sprayed it
> > the night before) good be part of the problem. and working a few times
> > more cleaned it up.
> >
> > Thanks guys
> >
> > steve
> >
> > --- In TS-520_820_530_830@yahoogroups.com
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> > >
> > >
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> > for the adjustment you wrote out for me. i will see if i have a
> > service manual in this computer, if not i will re down load.
> > >
> > > THANK YOU for the help
> > >
> > > steve
> >
>
>
>
> [Non-text portions of this message have been removed]
>

41677. Re: [TS-520_820_530_830] Re: 520S VFO

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-12 12:43:35 UTC
From: Mike
Topic: 41640 Message: 41677

"MO" stands for "Marker Output"

Have you checked all the other bands, 160, 80, 40, 15, and 10 meters, to see how they zero beat with the Marker Unit signal at 25Khz dial intervals?

On 4/12/2013 7:18 AM, yioutta_99 wrote:
>
> i will see if i can find a freq counter at work. I think. oscope might
> do the job too. I wanted to also double check the freq on the on the
> marker board. the service manual says to clip on the MO...what is MO.
> thanks for the tip with going through all the bands. And what freqs to
> look for.
>
> steve
>
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> <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@...> wrote:
> >
> > Steve,
> >
> > To verify the VFO is operating on the correct frequency range you will
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> >
> > Don't stop after only checking 2 bands, 20 meters and JJY/WWV. You
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> > meters, to ensure they too zero beat the Marker signal every 25Khz. If
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> > would appear the VFO is, in fact, operating over the proper 5.500Mhz to
> > 4.999Mhz frequency range and you should NOT touch any internal
> frequency
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> >
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> > "30Khz". If that is in fact true then that indicates the JJY/WWV HET
> > Oscillator 23.895Mhz crystal may be off frequency by 5Khz. You can
> > purchase a replacement JJY/WWV HET Oscillator crystal, 23.895Mhz, at
> > International Crystals in Oklahoma City, OK (see link below) for $23
> > plus USPS shipping.
> >
> > http://www.icmfg.com/hamradio.html
> >

> > They have an 800, toll free, number you can call. They take all major
> > credit cards.
> >
> > 73
> > Mike
> > W5RKL
> >
> >
> >
> >
> > On 4/11/2013 10:39 PM, yioutta_99 wrote:
> > >
> > > UPDATE:
> > > I re-cleaned and Blew out the VFO. Seems like the drifting stopped. i
> > > went on WWV and found i wasnt too far off the mark for some
> reason. So
> > > maybe the problem wasnt mechanical..maybe just left over gunk(?). I
> > > zero beated the marker, but when the band switch was on WWV I was not
> > > getting the tone every 25 KC..it was something around 30 some. I went
> > > on 20m to pick up the maritime net at 14.300 and i was real close on
> > > the dial. i was able to just adjust the outer plate. I turned the
> > > marker on and it was on every 25KC now. QSOed with a fellow in CA and
> > > got a freq check and i was about a 1/2 KC off.
> > > I am wondering if have extra residue on the band switch (sprayed it
> > > the night before) good be part of the problem. and working a few
> times
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> > > Thanks guys
> > >
> > > steve
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "yioutta_99"
> > > <yioutta_99@> wrote:
> > > >
> > > >
> > > > Sorry, Its the 520S
> > > >
> > > > I just took a listen, and its still drifting. i listen for a bit on
> > > > 20 meters.
> > > >
> > > > I am thinking there maybe some dislodged gunk, or residue in the
> > > > VFO. i will blow it out first to see if it can stabilize, then go in
> > > > for the adjustment you wrote out for me. i will see if i have a
> > > > service manual in this computer, if not i will re down load.
> > > >
> > > > THANK YOU for the help
> > > >

> > > > steve
> > >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
>

[Non-text portions of this message have been removed]

41678. Re: [TS-520_820_530_830] Transformer smoking

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-12 13:27:54 UTC
From: Mike
Topic: 41659 Message: 41678

What test have you performed that clearly indicates the transformer is,
in fact, overheating/smoking?

Have you checked the Rectifier Unit to see if a resistor is smoking, not
the power transformer?

You have said nothing about the fuse, did it blow? Have you checked the
fuse to ensure it is the correct rating?

You need to perform further test before you are absolutely sure the
power transformer is in fact overheating/smoking.

Mike

On 4/11/2013 5:04 PM, Garry Walker wrote:
>
> Hi. I plug in my ts830 and the transformer is smoking upon switch on. Is
> this fixable or is it time for a replacement? If I need to replace, anyone
> have a source at reasonable cost?
>
> Thanks.
>
> G
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

41679. Re: pricing a TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-12 13:56:50 UTC
From: jdarmstrongjr
Topic: 41660 Message: 41679

Flea market prices tend to be lower. Last year, I picked up a TS-520S in great condition for $160 at one of these events http://www.electronicsfleamarket.com/ The receiver is better than my TS-520. WWV is +30 dB over here most days.

73 de NV6W
Assistant Section Manager
ARRL Santa Clara Valley Section

--- In TS-520_820_530_830@yahoogroups.com, "Michael" <m005kennedy@...> wrote:
>
> Won't be selling on line so I thought this would be ok to ask. What would you price a good condition Ts-520 at for sale? $250 range?
>
> Mike
> KB1IUI
>

41680. Re: TS-830S CW Transmit Problem

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-12 21:08:15 UTC
From: masongregc43
Topic: 40680 Message: 41680

Bill - I have this exact problem - did you find the fix?

Greg
VE4AMN

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> Usually the key jack goes shorted when you remove a plug. A leaf Â swiching part of the jack does this. Maybe this part is bent over and touching when the plug is in!
> Sometimes even a high resistance short can key the rig. do you have a plug with nothing wired to test with to see if a totally open plug will not key up when plugged in !?
> good luck,
> 73...JD
>
>
> _____
> From: scott10k <scottandalene@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tuesday, January 22, 2013 3:36 PM
> Subject: [TS-520_820_530_830] Re: TS-830S CW Transmit Problem
>
>
>
> Â
>
> Bill,
> Do you have an electronic keyer hooked up to the plug? If you do, the keyer needs to be set on "Grid-Block Keying", or if it is on "Direct Keying" it will do as you are experiencing. If you are using a manual key, then I am not sure what the problem is.
> 73s, Scott, N6CIC
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, "baamaster" wrote:
> >
> > I purchased a TS-830S last weekend, and it seems to work well except for one minor problem. If you have a key plugged in and not closed, and switch to CW mode, you hear the sidetone and if VOX is enabled, the rig is keyed.
> >
> > If you unplug the key, it's fine. The plug is not shorted, and when the radio transmits via the VOX, closing or opening the key has no effect on the keying of the transmitter.
> >
> > In short, when you plug in a 1/4 in phono plug, it keys the transmitter in CW Mode.
> >
> > Anyone have any thoughts before I start tearing things apart?
> >
> > Thanks,
> >

> > Bill
> > KA4GAV
> >
>
>
>
>
> [Non-text portions of this message have been removed]
>

41681. Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-12 23:06:56 UTC
From: tfrugia81
Topic: 41132 Message: 41681

Just thought I'd give an update on this issue. Replacing the diode on the FIX-AVR board did not solve the problem.

I am still working with another ham to try and resolve this. There is indeed a voltage drop when this happens. The 9v lines measure 6.10v when it happens, and 8.92v when it's working properly. The 3.3v line on the FIX-AVR board also drops from 3.28 to 2.26 when this is happening.

I'm going to spend more time on the AF board looking for bad connections or anything out of the ordinary, since it was the culprit of the CW sidetone issue.

If you have any other ideas for me to try, or need any more info on the issue, please let me know! I appreciate any help!

73!

-Tyler
k7fru

--- In TS-520_820_530_830@yahoogroups.com, Tyler Frugia <tfrugia@...> wrote:
>
> Hi Mike and Alan,
>
> Thanks for the help. So far I have checked RL1 and RL2, both are seated
> well and appear to be brand new (I did not attempt to clean them yet
> though).
>
> With the help of another ham, I believe I have the problem pinpointed to
> a bad zener diode on the FIX-AVR board. I am picking up a replacement
> tonight and will hopefully have this problem resolved. If so I will let
> the group know the solution in case anyone else runs into the problem!
>
>
> 73!
>
> -Tyler
> k7fru
>
>
>
> On Mon, Apr 8, 2013 at 11:09 PM, Alan Riley <arr44@...> wrote:
>
> > **
> >
> >
> > Tyler, I really havenâ□□t been able to come up with anything specific from

> > looking over the
> > TS-520SE schematic. I think I would next compare the power supply voltages
> > leaving the
> > FIX CH AVR unit under both normal conditions and when the rig is acting up.
> >
> > Obviously there are many points on the boards themselves where DC voltages
> > could be
> > measured and compared either with voltages measured under normal
> > conditions or with
> > the schematic values but if you could get your hands on an oscilloscope it
> > would make
> > locating the problem a lot easier. Whatever is causing your receive
> > problem is also causing
> > your transmit problem.
> >
> > I am still leaning toward a bad connection somewhere in the shared
> > circuitry. If there are
> > any socketed components, wiggle them gently. Press lightly on soldered
> > components.
> >
> > Alan, KD5R
> >
> > From: tfrugia81
> > Sent: Tuesday, April 02, 2013 9:56 PM
> >
> > To: TS-520_820_530_830@yahoogroups.com
> > Subject: [TS-520_820_530_830] Re: ts520se sidetone question
> >
> > Hi Alan,
> >
> > Over the past month or so I have fooled with the TS-520se trying to pin
> > down this issue. I've poked and wiggled all of the connections and
> > terminals on the RF, IF and generator boards. I've actually poked just
> > about every one in the entire unit, but nothing seems to make a difference.
> > After a random amount of time everything just goes back to normal, and then
> > after a short time it starts doing it again.
> >
> > It seems to be doing it more frequent now. I'm nervous to event attempt a
> > qso on it. Can you think of any other things I should look for?
> >
> > One other clue, when this is happening if I turn the RF gain fully CCW,
> > the meter only goes up to around 1/3 of the full meter (
> > http://content.screencast.com/users/Tyler81/folders/Jing/media/1253a282-fe21-4f48-8288-0b171fd729b1/00000812.png).
> > When the problem stops (I can send/receive again) the meter peaks when I
> > turn the RF gain all of the way CCW.
> >
> > Thanks for any help,
> >

> > Tyler
> > k7fru
> >
> > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley" <arr44@>
> > wrote:
> > >
> > > This problem could be a little harder to track down. If you havenÃ¢â□¬â□¢t
> > done
> > > so already, make sure all board mounting screws are tight Ã¢â□¬" loosen them
> > > up a little first and then retighten. If you have a quality spray contact
> > > cleaner such as DeoxIT D5, you could clean the MODE and FUNCTION
> > > switch contacts, followed by blowing them dry with compressed air, but
> > > I really donÃ¢â□¬â□¢t think it is a switch contact issue.
> > >
> > > Since you have already found one bad solder connection, it is very
> > possible
> > > that there may another one that is temperature sensitive causing this
> > > problem. It is affecting both the receive and transmit functions so that
> > > narrows it down a bit.
> > >
> > > I think I would concentrate on the RF, IF, and GENERATOR board
> > connections.
> > > Using a hair dryer to warm each board a little might point you to the
> > general
> > > area of the problem but you canÃ¢â□¬â□¢t concentrate the heat well enough to
> > really
> > > isolate the problem. DonÃ¢â□¬â□¢t use a soldering iron for this since the rig
> > will
> > > need to have power applied. ***The RF unit has dangerous voltages
> > > applied***.
> > >
> > > Using an insulated tool such as a wooden popsickle stick, gently wiggle
> > > the wires at the soldered connections with the rig powered up. There
> > > could also be an issue with a component lead not making reliable contact
> > > but check the wire connections to the terminals first.
> > >
> > > If this doesnÃ¢â□¬â□¢t work, we will try something else. Also, there are
> > other forum
> > > members with more experience on these rigs than I have, so feel free to
> > > jump in.
> > >
> > > 73,
> > > Alan, KD5R
> > >
> > > From: tfrugia81
> > > Sent: Friday, March 01, 2013 5:22 PM
> > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > Subject: [TS-520_820_530_830] Re: ts520se sidetone question
> > >

> > >
> > > One more observation. When the receive is out, if I put the mode to TUNE
> > and the function switch to VFO, I can hear white noise just as normal. Any
> > other combination of MODE and FUNCTION cause it to have no receive.
> > >
> > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "tfrugia81" wrote:
> > > >
> > > > I'm not sure why my reply to this didn't show last night, but for the
> > record the KEY terminal was loose. Soldering it back together solved the
> > sidetone issue. Thanks Alan!
> > > >
> > > > Regarding the loss of receive audio. When it happens if I tune to the
> > 25 kHz calibrator I do not hear the tone. When the receive finally comes
> > back I DO hear the tone, but while it's dropped out I do not hear it. I can
> > still hear other stations in SSB, but I have to turn the volume up all of
> > the way and even then it's barely audible.
> > > >
> > > > I also tried keying the microphone several times. I can hear the
> > relays clicking but I do not get any RF output while this is happening.
> > Once the receive comes back everything works normal again. I also tried
> > cycling the receive antenna switch. It has something wedged in to keep it
> > "up" all of the time. I will take that out and see if toggling the switch
> > makes a difference.
> > > >
> > > > Oddly, once the radio has been on for a while this issue doesn't seem
> > to happen at all. But it's really frustrating sometimes!
> > > >
> > > > Thanks again for your help,
> > > >
> > > >
> > > > Tyler
> > > > k7fru
> > > >
> > > >
> > > >
> > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley"
> > wrote:
> > > > >
> > > > > Well, the video tells me you may have a bad TR relay causing the
> > intermittent
> > > > > loss of receive audio. You can check for this by turning on the
> > internal 25 kHz
> > > > > calibrator. If it is the TR relay, the signal from the internal
> > calibrator will still
> > > > > be at itÃ□Â¢Ã□â□¬Ã□â□¢s normal level even though the received signal off of
> > the antenna has
> > > > > dropped out. Connect a microphone and key it briefly a few times and
> > see if
> > > > > the signal from the antenna returns. In addition, exercise the

> > external receive
> > > > > antenna switch on the rear of the rig since the receive signal path
> > goes through
> > > > > it too.
> > > > >
> > > > > On the constant sidetone issue, look closely at all soldered
> > connections in
> > > > > the sidetone circuit and especially any wire-wrap connections. You
> > should
> > > > > be able to track down the problem there with your voltmeter. Also,
> > make
> > > > > sure the board mounting screws are tight.
> > > > >
> > > > > 73,
> > > > > Alan, KD5R
> > > > >
> > > > >
> > > > >
> > > > > From: tfrugia81
> > > > > Sent: Tuesday, February 26, 2013 12:42 PM
> > > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > > > Subject: [TS-520_820_530_830] Re: ts520se sidetone question
> > > > >
> > > > >
> > > > > Thanks again for the help. I will test this tonight.
> > > > >
> > > > > Here is an issue I'm having as well, could this be related? I would
> > think not, but thought I'd send it anyway -
> > http://www.youtube.com/watch?v=AAWdikZZt58
> > > > >
> > > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley"
> > wrote:
> > > > > >
> > > > > > Ok, good. The purpose of this Ã□Æ'Ã□Â¢Ã□â□□Ã□â□¬"63 vdc is to inhibit the
> > sidetone oscillator
> > > > > > when your key contacts are open. It does this by reverse biasing
> > diode D3,
> > > > > > thus turning it off and interrupting the feedback path necessary
> > for Q6 to
> > > > > > oscillate.
> > > > > >
> > > > > > It appears that your Ã□Æ'Ã□Â¢Ã□â□□Ã□â□¬"63 volts is either not reaching the
> > diode or else the
> > > > > > diode is shorted. A positive voltage of about +100 vdc enters the
> > AF board
> > > > > > at the Ã□Æ'Ã□Â¢Ã□â□□Ã□â□¬Ã□â□□Ã□Å"STBÃ□Æ'Ã□Â¢Ã□â□□Ã□â□¬Ã□â□□Ã□
terminal. This +100v and the
> > voltage at the Ã□Æ'Ã□Â¢Ã□â□□Ã□â□¬Ã□â□□Ã□Å"KEYÃ□Æ'Ã□Â¢Ã□â□□Ã□â□¬Ã□â□□Ã□
terminal

> > > > > > (-63v key up, 0v key down) are combined through resistors R35 and
> > R36
> > > > > > such that D3 is forward biased when your key contacts are closed
> > but
> > > > > > when the key contacts open, the Ã□Æ'Ã□Â¢Ã□â□□Ã□â□¬"63v
> > Ã□Æ'Ã□Â¢Ã□â□□Ã□â□¬Ã□â□□Ã□Å"overpowersÃ□Æ'Ã□Â¢Ã□â□□Ã□â□¬Ã□â□□Ã□ the positive
voltage,
> > > > > > killing the oscillator.
> > > > > >
> > > > > > One other possibility would be for the R35 and/or R36 values to
> > have changed
> > > > > > such that the negative voltage is not quite able to overcome the
> > positive voltage.
> > > > > >
> > > > > > Measure the voltage at the anode of D3 under key up and key down
> > conditions.
> > > > > > Also, if you are using an analog meter or a digital meter with a
> > diode test
> > > > > > function, measure resistance both directions across D3 (be sure
> > there is
> > > > > > no voltage present on the diode when you do this).
> > > > > >
> > > > > > Let us know what you find.
> > > > > >
> > > > > > 73,
> > > > > > Alan, KD5R
> > > > > >
> > > > > >
> > > > > > From: tfrugia81
> > > > > > Sent: Monday, February 25, 2013 8:20 PM
> > > > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > > > > Subject: [TS-520_820_530_830] Re: ts520se sidetone question
> > > > > >
> > > > > >
> > > > > > Got it, thank you for the clarification.
> > > > > >
> > > > > > I measured voltage at the KEY terminal on the AF board, and it
> > indeed has -63ish volts DC with the key open. All of the connections on the
> > AF board look ok to my naked eye. I traced the ones that I could easily
> > follow and they seemed ok (using a meter to test continuity).
> > > > > >
> > > > > > I am very much new to these radios (and radio repair in general).
> > Is there anything else I should be looking for? I appreciate your help!
> > > > > >
> > > > > > 73
> > > > > >
> > > > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley"
> > wrote:
> > > > > > >

> > > > > > > Tyler, your TS-520SE
wonÃ□Æ'Ã□Æ'Ã□â□□Ã□Â¢Ã□Æ'Ã□â□□Ã□â□□Ã□â□¬Ã□Æ'Ã□â□□Ã□â□□Ã□â□¢t have a
> > FIX3-11, that is just the place I located
> > > > > > > > the problem in my TS-820S. Sorry, I should have pointed that out.
> > > > > > > >
> > > > > > > > Your problem, however appears to be the same as mine was
> > Ã□Æ'Ã□Æ'Ã□â□□Ã□Â¢Ã□Æ'Ã□â□□Ã□â□□Ã□â□¬" loss of cutoff
> > > > > > > > voltage to the sidetone oscillator. The sidetone oscillator runs
> > when the key
> > > > > > > > is closed but it is cut off by a negative voltage applied when
> > the key is open.
> > > > > > > >
> > > > > > > > In the TS-520SE, the sidetone oscillator is Q6 on the AF Unit
> > (X49-008-01).
> > > > > > > > The Ã□Æ'Ã□Æ'Ã□â□□Ã□Â¢Ã□Æ'Ã□â□□Ã□â□□Ã□â□¬Ã□Æ'Ã□â□□Ã□â□□Ã□Å"KEY
Ã□Æ'Ã□Æ'Ã□â□□Ã□Â¢Ã□Æ'Ã□â□□Ã□â□□Ã□â□¬Ã□Æ'Ã□â□□Ã□â□□Ã□ terminal
> > on that board should have a negative voltage of about
> > > > > > > > -65 vdc in the key-up condition (it should be the same as the
> > open-circuit
> > > > > > > > voltage across your key contacts). Check there to see if the
> > negative voltage
> > > > > > > > is present. I
donÃ□Æ'Ã□Æ'Ã□â□□Ã□Â¢Ã□Æ'Ã□â□□Ã□â□□Ã□â□¬Ã□Æ'Ã□â□□Ã□â□□Ã□â□¢t know whether
the
> > TS-520SE uses a wire-wrap connection
> > > > > > > > at that point or not but if it does, then I suspect you will
> > find it to be the
> > > > > > > > problem. If it is a bad wire-wrap connection, clean it good and
> > solder it.
> > > > > > > >
> > > > > > > > If you
donÃ□Æ'Ã□Æ'Ã□â□□Ã□Â¢Ã□Æ'Ã□â□□Ã□â□□Ã□â□¬Ã□Æ'Ã□â□□Ã□â□□Ã□â□¢t have the
manuals for it, you
> > can download them from
GordonÃ□Æ'Ã□Æ'Ã□â□□Ã□Â¢Ã□Æ'Ã□â□□Ã□â□□Ã□â□¬Ã□Æ'Ã□â□□Ã□â□□Ã□â□¢s
> > > > > > > > website as I just did (thanks, Gordon!).
> > > > > > > >
> > > > > > > > Let us know what you find.
> > > > > > > >
> > > > > > > > 73,
> > > > > > > > Alan, KD5R
> > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > > From: Tyler Frugia
> > > > > > > > Sent: Sunday, February 24, 2013 9:07 PM
> > > > > > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > > > > > > Subject: Re: [TS-520_820_530_830] ts520se sidetone question
> > > > > > > >

> > > > > > >
> > > > > > > > Hi Alan,
> > > > > > > >
> > > > > > > > Thanks for the email. Pardon my ignorance, but where would I find
> > > > > > > > FIX3-11?
> > > > > > > >
> > > > > > > > I appreciate any help!
> > > > > > > >
> > > > > > > > 73,
> > > > > > > >
> > > > > > > > Tyler
> > > > > > > > k7fru
> > > > > > > >
> > > > > > > > On Sun, Feb 24, 2013 at 6:52 PM, Alan Riley mailto:
> > arr44%40suddenlink.net> wrote:
> > > > > > > >
> > > > > > > > **
> > > > > > > >
> > > > > > > >
> > > > > > > > My TS-820S had the exact same problem when I bought it. I
> > found the
> > > > > > > > problem to be a broken
> > > > > > > > contact on connector FIX3-11 not making connection to the pin
> > on the pcb.
> > > > > > > >
> > > > > > > > 73,
> > > > > > > > Alan, KD5R
> > > > > > > >
> > > > > > > > From: tfrugia81
> > > > > > > > Sent: Saturday, February 23, 2013 11:09 PM
> > > > > > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > > > > > > Subject: [TS-520_820_530_830] ts520se sidetone question
> > > > > > > >
> > > > > > > >
> > > > > > > > Hello all. I'm a new owner of a kenwood hybrid. I absolutely
> > love it.
> > > > > > > >
> > > > > > > > I searched the group to try and find an answer to my problem.
> > There are
> > > > > > > > many similar posts but not quite what I am experiencing.
> > > > > > > >
> > > > > > > > If I have a key plugged in and switch to CW, I hear a constant
> > sidetone.
> > > > > > > > If I put the radio in "send" there is no RF output, but I hear
> > the tone. If
> > > > > > > > I press the key, it transmits as it should. The sidetone never
> > stops until
> > > > > > > > I unplug the key.
> > > > > > > >

> > > > > > > > This is just a standard straight key on a mono plug. I even
> > tried plugin
> > > > > > > > > in a plug with nothing attached and it does the same thing.
> > Oddly enough,
> > > > > > > > > it randomly will work fine. Today I left the rig turned on in
> > CW mode for
> > > > > > > > > about an hour. When I came back the tone was gone, but
> > switching to "tune"
> > > > > > > > > and back to CW caused the sidetone to come on and remain on.
> > > > > > > > >
> > > > > > > > > Any ideas? I took the case off and the plug is clean and looks
> > brand new.
> > > > > > > > >
> > > > > > > > > 73
> > > > > > > > >
> > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > >
> > > > > > > >
> > > > > > > >
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41682. Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-12 23:39:48 UTC
From: tfrugia81
Topic: 41132 Message: 41682

One question, is it worth adjusting the AVR to be closer to 9v? I know the difference is minimal, but I thought I would ask. The service manual (page 10, sec 3-11) shows how to adjust it for 9v +/- 0.2v. I'm curious if 8.92 (what I'm reading under normal/working conditions) vs 8.98 to 9.02v might be enough for concern.

73

--- In TS-520_820_530_830@yahoogroups.com, "tfrugia81" <tfrugia@...> wrote:
>
> Just thought I'd give an update on this issue. Replacing the diode on the FIX-AVR board did not solve the problem.
>
> I am still working with another ham to try and resolve this. There is indeed a voltage drop when this happens. The 9v lines measure 6.10v when it happens, and 8.92v when it's working properly. The 3.3v line on the FIX-AVR board also drops from 3.28 to 2.26 when this is happening.
>
> I'm going to spend more time on the AF board looking for bad connections or anything out of the ordinary, since it was the culprit of the CW sidetone issue.
>
> If you have any other ideas for me to try, or need any more info on the issue, please let me know! I appreciate any help!
>
>
> 73!
>
> -Tyler
> k7fru
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Tyler Frugia <tfrugia@> wrote:
> >
> > Hi Mike and Alan,
> >
> > Thanks for the help. So far I have checked RL1 and RL2, both are seated
> > well and appear to be brand new (I did not attempt to clean them yet
> > though).
> >
> > With the help of another ham, I believe I have the problem pinpointed to
> > a bad zener diode on the FIX-AVR board. I am picking up a replacement
> > tonight and will hopefully have this problem resolved. If so I will let
> > the group know the solution in case anyone else runs into the problem!
> >
> >
> > 73!
> >

> > -Tyler
> > k7fru
> >
> >
> >
> > On Mon, Apr 8, 2013 at 11:09 PM, Alan Riley <arr44@> wrote:
> >
> > > **
> > >
> > >
> > > Tyler, I really havenâ☐☐t been able to come up with anything specific from
> > > looking over the
> > > TS-520SE schematic. I think I would next compare the power supply voltages
> > > leaving the
> > > FIX CH AVR unit under both normal conditions and when the rig is acting up.
> > >
> > > Obviously there are many points on the boards themselves where DC voltages
> > > could be
> > > measured and compared either with voltages measured under normal
> > > conditions or with
> > > the schematic values but if you could get your hands on an oscilloscope it
> > > would make
> > > locating the problem a lot easier. Whatever is causing your receive
> > > problem is also causing
> > > your transmit problem.
> > >
> > > I am still leaning toward a bad connection somewhere in the shared
> > > circuitry. If there are
> > > any socketed components, wiggle them gently. Press lightly on soldered
> > > components.
> > >
> > > Alan, KD5R
> > >
> > > From: tfrugia81
> > > Sent: Tuesday, April 02, 2013 9:56 PM
> > >
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Subject: [TS-520_820_530_830] Re: ts520se sidetone question
> > >
> > > Hi Alan,
> > >
> > > Over the past month or so I have fooled with the TS-520se trying to pin
> > > down this issue. I've poked and wiggled all of the connections and
> > > terminals on the RF, IF and generator boards. I've actually poked just
> > > about every one in the entire unit, but nothing seems to make a difference.
> > > After a random amount of time everything just goes back to normal, and then
> > > after a short time it starts doing it again.
> > >
> > > It seems to be doing it more frequent now. I'm nervous to event attempt a

> > > qso on it. Can you think of any other things I should look for?
> > >
> > > One other clue, when this is happening if I turn the RF gain fully CCW,
> > > the meter only goes up to around 1/3 of the full meter (
> > > http://content.screencast.com/users/Tyler81/folders/Jing/media/1253a282-fe21-4f48-8288-0b171fd729b1/00000812.png).
> > > When the problem stops (I can send/receive again) the meter peaks when I
> > > turn the RF gain all of the way CCW.
> > >
> > > Thanks for any help,
> > >
> > > Tyler
> > > k7fru
> > >
> > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley" <arr44@>
> > > wrote:
> > > >
> > > > This problem could be a little harder to track down. If you havenÃ¢â□¬â□¢t
> > > done
> > > > so already, make sure all board mounting screws are tight Ã¢â□¬" loosen them
> > > > up a little first and then retighten. If you have a quality spray contact
> > > > cleaner such as DeoxIT D5, you could clean the MODE and FUNCTION
> > > > switch contacts, followed by blowing them dry with compressed air, but
> > > > I really donÃ¢â□¬â□¢t think it is a switch contact issue.
> > > >
> > > > Since you have already found one bad solder connection, it is very
> > > possible
> > > > that there may another one that is temperature sensitive causing this
> > > > problem. It is affecting both the receive and transmit functions so that
> > > > narrows it down a bit.
> > > >
> > > > I think I would concentrate on the RF, IF, and GENERATOR board
> > > connections.
> > > > Using a hair dryer to warm each board a little might point you to the
> > > general
> > > > area of the problem but you canÃ¢â□¬â□¢t concentrate the heat well enough to
> > > really
> > > > isolate the problem. DonÃ¢â□¬â□¢t use a soldering iron for this since the rig
> > > will
> > > > need to have power applied. ***The RF unit has dangerous voltages
> > > > applied***.
> > > >
> > > > Using an insulated tool such as a wooden popsickle stick, gently wiggle
> > > > the wires at the soldered connections with the rig powered up. There
> > > > could also be an issue with a component lead not making reliable contact
> > > > but check the wire connections to the terminals first.
> > > >
> > > > If this doesnÃ¢â□¬â□¢t work, we will try something else. Also, there are
> > > other forum

> > > > members with more experience on these rigs than I have, so feel free to
> > > > jump in.
> > > >
> > > > 73,
> > > > Alan, KD5R
> > > >
> > > > From: tfrugia81
> > > > Sent: Friday, March 01, 2013 5:22 PM
> > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > > Subject: [TS-520_820_530_830] Re: ts520se sidetone question
> > > >
> > > >
> > > > One more observation. When the receive is out, if I put the mode to TUNE
> > > and the function switch to VFO, I can hear white noise just as normal. Any
> > > other combination of MODE and FUNCTION cause it to have no receive.
> > > >
> > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "tfrugia81" wrote:
> > > > >
> > > > > I'm not sure why my reply to this didn't show last night, but for the
> > > record the KEY terminal was loose. Soldering it back together solved the
> > > sidetone issue. Thanks Alan!
> > > > >
> > > > > Regarding the loss of receive audio. When it happens if I tune to the
> > > 25 kHz calibrator I do not hear the tone. When the receive finally comes
> > > back I DO hear the tone, but while it's dropped out I do not hear it. I can
> > > still hear other stations in SSB, but I have to turn the volume up all of
> > > the way and even then it's barely audible.
> > > > >
> > > > > I also tried keying the microphone several times. I can hear the
> > > relays clicking but I do not get any RF output while this is happening.
> > > Once the receive comes back everything works normal again. I also tried
> > > cycling the receive antenna switch. It has something wedged in to keep it
> > > "up" all of the time. I will take that out and see if toggling the switch
> > > makes a difference.
> > > > >
> > > > > Oddly, once the radio has been on for a while this issue doesn't seem
> > > to happen at all. But it's really frustrating sometimes!
> > > > >
> > > > > Thanks again for your help,
> > > > >
> > > > >
> > > > > Tyler
> > > > > k7fru
> > > > >
> > > > >
> > > > >
> > > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley"
> > > wrote:
> > > > > >

> > > > > > Well, the video tells me you may have a bad TR relay causing the
> > > intermittent
> > > > > > loss of receive audio. You can check for this by turning on the
> > > internal 25 kHz
> > > > > > calibrator. If it is the TR relay, the signal from the internal
> > > calibrator will still
> > > > > > be at itÃ□Â¢Ã□â□¬Ã□â□¢s normal level even though the received signal off of
> > > the antenna has
> > > > > > dropped out. Connect a microphone and key it briefly a few times and
> > > see if
> > > > > > the signal from the antenna returns. In addition, exercise the
> > > external receive
> > > > > > antenna switch on the rear of the rig since the receive signal path
> > > goes through
> > > > > > it too.
> > > > > >
> > > > > > On the constant sidetone issue, look closely at all soldered
> > > connections in
> > > > > > the sidetone circuit and especially any wire-wrap connections. You
> > > should
> > > > > > be able to track down the problem there with your voltmeter. Also,
> > > make
> > > > > > sure the board mounting screws are tight.
> > > > > >
> > > > > > 73,
> > > > > > Alan, KD5R
> > > > > >
> > > > > >
> > > > > >
> > > > > > From: tfrugia81
> > > > > > Sent: Tuesday, February 26, 2013 12:42 PM
> > > > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > > > > Subject: [TS-520_820_530_830] Re: ts520se sidetone question
> > > > > >
> > > > > >
> > > > > > Thanks again for the help. I will test this tonight.
> > > > > >
> > > > > > Here is an issue I'm having as well, could this be related? I would
> > > think not, but thought I'd send it anyway -
> > > http://www.youtube.com/watch?v=AAWdikZZt58
> > > > > >
> > > > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley"
> > > wrote:
> > > > > > > > > Ok, good. The purpose of this Ã□Æ'Ã□Â¢Ã□â□□Ã□â□¬"63 vdc is to inhibit the
> > > sidetone oscillator
> > > > > > > > > when your key contacts are open. It does this by reverse biasing
> > > diode D3,
> > > > > > > > > thus turning it off and interrupting the feedback path necessary

> > > for Q6 to
> > > > > > > > oscillate.
> > > > > > > >
> > > > > > > > It appears that your Ã□Æ'Ã□Â¢Ã□â□□Ã□â□¬"63 volts is either not reaching the
> > > diode or else the
> > > > > > > > diode is shorted. A positive voltage of about +100 vdc enters the
> > > AF board
> > > > > > > > at the Ã□Æ'Ã□Â¢Ã□â□□Ã□â□¬Ã□â□□Ã□Å"STBÃ□Æ'Ã□Â¢Ã□â□□Ã□â□¬Ã□â□□Ã□ terminal. This +100v and the
> > > voltage at the Ã□Æ'Ã□Â¢Ã□â□□Ã□â□¬Ã□â□□Ã□Å"KEYÃ□Æ'Ã□Â¢Ã□â□□Ã□â□¬Ã□â□□Ã□ terminal
> > > > > > > > (-63v key up, 0v key down) are combined through resistors R35 and
> > > R36
> > > > > > > > such that D3 is forward biased when your key contacts are closed
> > > but
> > > > > > > > when the key contacts open, the Ã□Æ'Ã□Â¢Ã□â□□Ã□â□¬"63v
> > > Ã□Æ'Ã□Â¢Ã□â□□Ã□â□¬Ã□â□□Ã□Å"overpowersÃ□Æ'Ã□Â¢Ã□â□□Ã□â□¬Ã□â□□Ã□ the positive voltage,
> > > > > > > > killing the oscillator.
> > > > > > > >
> > > > > > > > One other possibility would be for the R35 and/or R36 values to
> > > have changed
> > > > > > > > such that the negative voltage is not quite able to overcome the
> > > positive voltage.
> > > > > > > >
> > > > > > > > Measure the voltage at the anode of D3 under key up and key down
> > > conditions.
> > > > > > > > Also, if you are using an analog meter or a digital meter with a
> > > diode test
> > > > > > > > function, measure resistance both directions across D3 (be sure
> > > there is
> > > > > > > > no voltage present on the diode when you do this).
> > > > > > > >
> > > > > > > > Let us know what you find.
> > > > > > > >
> > > > > > > > 73,
> > > > > > > > Alan, KD5R
> > > > > > > >
> > > > > > > >
> > > > > > > > From: tfrugia81
> > > > > > > > Sent: Monday, February 25, 2013 8:20 PM
> > > > > > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > > > > > > Subject: [TS-520_820_530_830] Re: ts520se sidetone question
> > > > > > > >
> > > > > > > >
> > > > > > > > Got it, thank you for the clarification.
> > > > > > > >
> > > > > > > > I measured voltage at the KEY terminal on the AF board, and it
> > > indeed has -63ish volts DC with the key open. All of the connections on the

> > > AF board look ok to my naked eye. I traced the ones that I could easily
> > > follow and they seemed ok (using a meter to test continuity).
> > > > > >
> > > > > > > I am very much new to these radios (and radio repair in general).
> > > Is there anything else I should be looking for? I appreciate your help!
> > > > > >
> > > > > > > 73
> > > > > >
> > > > > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Alan Riley"
> > > wrote:
> > > > > > >
> > > > > > > > Tyler, your TS-520SE
wonÃ□Æ'Ã□Æ'Ã□â□□Ã□Â¢Ã□Æ'Ã□â□□Ã□â□□Ã□â□¬Ã□Æ'Ã□â□□Ã□â□□Ã□â□¢t have a
> > > FIX3-11, that is just the place I located
> > > > > > > the problem in my TS-820S. Sorry, I should have pointed that out.
> > > > > > >
> > > > > > > > Your problem, however appears to be the same as mine was
> > > Ã□Æ'Ã□Æ'Ã□â□□Ã□Â¢Ã□Æ'Ã□â□□Ã□â□□Ã□â□¬" loss of cutoff
> > > > > > > voltage to the sidetone oscillator. The sidetone oscillator runs
> > > when the key
> > > > > > > is closed but it is cut off by a negative voltage applied when
> > > the key is open.
> > > > > > >
> > > > > > > > In the TS-520SE, the sidetone oscillator is Q6 on the AF Unit
> > > (X49-008-01).
> > > > > > > The Ã□Æ'Ã□Æ'Ã□â□□Ã□Â¢Ã□Æ'Ã□â□□Ã□â□□Ã□â□¬Ã□Æ'Ã□â□□Ã□â□□Ã□Å"KE
YÃ□Æ'Ã□Æ'Ã□â□□Ã□Â¢Ã□Æ'Ã□â□□Ã□â□□Ã□â□¬Ã□Æ'Ã□â□□Ã□â□□Ã□ terminal
> > > on that board should have a negative voltage of about
> > > > > > > -65 vdc in the key-up condition (it should be the same as the
> > > open-circuit
> > > > > > > voltage across your key contacts). Check there to see if the
> > > negative voltage
> > > > > > > is present. I
donÃ□Æ'Ã□Æ'Ã□â□□Ã□Â¢Ã□Æ'Ã□â□□Ã□â□□Ã□â□¬Ã□Æ'Ã□â□□Ã□â□□Ã□â□¢t know whether
the
> > > TS-520SE uses a wire-wrap connection
> > > > > > > at that point or not but if it does, then I suspect you will
> > > find it to be the
> > > > > > > problem. If it is a bad wire-wrap connection, clean it good and
> > > solder it.
> > > > > > >
> > > > > > > > If you
donÃ□Æ'Ã□Æ'Ã□â□□Ã□Â¢Ã□Æ'Ã□â□□Ã□â□□Ã□â□¬Ã□Æ'Ã□â□□Ã□â□□Ã□â□¢t have the
manuals for it, you
> > > can download them from
GordonÃ□Æ'Ã□Æ'Ã□â□□Ã□Â¢Ã□Æ'Ã□â□□Ã□â□□Ã□â□¬Ã□Æ'Ã□â□□Ã□â□□Ã□â□¢s
> > > > > > > website as I just did (thanks, Gordon!).
> > > > > > >
> > > > > > > > Let us know what you find.

> > > > > > > >
> > > > > > > > > 73,
> > > > > > > > > Alan, KD5R
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > From: Tyler Frugia
> > > > > > > > > Sent: Sunday, February 24, 2013 9:07 PM
> > > > > > > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > > > > > > > Subject: Re: [TS-520_820_530_830] ts520se sidetone question
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > Hi Alan,
> > > > > > > > >
> > > > > > > > > Thanks for the email. Pardon my ignorance, but where would I find
> > > > > > > > > FIX3-11?
> > > > > > > > >
> > > > > > > > > I appreciate any help!
> > > > > > > > >
> > > > > > > > > 73,
> > > > > > > > >
> > > > > > > > > Tyler
> > > > > > > > > k7fru
> > > > > > > > >
> > > > > > > > > On Sun, Feb 24, 2013 at 6:52 PM, Alan Riley mailto:
> > > arr44%40suddenlink.net> wrote:
> > > > > > > > >
> > > > > > > > > **
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > My TS-820S had the exact same problem when I bought it. I
> > > found the
> > > > > > > > > problem to be a broken
> > > > > > > > > contact on connector FIX3-11 not making connection to the pin
> > > on the pcb.
> > > > > > > > >
> > > > > > > > > 73,
> > > > > > > > > Alan, KD5R
> > > > > > > > >
> > > > > > > > > From: tfrugia81
> > > > > > > > > Sent: Saturday, February 23, 2013 11:09 PM
> > > > > > > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > > > > > > > Subject: [TS-520_820_530_830] ts520se sidetone question
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > Hello all. I'm a new owner of a kenwood hybrid. I absolutely
> > > love it.
> > > > > > > > >
> > > > > > > > > I searched the group to try and find an answer to my problem.

> > > There are
> > > > > > > > > > many similar posts but not quite what I am experiencing.
> > > > > > > > > >
> > > > > > > > > > If I have a key plugged in and switch to CW, I hear a constant
> > > sidetone.
> > > > > > > > > > If I put the radio in "send" there is no RF output, but I hear
> > > the tone. If
> > > > > > > > > > I press the key, it transmits as it should. The sidetone never
> > > stops until
> > > > > > > > > > I unplug the key.
> > > > > > > > > >
> > > > > > > > > > This is just a standard straight key on a mono plug. I even
> > > tried plugin
> > > > > > > > > > in a plug with nothing attached and it does the same thing.
> > > Oddly enough,
> > > > > > > > > > it randomly will work fine. Today I left the rig turned on in
> > > CW mode for
> > > > > > > > > > about an hour. When I came back the tone was gone, but
> > > switching to "tune"
> > > > > > > > > > and back to CW caused the sidetone to come on and remain on.
> > > > > > > > > >
> > > > > > > > > > Any ideas? I took the case off and the plug is clean and looks
> > > brand new.
> > > > > > > > > >
> > > > > > > > > > 73
> > > > > > > > > >
> > > > > > > > > > [Non-text portions of this message have been removed]
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41683. TS-530S back two switches

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-13 00:01:55 UTC
From: rkings1956
Topic: 41683 Message: 41683

Hi Group,

I purchased a TS-530s and have not received yet. I notice in the photos
that the back of the rig has two added switches. I was wondering if anyone has any idea
what they may be for? I provide a photo in the groups photo section under my callsigns
KD6FSK. The person that I purchased the rig from has no idea. I would appreciate any help.

Rob
KD6FSK

41684. Re: TS-520 for parts

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-13 00:45:52 UTC
From: yioutta_99
Topic: 41656 Message: 41684

are the slugs in the coils still good? I know one of my 10 meter coils is cracked.

--- In TS-520_820_530_830@yahoogroups.com, "Stephen - AE2S" <ae2s@...> wrote:
>
> Hi all,
> I have a bunch of TS-520 parts listed on QRZ if anyone is looking for spare parts.
>
> http://forums.qrz.com/showthread.php?386995-TS-520
>
> Regards,
> Steve - AE2S
>

41685. Re: 520S VFO

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-13 00:52:47 UTC
From: yioutta_99
Topic: 41640 Message: 41685

the scope i wanted was not available this weekend, i do have a line on a freq counter also..just not going to happen this weekend. I did get a fluke 45 to measure the 25KC on the marker board, but it is not picking up the signal. I do have 9 volts through. looking at the other bands the marker seems a bit off by a few KCs. when I get the right equipment, Ill make some checks

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:

> Steve,
>
> To verify the VFO is operating on the correct frequency range you will
> need a frequency counter. If you can borrow one from a friend then
> connect the frequency counter to the "VFO" terminal on the IF Unit
> board. Tune the VFO to zero on the dial, the frequency counter should
> display "very close" to 5.500Mhz. Tune the VFO to 500 on the dial and
> the frequency counter should display "very close" to 4.999Mhz.
>
> Don't stop after only checking 2 bands, 20 meters and JJY/WWV. You
> should also have checked all the other bands, 160, 80, 40, 15, and 10
> meters, to ensure they too zero beat the Marker signal every 25Khz. If
> all the other ham bands zero beat the Marker signal ever 25Khz then it
> would appear the VFO is, in fact, operating over the proper 5.500Mhz to
> 4.999Mhz frequency range and you should NOT touch any internal frequency
> adjustments in the VFO!!!
>
> You said that JJY/WWV and the Marker signal zero beat about every
> "30Khz". If that is in fact true then that indicates the JJY/WWV HET
> Oscillator 23.895Mhz crystal may be off frequency by 5Khz. You can
> purchase a replacement JJY/WWV HET Oscillator crystal, 23.895Mhz, at
> International Crystals in Oklahoma City, OK (see link below) for $23
> plus USPS shipping.
>
> http://www.icmfg.com/hamradio.html
>
> They have an 800, toll free, number you can call. They take all major
> credit cards.
>
> 73
> Mike
> W5RKL
>
>
>
>
> On 4/11/2013 10:39 PM, yioutta_99 wrote:
> >

> > UPDATE:
> > I re-cleaned and Blew out the VFO. Seems like the drifting stopped. i
> > went on WWV and found i wasnt too far off the mark for some reason. So
> > maybe the problem wasnt mechanical..maybe just left over gunk(?). I
> > zero beated the marker, but when the band switch was on WWV I was not
> > getting the tone every 25 KC..it was something around 30 some. I went
> > on 20m to pick up the maritime net at 14.300 and i was real close on
> > the dial. i was able to just adjust the outer plate. I turned the
> > marker on and it was on every 25KC now. QSOed with a fellow in CA and
> > got a freq check and i was about a 1/2 KC off.
> > I am wondering if have extra residue on the band switch (sprayed it
> > the night before) good be part of the problem. and working a few times
> > more cleaned it up.
> >
> > Thanks guys
> >
> > steve
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "yioutta_99"
> > <yioutta_99@> wrote:
> > >
> > >
> > > Sorry, Its the 520S
> > >
> > > I just took a listen, and its still drifting. i listen for a bit on
> > 20 meters.
> > >
> > > I am thinking there maybe some dislodged gunk, or residue in the
> > VFO. i will blow it out first to see if it can stabilize, then go in
> > for the adjustment you wrote out for me. i will see if i have a
> > service manual in this computer, if not i will re down load.
> > >
> > > THANK YOU for the help
> > >
> > > steve
> >
>
>
>
> [Non-text portions of this message have been removed]
>

41686. Re: [TS-520_820_530_830] TS-530S back two switches

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-13 02:07:11 UTC
From: Joseph Stiles
Topic: 41683 Message: 41686

Rob,

I took a look....they could be just about anything. Need to see the inside....and be able to see where the wires go.

The two most common I've seen with this switch set up are: FREE BANDING...aka CB HACK. It alters the PLL signal path
to get above, in, and, below the CB band.

The second, is an aftermarket modification to switch filters in/out.

73 Joe
WB7UQU

From: rkings1956 <rkings1956@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, April 12, 2013 5:01 PM
Subject: [TS-520_820_530_830] TS-530S back two switches

Hi Group,

I purchased a TS-530s and have not received yet. I notice in the photos
that the back of the rig has two added switches. I was wondering if anyone has any idea
what they may be for? I provide a photo in the groups photo section under my callsigns
KD6FSK. The person that I purchased the rig from has no idea. I would appreciate any help.

Rob
KD6FSK

[Non-text portions of this message have been removed]

41687. Re: [TS-520_820_530_830] Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-13 03:19:12 UTC
From: Alan Riley
Topic: 41132 Message: 41687

Tyler, the actual value of the 9V is probably not so critical that touching it up would benefit you and I certainly would not recommend it if the rig was operating normally.

However, if that adjustment VR1 is intermittent, then it will affect both the 9V and the 3.3V levels. Try this: with the power off, mark the physical setting of the trimmer VR1 as closely as you can, then turn it limit to limit several times. Reset it to the marked position, then turn on the power and set the VR1 for 9V measured from Terminal 9 to chassis. If it continues to act up, we will look into it further.

Alan, KD5R

From: tfrugia81
Sent: Friday, April 12, 2013 6:39 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: ts520se sidetone question

One question, is it worth adjusting the AVR to be closer to 9v? I know the difference is minimal, but I thought I would ask. The service manual (page 10, sec 3-11) shows how to adjust it for 9v +/- 0.2v. I'm curious if 8.92 (what I'm reading under normal/working conditions) vs 8.98 to 9.02v might be enough for concern.

73

[Non-text portions of this message have been removed]

41688. Re: Transformer smoking

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-13 04:42:11 UTC
From: yioutta_99
Topic: 41659 Message: 41688

can you feel the transformer ,after you unplug the unit? is it hot? transformers hold heat for a long time. if not, i would agree that its something else. is it drawing a lot of current on power up? youll need a inline power meter for checking. A bad transformer will probably draw more current than a resistor. follow your nose to a burnt part... it could be under the chassis as well.

steve
N7lwf

--- In TS-520_820_530_830@yahoogroups.com, "Brad Allen" <kb2chy@...> wrote:
>
> Of course it's fixable providing the transformer is not shorted out now. Do
> you have a call? What are your abilities to do such work? Have you got a
> schematic to isolate the problem? It seems to me if it is the primary
> smoking, it would blow a fuse. The secondary, well there are other
> components that would blow before smoking the transformer. The thing is that
> transformer is not going to smoke till a winding gets hot. I believe you
> should isolate the issue then find out why the fuse did not blow. Maybe
> check a little harder to find what is REALLY smoking in there. Transformer
> is not going to smoke when you plug it in. The load will blow a fuse first.
> Look deeper, maybe It's a capacitor or a power resistor (bleeder) that is
> smoking. Brad KB2CHY
>
>
>
> _____
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Garry Walker
> Sent: Thursday, April 11, 2013 6:04 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Transformer smoking
>
>
>
>
>
>
> Hi. I plug in my ts830 and the transformer is smoking upon switch on. Is
> this fixable or is it time for a replacement? If I need to replace, anyone
> have a source at reasonable cost?
>
> Thanks.
>
> G
>

> [Non-text portions of this message have been removed]
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>
> [Non-text portions of this message have been removed]
>

41689. Re: [TS-520_820_530_830] TS-530S back two switches

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-13 04:41:10 UTC
From: Robert Reyes
Topic: 41683 Message: 41689

Ok Joe,

Thanks, I'll wait till I get the rig in next week and look inside.

--- On Sat, 4/13/13, Joseph Stiles <stilesjoseph@...> wrote:

From: Joseph Stiles <stilesjoseph@...>
Subject: Re: [TS-520_820_530_830] TS-530S back two switches
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Date: Saturday, April 13, 2013, 2:07 AM

Rob,

  I took a look....they could be just about anything. Need to see the inside....and be able to see where the wires go.

  The two most common I've seen with this switch set up are: FREE BANDING...aka CB HACK. It alters the PLL signal path
       to get above, in, and, below the CB band.

   The second, is an aftermarket modification to switch filters in/out.

73 Joe
WB7UQU

_____
From: rkings1956 <rkings1956@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, April 12, 2013 5:01 PM
Subject: [TS-520_820_530_830] TS-530S back two switches

Hi Group,

I purchased a TS-530s and have not received yet. I notice in the photos
that the back of the rig has two added switches. I was wondering if anyone has any idea
what they may be for? I provide a photo in the groups photo section under my callsigns
KD6FSK. The person that I purchased the rig from has no idea. I would appreciate any help.

Rob
KD6FSK

[Non-text portions of this message have been removed]

Yahoo! Groups Links

[Non-text portions of this message have been removed]

41690. Coil adjustment tools - specs and source

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-13 05:31:16 UTC
From: paul.nussbaum
Topic: 41690 Message: 41690

What do you use? I have a couple, bought some more the other day at the only place around here that has them.

The coils for the ant, mix, and drive have different size and shape apertures in the slugs, and of the tools I have, only the drive slugs will accept one of my tools.

Is there a specification that either describes the right tool (the business end of the thing) or describes the slugs' apertures so I can get them to mate properly?

If someone has existing tools that fit, could you provide the description, name, manufacturer, specification, or any other info that might help me locate them?

I'm thinking my coil pack needs alignment...?

TS-820s
MHz - CW Watts Output / Dummy Load
28 - 90
21 - 90
14 - 70
7 - 65
3.5 - 40
1.8 - 60

Thanks,
Paul
AD5FT

41691. Re: [TS-520_820_530_830] Re: Transformer smoking

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-13 05:53:02 UTC
From: Mike
Topic: 41659 Message: 41691

G,

Did the fuse blow prior to or when the transformer started smoking?

Have you verified the fuse is the correct 6 amp fuse and not a fuse with
a much higher current rating?

Have you visually checked the Rectifier Unit for overheated components
such as resistors as well as wiring in and around the area of the
Rectifier Unit board?

What other checks have you done that would produce results that points
to the transformer as the source of the "smoke"?

Mike
W5RKL

On 4/12/2013 11:42 PM, yioutta_99 wrote:
>
> can you feel the transformer ,after you unplug the unit? is it hot?
> transformers hold heat for a long time. if not, i would agree that its
> something else. is it drawing a lot of current on power up? youll need
> a inline power meter for checking. A bad transformer will probably
> draw more current than a resistor. follow your nose to a burnt part...
> it could be under the chassis as well.
>
> steve
> N7lwf
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Brad Allen"
> <kb2chy@...> wrote:
> >
> > Of course it's fixable providing the transformer is not shorted out
> now. Do
> > you have a call? What are your abilities to do such work? Have you got a
> > schematic to isolate the problem? It seems to me if it is the primary
> > smoking, it would blow a fuse. The secondary, well there are other
> > components that would blow before smoking the transformer. The thing
> is that
> > transformer is not going to smoke till a winding gets hot. I believe you
> > should isolate the issue then find out why the fuse did not blow. Maybe
> > check a little harder to find what is REALLY smoking in there.
> Transformer
> > is not going to smoke when you plug it in. The load will blow a fuse
> first.

> > Look deeper, maybe It's a capacitor or a power resistor (bleeder)
> that is
> > smoking. Brad KB2CHY
> >
> >
> >
> > _____
> >
> > From: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > [mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Garry Walker
> > Sent: Thursday, April 11, 2013 6:04 PM
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Subject: [TS-520_820_530_830] Transformer smoking
> >
> >
> >
> >
> >
> > Hi. I plug in my ts830 and the transformer is smoking upon switch on. Is
> > this fixable or is it time for a replacement? If I need to replace,
> anyone
> > have a source at reasonable cost?
> >
> > Thanks.
> >
> > G
> >
> > [Non-text portions of this message have been removed]
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> > [Non-text portions of this message have been removed]
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41692. Re: Coil adjustment tools - specs and source

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-13 13:36:56 UTC
From: roberteleazer@rocketmail.com
Topic: 41690 Message: 41692

I have accumulated a collection of tuning tools, including from Radio Shack (they rarely have them any more) and Fair Radio.

But the problem with the coil cores in the TS-820S is that nothing fits them very well. The plastic tools bend too easily and metal screwdrivers both affect the measurement and tend to crack the coil slugs.

So here is what you should do. Get a wooden dowel, about 3/16 in dia or thereabouts (package of various sizes available at Wal Mart for about $1.59). File down the end to a "chisel" point. Then lop off the very end of the chisel point to make it blunter and cut off the sides of the point so it is just wide enough to fit the coil slugs.

Of course, if you screw up you can just cut the end off and start over.

Once you have it right, dip the tip in polyurethane varnish or coat it with superglue and let it dry throughly.

Also, take another dowel and file it down to chisel point to use for turning the final neutralizing cap without electrocuting yourself.

The thing I have not found yet is a tuning tool that is both nonmetallic and strong enough to tune the carrier unit adjustments without affecting the frequency. I have to use a metal screwdriver and repeat the adjustments as required.

Good Luck!

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "paul.nussbaum" <paul.nussbaum@...> wrote:
>
> What do you use? I have a couple, bought some more the other day at the only place around here that has them.
>
> The coils for the ant, mix, and drive have different size and shape apertures in the slugs, and of the tools I have, only the drive slugs will accept one of my tools.
>
> Is there a specification that either describes the right tool (the business end of the thing) or describes the slugs' apertures so I can get them to mate properly?
>
> If someone has existing tools that fit, could you provide the description, name, manufacturer, specification, or any other info that might help me locate them?
>
> I'm thinking my coil pack needs alignment...?
>
> TS-820s
> MHz - CW Watts Output / Dummy Load

> 28 - 90
> 21 - 90
> 14 - 70
> 7 - 65
> 3.5 - 40
> 1.8 - 60
>
> Thanks,
> Paul
> AD5FT
>

41693. Re: Coil adjustment tools - specs and source

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-13 13:42:34 UTC
From: M. J. Synowiec
Topic: 41690 Message: 41693

Hello Paul,

There are a couple of sources for the kenwood alignment tools & other parts that members of this reflector have used with success. One is Ken Kemski who can be found at www.k4eaa.com. Not only parts but a great deal of info as well. Another is http://www.hybridrestore.com/parts/. Many will recommend Bob Mansker as well. I've also gotten a nice set of tools from The Tube depot www.tubedepot.com. I'm sure others can supply info/encouragement as well as advice on shaping/modifying your existing tools to thee job at hand. Good Luck! You're in the right place to getting your hybrid health back in order.

Vy 73,
mjsyn
K8SYN

[Non-text portions of this message have been removed]

41694. Re: 520S VFO

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-13 14:31:53 UTC
From: yioutta_99
Topic: 41640 Message: 41694

i have..I need to look at this closer. sometimes it appears to be off other times right on the money. so at this point I am not 100% on this question. perhaps the band switch ? I sprayed it, but failed to blow it afterwards. I will revisit that task today.
on air checks so far VFO is dead on with other hams.

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> "MO" stands for "Marker Output"
>
> Have you checked all the other bands, 160, 80, 40, 15, and 10 meters, to
> see how they zero beat with the Marker Unit signal at 25Khz dial intervals?
>
>
>
>
> On 4/12/2013 7:18 AM, yioutta_99 wrote:
> >
> > i will see if i can find a freq counter at work. I think. oscope might
> > do the job too. I wanted to also double check the freq on the on the
> > marker board. the service manual says to clip on the MO...what is MO.
> > thanks for the tip with going through all the bands. And what freqs to
> > look for.
> >
> > steve
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@> wrote:
> > >
> > > Steve,
> > >
> > > To verify the VFO is operating on the correct frequency range you will
> > > need a frequency counter. If you can borrow one from a friend then
> > > connect the frequency counter to the "VFO" terminal on the IF Unit
> > > board. Tune the VFO to zero on the dial, the frequency counter should
> > > display "very close" to 5.500Mhz. Tune the VFO to 500 on the dial and
> > > the frequency counter should display "very close" to 4.999Mhz.
> > >
> > > Don't stop after only checking 2 bands, 20 meters and JJY/WWV. You
> > > should also have checked all the other bands, 160, 80, 40, 15, and 10
> > > meters, to ensure they too zero beat the Marker signal every 25Khz. If
> > > all the other ham bands zero beat the Marker signal ever 25Khz then it
> > > would appear the VFO is, in fact, operating over the proper 5.500Mhz to
> > > 4.999Mhz frequency range and you should NOT touch any internal
> > frequency
> > > adjustments in the VFO!!!

> > >
> > > You said that JJY/WWV and the Marker signal zero beat about every
> > > "30Khz". If that is in fact true then that indicates the JJY/WWV HET
> > > Oscillator 23.895Mhz crystal may be off frequency by 5Khz. You can
> > > purchase a replacement JJY/WWV HET Oscillator crystal, 23.895Mhz, at
> > > International Crystals in Oklahoma City, OK (see link below) for $23
> > > plus USPS shipping.
> > >
> > > http://www.icmfg.com/hamradio.html
> > >
> > > They have an 800, toll free, number you can call. They take all major
> > > credit cards.
> > >
> > > 73
> > > Mike
> > > W5RKL
> > >
> > >
> > >
> > >
> > > On 4/11/2013 10:39 PM, yioutta_99 wrote:
> > > >
> > > > UPDATE:
> > > > I re-cleaned and Blew out the VFO. Seems like the drifting stopped. i
> > > > went on WWV and found i wasnt too far off the mark for some
> > reason. So
> > > > maybe the problem wasnt mechanical..maybe just left over gunk(?). I
> > > > zero beated the marker, but when the band switch was on WWV I was not
> > > > getting the tone every 25 KC..it was something around 30 some. I went
> > > > on 20m to pick up the maritime net at 14.300 and i was real close on
> > > > the dial. i was able to just adjust the outer plate. I turned the
> > > > marker on and it was on every 25KC now. QSOed with a fellow in CA and
> > > > got a freq check and i was about a 1/2 KC off.
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> > > > the night before) good be part of the problem. and working a few
> > times
> > > > more cleaned it up.
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> > > > Thanks guys
> > > >
> > > > steve
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "yioutta_99"
> > > > <yioutta_99@> wrote:
> > > > >
> > > > >
> > > > > Sorry, Its the 520S
> > > > >

> > > > > I just took a listen, and its still drifting. i listen for a bit on
> > > > 20 meters.
> > > > >
> > > > > I am thinking there maybe some dislodged gunk, or residue in the
> > > > VFO. i will blow it out first to see if it can stabilize, then go in
> > > > for the adjustment you wrote out for me. i will see if i have a
> > > > service manual in this computer, if not i will re down load.
> > > > >
> > > > > THANK YOU for the help
> > > > >
> > > > > steve
> > > >
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41695. Re: [TS-520_820_530_830] TS-530S back two switches

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-13 05:34:38 UTC
From: Robert Reyes
Topic: 41683 Message: 41695

Joe,

I just received a msg from person I purchased the ts-530s and he stated that switches are for the CB band. He said if there up its for CB and down is for Ham bands. Is this going to affect the rig or do I just leave it alone. He also stated that the rig is working on all bands with 100 watts output.

Rob
KD6FSK

--- On Sat, 4/13/13, Joseph Stiles <stilesjoseph@yahoo.com> wrote:

From: Joseph Stiles <stilesjoseph@...>
Subject: Re: [TS-520_820_530_830] TS-530S back two switches
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Date: Saturday, April 13, 2013, 2:07 AM

Rob,

  I took a look....they could be just about anything. Need to see the inside....and be able to see where the wires go.

  The two most common I've seen with this switch set up are: FREE BANDING...aka CB HACK. It alters the PLL signal path
       to get above, in, and, below the CB band.

   The second, is an aftermarket modification to switch filters in/out.

73 Joe
WB7UQU

_____
From: rkings1956 <rkings1956@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, April 12, 2013 5:01 PM
Subject: [TS-520_820_530_830] TS-530S back two switches

Hi Group,

I purchased a TS-530s and have not received yet. I notice in the photos
that the back of the rig has two added switches. I was wondering if anyone has any idea what they may be for? I provide a photo in the groups photo section under my callsigns KD6FSK. The person that I purchased the rig from has no idea. I would appreciate any help.

Rob
KD6FSK

[Non-text portions of this message have been removed]

Yahoo! Groups Links

[Non-text portions of this message have been removed]

41696. Re: Coil adjustment tools - specs and source

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-13 17:24:31 UTC
From: Keith Hutt
Topic: 41690 Message: 41696

I found some old hard plastic knitting needles which are very strong,
and trim down nicely with a bit of patience,

just use a good craft knife

Keith G0TSH

[Non-text portions of this message have been removed]

41697. Re: [TS-520_820_530_830] TS-530S back two switches

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-13 18:18:58 UTC
From: Joseph Stiles
Topic: 41683 Message: 41697

Rob,

That is very common. You can leave it be.....and mark the switches as to what they do....ie..."up" CB..."down" HAM....or remove the mods.
Depending on which way the mods were done...it could take 10 minutes to and hour or more to properly remove.

It is possible that the 10 meter coils..."ANT," "MIX," and "XMIT(or drive) coils my have been "adjusted."

Please note that: It is illegal for you to operate this rig in/on the 11meter(CB) band...or any others for that matter...outside of the band plan/restrictions/conditions of your license...except for some very rare instances spelled out in Part 97 of the FCC Rules & Regulations.

It's up to you what you choose to with it. As Stated to another member of this board..ANY rig that crosses by path or bench...will have ANY CB HACK or
FREE BANDING REMOVED..or I won't work on it.

73 Joe
WB7UQU

From: Robert Reyes <rkings1956@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, April 12, 2013 10:34 PM
Subject: Re: [TS-520_820_530_830] TS-530S back two switches

Joe,

I just received a msg from person I purchased the ts-530s and he stated that switches are for the CB band. He said if there up its for CB and down is for Ham bands. Is this going to affect the rig or do I just leave it alone. He also stated that the rig is working on all bands with 100 watts output.

Rob
KD6FSK

--- On Sat, 4/13/13, Joseph Stiles <stilesjoseph@...> wrote:

From: Joseph Stiles <stilesjoseph@...>
Subject: Re: [TS-520_820_530_830] TS-530S back two switches
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Date: Saturday, April 13, 2013, 2:07 AM

Rob,

I took a look....they could be just about anything. Need to see the inside....and be able to see where the wires go.

The two most common I've seen with this switch set up are: FREE BANDING...aka CB HACK. It alters the PLL signal path
to get above, in, and, below the CB band.

The second, is an aftermarket modification to switch filters in/out.

73 Joe
WB7UQU

From: rkings1956 <rkings1956@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, April 12, 2013 5:01 PM
Subject: [TS-520_820_530_830] TS-530S back two switches

Hi Group,

I purchased a TS-530s and have not received yet. I notice in the photos
that the back of the rig has two added switches. I was wondering if anyone has any idea what they may be for? I provide a photo in the groups photo section under my callsigns KD6FSK. The person that I purchased the rig from has no idea. I would appreciate any help.

Rob
KD6FSK

[Non-text portions of this message have been removed]

Yahoo! Groups Links

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41698. BS-8 adapter.....my radio a 520S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-13 18:47:55 UTC
From: n3kvl
Topic: 41698 Message: 41698

Hello All,

I opened the sm-220 and looked at the adapter and it a BS-8 not a BS-5. Its marked on the bottom. So I assume that it is not going to work with the TS-520S? The manual indicate a BS-5 for the 520.

Is this trading material? Anyone?

Thanks
Archie

41699. Re: [TS-520_820_530_830] BS-8 adapter.....my radio a 520S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-13 19:15:43 UTC
From: Mike
Topic: 41698 Message: 41699

Unfortunately Archie the BS-8 will not work with the TS-520 series transceivers.

73
Mike
W5RKL

On 4/13/2013 1:47 PM, n3kvl wrote:
>
> Hello All,
>
> I opened the sm-220 and looked at the adapter and it a BS-8 not a
> BS-5. Its marked on the bottom. So I assume that it is not going to
> work with the TS-520S? The manual indicate a BS-5 for the 520.
>
> Is this trading material? Anyone?
>
> Thanks
> Archie
>
>

[Non-text portions of this message have been removed]

41700. Re: [TS-520_820_530_830] BS-8 adapter.....my radio a 520S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-13 19:18:17 UTC
From: Alvin Chipmunk
Topic: 41698 Message: 41700

Hi Mike,

I thought so. Too bad for me. Now, I'm wondering if I try and trade it or sell it outright.

Archie

From: Mike <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, April 13, 2013 3:15 PM
Subject: Re: [TS-520_820_530_830] BS-8 adapter.....my radio a 520S

Unfortunately Archie the BS-8 will not work with the TS-520 series transceivers.

73
Mike
W5RKL

On 4/13/2013 1:47 PM, n3kvl wrote:
>
> Hello All,
>
> I opened the sm-220 and looked at the adapter and it a BS-8 not a
> BS-5. Its marked on the bottom. So I assume that it is not going to
> work with the TS-520S? The manual indicate a BS-5 for the 520.
>
> Is this trading material? Anyone?
>
> Thanks
> Archie
>
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41701. Re: [TS-520_820_530_830] BS-8 adapter.....my radio a 520S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-13 20:09:13 UTC
From: Mike
Topic: 41698 Message: 41701

I can't answer that question Archie. You could put a posting to see if
anyone has a BS-5 to trade for your BS-8.

73
Mike

On 4/13/2013 2:18 PM, Alvin Chipmunk wrote:
>
> Hi Mike,
>
> I thought so. Too bad for me. Now, I'm wondering if I try and trade
> it or sell it outright.
>
> Archie
>
> _____
> From: Mike <w5rkl@... <mailto:w5rkl%40yahoo.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Saturday, April 13, 2013 3:15 PM
> Subject: Re: [TS-520_820_530_830] BS-8 adapter.....my radio a 520S
>
>
>
> Unfortunately Archie the BS-8 will not work with the TS-520 series
> transceivers.
>
> 73
> Mike
> W5RKL
>
> On 4/13/2013 1:47 PM, n3kvl wrote:
> >
> > Hello All,
> >
> > I opened the sm-220 and looked at the adapter and it a BS-8 not a
> > BS-5. Its marked on the bottom. So I assume that it is not going to
> > work with the TS-520S? The manual indicate a BS-5 for the 520.
> >
> > Is this trading material? Anyone?
> >
> > Thanks
> > Archie
> >
> >

>
> [Non-text portions of this message have been removed]
>
> [Non-text portions of this message have been removed]
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>

[Non-text portions of this message have been removed]

41702. Re: [TS-520_820_530_830] BS-8 adapter.....my radio a 520S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-13 20:20:29 UTC
From: pmarkavage@...
Topic: 41698 Message: 41702

Only the "pan" junction will not work probably. The rest of the SM-220, monitoring your transmit signal and monitoring receive signals will work properly. Over the years, I've found the panadapter function of the SM-220 somewhat useless but it makes for nice station eye candy. The real value of the SM-220 is monitoring your transmit signal and to a somewhat lesser extent, monitoring receive signal waveforms.

Pete, wa2cwa

On Sat, 13 Apr 2013 18:47:55 -0000 "n3kvl" <n3kvl@...> writes:
> Hello All,
>
> I opened the sm-220 and looked at the adapter and it a BS-8 not a
> BS-5. Its marked on the bottom. So I assume that it is not going
> to work with the TS-520S? The manual indicate a BS-5 for the 520.
>
>
> Is this trading material? Anyone?
>
> Thanks
> Archie

41703. Re: [TS-520_820_530_830] Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-13 20:22:34 UTC
From: Tyler Frugia
Topic: 41132 Message: 41703

Thanks Allan. I did as you suggested, but having same symptoms.

However, I think I have a HUGE clue. While tooth picking around the AF board, the radio went deaf. Since I had the bottom open and was near it, I heard the relay RL2 CLICK and audio was restored. I noticed this twice! I've previously pulled the relay and reseated it (looks brand new), but now I believe this is the culprit. I'll look trough my previous notes to see what the next step may be.

73!

Sent from my iPhone

On Apr 12, 2013, at 8:19 PM, "Alan Riley" <arr44@...> wrote:

> Tyler, the actual value of the 9V is probably not so critical that touching it up
> would benefit you and I certainly would not recommend it if the rig was
> operating normally.
>
> However, if that adjustment VR1 is intermittent, then it will affect both the 9V
> and the 3.3V levels. Try this: with the power off, mark the physical setting of
> the trimmer VR1 as closely as you can, then turn it limit to limit several times.
> Reset it to the marked position, then turn on the power and set the VR1 for
> 9V measured from Terminal 9 to chassis. If it continues to act up, we will
> look into it further.
>
> Alan, KD5R
>
> From: tfrugia81
> Sent: Friday, April 12, 2013 6:39 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: ts520se sidetone question
>
> One question, is it worth adjusting the AVR to be closer to 9v? I know the difference is minimal, but I thought I would ask. The service manual (page 10, sec 3-11) shows how to adjust it for 9v +/- 0.2v. I'm curious if 8.92 (what I'm reading under normal/working conditions) vs 8.98 to 9.02v might be enough for concern.
>
> 73
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

41704. Re: [TS-520_820_530_830] Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-13 20:49:17 UTC
From: Tyler Frugia
Topic: 41132 Message: 41704

I took the relay cover off so I could see what was happening when the radio goes deaf. I made a video of it (http://www.youtube.com/watch?v=9YHssBUzq20). The radio goes deaf at 1m 27s, and comes back at 2m 2s.

The relay doesn't seem to do anything when the radio goes 'deaf', but definitely flutters when it comes back alive. Is it still worth cleaning it out, or is this just a byproduct of the real issue?

Thanks for any help!

-Tyler
k7fru

On Sat, Apr 13, 2013 at 1:22 PM, Tyler Frugia <tfrugia@...> wrote:

> Thanks Allan. I did as you suggested, but having same symptoms.
>
> However, I think I have a HUGE clue. While tooth picking around the AF
> board, the radio went deaf. Since I had the bottom open and was near it, I
> heard the relay RL2 CLICK and audio was restored. I noticed this twice!
> I've previously pulled the relay and reseated it (looks brand new), but
> now I believe this is the culprit. I'll look trough my previous notes to
> see what the next step may be.
>
> 73!
>
> Sent from my iPhone
>
> On Apr 12, 2013, at 8:19 PM, "Alan Riley" <arr44@...> wrote:
>
>
>
>
> Tyler, the actual value of the 9V is probably not so critical that
> touching it up
> would benefit you and I certainly would not recommend it if the rig was
> operating normally.
>
> However, if that adjustment VR1 is intermittent, then it will affect both
> the 9V
> and the 3.3V levels. Try this: with the power off, mark the physical
> setting of
> the trimmer VR1 as closely as you can, then turn it limit to limit several
> times.
> Reset it to the marked position, then turn on the power and set the VR1 for
> 9V measured from Terminal 9 to chassis. If it continues to act up, we will
> look into it further.

>
> Alan, KD5R
>
> From: tfrugia81
> Sent: Friday, April 12, 2013 6:39 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: ts520se sidetone question
>
> One question, is it worth adjusting the AVR to be closer to 9v? I know the
> difference is minimal, but I thought I would ask. The service manual (page
> 10, sec 3-11) shows how to adjust it for 9v +/- 0.2v. I'm curious if 8.92
> (what I'm reading under normal/working conditions) vs 8.98 to 9.02v might
> be enough for concern.
>
> 73
>
> [Non-text portions of this message have been removed]
>
>
>
>

[Non-text portions of this message have been removed]

41705. Tune-Up procedure for TS-820S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-13 22:14:37 UTC
From: bsmply
Topic: 41705 Message: 41705

Greetings to the group. I tried to join today's 40m net on my TS-820S, but I was not heard, so I had to fail back to my Yeasu FT-897 :(. Oh well.

First, my name is Burton (I go by anything close to it). I've been a member of the group for a while, but this is my first post. I've enjoyed the group and all the help I've seen on here.

I think the reason nobody could hear me on the group net with my 820S is I'm still a rookie at the tune-up procedure when changing bands. I tried to follow the procedure listed in the files section of this group, specifically for the 820S. Here's the link - http://groups.yahoo.com/group/TS-520_820_530_830/files/OPERATOR%20AIDS (file--> operator aids --> tuneup.doc). I don't know if it's the rig or my lack of knowledge on how to use it.

Is this the correct document to be used? If so, I have some comments/questions about this procedure.

On page 1, step 1: Why is the position of the "standby switch" listed twice?

On page 2, step 5: With the meter set to "ALC", the procedure states to "peak the meter", however it's not clear if this is meant to only peak the meter within the ACL scale, or to the edge of the meter. Which peak and I shooting for?

On page 2, step 6: My meter starts at about 225ma, then when I flip the standby switch to "send", the meter drops to ~60 - 90 ma (never exceeds 100 ma), but there is no specific "dip" - ie, regardless of how I adjust the plate knob, the meter appears to drop, then stays around the same reading and does not really move until I release the standby switch.

Since I'm not sure about the settings, I've never really moved the "car" setting from the 9 o'clock position as stated in step 1. The manual defined the CAR setting as the carrier level adjustment for CW and implies that adjusting it will not affect SSB. Am I interpreting this incorrectly?

I guess I'm a little confused. Following the net, I fired up the 820 again and found the W3SGJ special event booming on 7.240.0 and tried to call out, but I made a hybird rookie mistake, I turned off the heaters while listening ... and forgot to turn them back on until it was too late. I guess I'm not the only person to make this mistake.

I have plans next weekend and will not be able to try the net then. Maybe some other time.

Also, just wondering if anyone from this group is in the greater Philadelphia area and would be willing to make a trip to my QTH to show me how to tune this rig?

73,

KC2OUC, Burton

41706. Re: [TS-520_820_530_830] Tune-Up procedure for TS-820S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-14 00:20:33 UTC
From: michael Miller
Topic: 41705 Message: 41706

Hi Burton, you can find the tuneup procedure for "kenwood HYBRID" at www.K4eaa.com/tune-up.htm I hope that this will help you. W9MVM.

BEST 73 and GODS BLESSINGS, MIKE & Princess Ruth.

>_____
> From: bsmply <bsmply@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Saturday, April 13, 2013 6:14 PM
>Subject: [TS-520_820_530_830] Tune-Up procedure for TS-820S
>
>
>
>
>Greetings to the group. I tried to join today's 40m net on my TS-820S, but I was not heard, so I had to fail back to my Yeasu FT-897 :(. Oh well.
>
>First, my name is Burton (I go by anything close to it). I've been a member of the group for a while, but this is my first post. I've enjoyed the group and all the help I've seen on here.
>
>I think the reason nobody could hear me on the group net with my 820S is I'm still a rookie at the tune-up procedure when changing bands. I tried to follow the procedure listed in the files section of this group, specifically for the 820S. Here's the link - http://groups.yahoo.com/group/TS-520_820_530_830/files/OPERATOR%20AIDS (file--> operator aids --> tuneup.doc). I don't know if it's the rig or my lack of knowledge on how to use it.
>
>Is this the correct document to be used? If so, I have some comments/questions about this procedure.
>
>On page 1, step 1: Why is the position of the "standby switch" listed twice?
>
>On page 2, step 5: With the meter set to "ALC", the procedure states to "peak the meter", however it's not clear if this is meant to only peak the meter within the ACL scale, or to the edge of the meter. Which peak and I shooting for?
>
>On page 2, step 6: My meter starts at about 225ma, then when I flip the standby switch to "send", the meter drops to ~60 - 90 ma (never exceeds 100 ma), but there is no specific "dip" - ie, regardless of how I adjust the plate knob, the meter appears to drop, then stays around the same reading and does not really move until I release the standby switch.
>
>Since I'm not sure about the settings, I've never really moved the "car" setting from the 9 o'clock position as stated in step 1. The manual defined the CAR setting as the carrier level adjustment for CW and implies that adjusting it will not affect SSB. Am I

interpreting this incorrectly?
>
>I guess I'm a little confused. Following the net, I fired up the 820 again and found the W3SGJ special event booming on 7.240.0 and tried to call out, but I made a hybird rookie mistake, I turned off the heaters while listening ... and forgot to turn them back on until it was too late. I guess I'm not the only person to make this mistake.
>
>I have plans next weekend and will not be able to try the net then. Maybe some other time.
>
>Also, just wondering if anyone from this group is in the greater Philadelphia area and would be willing to make a trip to my QTH to show me how to tune this rig?
>
>73,
>
>KC2OUC, Burton
>
>
>

[Non-text portions of this message have been removed]

41707. Re: [TS-520_820_530_830] BS-8 adapter.....my radio a 520S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-14 00:47:54 UTC
From: pmarkavage@...
Topic: 41698 Message: 41707

"probably" should be "properly". Fingers working faster then brain.
Pete, wa2cwa

On Sat, 13 Apr 2013 16:20:29 -0400 pmarkavage@... writes:
> Only the "pan" junction will not work probably. The rest of the SM-220 monitoring your transmit signal and monitoring receive signals will work properly. Over the years, I've found the panadapter function of the SM-220 somewhat useless but it makes for nice station eye candy. The real value of the SM-220 is monitoring your transmit signal and to a somewhat lesser extent, monitoring receive signal waveforms.
>
> Pete, wa2cwa
>
> On Sat, 13 Apr 2013 18:47:55 -0000 "n3kvl" <n3kvl@...>
> writes:
> > Hello All,
> >
> > I opened the sm-220 and looked at the adapter and it a BS-8 not a
>
> > BS-5. Its marked on the bottom. So I assume that it is not going
>
> > to work with the TS-520S? The manual indicate a BS-5 for the
> 520.
> >
> >
> > Is this trading material? Anyone?
> >
> > Thanks
> > Archie

41708. Re: Coil adjustment tools - specs and source

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-14 00:55:11 UTC
From: Scott Griffin
Topic: 41690 Message: 41708

Excellent suggestions above. I have taken some of the hard plastic electronic alignment tools (say from Radio Shack) and trimmed them down to fit the coil slots with a very sharp knife or a razor blade (careful!). Hope that helps.

73s, Scott, N6CIC

[Non-text portions of this message have been removed]

41709. Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-14 01:21:18 UTC
From: rc143dr
Topic: 41132 Message: 41709

Hello Tyler,

I recently had an issue similar to what you describe with a TS-520S. It was related to the 9V off of the FIX CH AVR UNIT. The POT VR1 had partially failed (one side of the wiper tab that holds it on had broken off partially) such that the wiper was making random/intermitted contact which was causing the 9V to randomly fail/go out of tolerance.

I am not sure if this would cause the relay to glitch when it comes back on or not.

Just another thing to look at if you did not do so already.

73,

Roger (AE3RT)

--- In TS-520_820_530_830@yahoogroups.com, Tyler Frugia <tfrugia@...> wrote:
>
> I took the relay cover off so I could see what was happening when the radio
> goes deaf. I made a video of it (http://www.youtube.com/watch?v=9YHssBUzq20).
> The radio goes deaf at 1m 27s, and comes back at 2m 2s.
>
> The relay doesn't seem to do anything when the radio goes 'deaf', but
> definitely flutters when it comes back alive. Is it still worth cleaning
> it out, or is this just a byproduct of the real issue?
>
>
> Thanks for any help!
>
> -Tyler
> k7fru
>
>
> On Sat, Apr 13, 2013 at 1:22 PM, Tyler Frugia <tfrugia@...> wrote:
>
> > Thanks Allan. I did as you suggested, but having same symptoms.
> >
> > However, I think I have a HUGE clue. While tooth picking around the AF
> > board, the radio went deaf. Since I had the bottom open and was near it, I
> > heard the relay RL2 CLICK and audio was restored. I noticed this twice!
> > I've previously pulled the relay and reseated it (looks brand new), but
> > now I believe this is the culprit. I'll look trough my previous notes to
> > see what the next step may be.
> >
> > 73!
> >
> > Sent from my iPhone

> >
> > On Apr 12, 2013, at 8:19 PM, "Alan Riley" <arr44@...> wrote:
> >
> >
> >
> > Tyler, the actual value of the 9V is probably not so critical that
> > touching it up
> > would benefit you and I certainly would not recommend it if the rig was
> > operating normally.
> >
> > However, if that adjustment VR1 is intermittent, then it will affect both
> > the 9V
> > and the 3.3V levels. Try this: with the power off, mark the physical
> > setting of
> > the trimmer VR1 as closely as you can, then turn it limit to limit several
> > times.
> > Reset it to the marked position, then turn on the power and set the VR1 for
> > 9V measured from Terminal 9 to chassis. If it continues to act up, we will
> > look into it further.
> >
> > Alan, KD5R
> >
> > From: tfrugia81
> > Sent: Friday, April 12, 2013 6:39 PM
> > To: TS-520_820_530_830@yahoogroups.com
> > Subject: [TS-520_820_530_830] Re: ts520se sidetone question
> >
> > One question, is it worth adjusting the AVR to be closer to 9v? I know the
> > difference is minimal, but I thought I would ask. The service manual (page
> > 10, sec 3-11) shows how to adjust it for 9v +/- 0.2v. I'm curious if 8.92
> > (what I'm reading under normal/working conditions) vs 8.98 to 9.02v might
> > be enough for concern.
> >
> > 73
> >
> > [Non-text portions of this message have been removed]
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> >
> >
> >
>
>
> [Non-text portions of this message have been removed]
>

41710. Re: [TS-520_820_530_830] TS-530S back two switches

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-14 04:37:15 UTC
From: Robert Reyes
Topic: 41683 Message: 41710

Thanks Joe,

I will wait to get the rig in and will remove the mod.

Rob
kd6fsk

--- On Sat, 4/13/13, Joseph Stiles <stilesjoseph@...> wrote:

From: Joseph Stiles <stilesjoseph@...>
Subject: Re: [TS-520_820_530_830] TS-530S back two switches
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Date: Saturday, April 13, 2013, 6:18 PM

Rob,

That is very common. You can leave it be.....and mark the switches as to what they do....ie..."up" CB..."down" HAM....or remove the mods.
Depending on which way the mods were done...it could take 10 minutes to and hour or more to properly remove.

  It is possible that the 10 meter coils..."ANT," "MIX," and "XMIT(or drive) coils my have been "adjusted."

  Please note that: It is illegal for you to operate this rig in/on the 11meter(CB) band...or any others for that matter...outside of the band plan/restrictions/conditions of your license...except for some very rare instances spelled out in Part 97 of the FCC Rules & Regulations.

It's up to you what you choose to with it. As Stated to another member of this board..ANY rig that crosses by path or bench...will have ANY CB HACK or
FREE BANDING REMOVED..or I won't work on it.

73 Joe
WB7UQU

From: Robert Reyes <rkings1956@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, April 12, 2013 10:34 PM
Subject: Re: [TS-520_820_530_830] TS-530S back two switches

Joe,

I just received a msg from person I purchased the ts-530s and he stated that switches are for the CB band. He said if there up its for CB and down is for Ham bands. Is this going to affect the rig or do I just leave it alone. He also stated that the rig is working on all bands with 100 watts output.

Rob
KD6FSK

--- On Sat, 4/13/13, Joseph Stiles <stilesjoseph@...> wrote:

From: Joseph Stiles <stilesjoseph@...>
Subject: Re: [TS-520_820_530_830] TS-530S back two switches
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Date: Saturday, April 13, 2013, 2:07 AM

Rob,

I took a look....they could be just about anything. Need to see the inside....and be able to see where the wires go.

The two most common I've seen with this switch set up are: FREE BANDING...aka CB HACK. It alters the PLL signal path
to get above, in, and, below the CB band.

The second, is an aftermarket modification to switch filters in/out.

73 Joe
WB7UQU

From: rkings1956 <rkings1956@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, April 12, 2013 5:01 PM
Subject: [TS-520_820_530_830] TS-530S back two switches

Hi Group,

I purchased a TS-530s and have not received yet. I notice in the photos
that the back of the rig has two added switches. I was wondering if anyone has any idea
what they may be for? I provide a photo in the groups photo section under my callsigns
KD6FSK. The person that I purchased the rig from has no idea. I would appreciate any help.

Rob
KD6FSK

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Yahoo! Groups Links

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Yahoo! Groups Links

[Non-text portions of this message have been removed]

41711. Re: [TS-520_820_530_830] Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-14 05:24:27 UTC
From: Alan Riley
Topic: 41132 Message: 41711

I think what you observed with the relay is an effect rather than the
cause of your problem. The two relays are not activated while in the
receive state. That is why you didn't observe any relay activity when
the receiver went deaf. They are supplied with 12V by Q8 in the VOX
unit when transmitting. When the 9V came back up to normal, a transient
probably caused Q8 to turn on briefly causing the relay action. Q8 is
normally cut off and thus doesn't supply any voltage to the relay coils.

It still appears to me that the problem is on the FIX CH AVR unit. One
other thing to check though is to verify that the 14V coming into the
FIX CH AVR unit remains at 14V at the same time that the 9V output
is acting up. If the 14V is steady then we will look closer at the 9V
problem. Roger (AE3RT) made a good suggestion on looking closely
at VR1.

Alan, KD5R

-----Original Message-----
From: Tyler Frugia
Sent: Saturday, April 13, 2013 3:49 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: ts520se sidetone question

I took the relay cover off so I could see what was happening when the radio
goes deaf. I made a video of it
(http://www.youtube.com/watch?v=9YHssBUzq20).
The radio goes deaf at 1m 27s, and comes back at 2m 2s.

The relay doesn't seem to do anything when the radio goes 'deaf', but
definitely flutters when it comes back alive. Is it still worth cleaning
it out, or is this just a byproduct of the real issue?

Thanks for any help!

-Tyler
k7fru

On Sat, Apr 13, 2013 at 1:22 PM, Tyler Frugia <tfrugia@...> wrote:

> Thanks Allan. I did as you suggested, but having same symptoms.
>
> However, I think I have a HUGE clue. While tooth picking around the AF
> board, the radio went deaf. Since I had the bottom open and was near it,
> I
> heard the relay RL2 CLICK and audio was restored. I noticed this twice!
> I've previously pulled the relay and reseated it (looks brand new), but
> now I believe this is the culprit. I'll look trough my previous notes to

> see what the next step may be.
>
> 73!
>
> Sent from my iPhone
>
> On Apr 12, 2013, at 8:19 PM, "Alan Riley" <arr44@...> wrote:
>
>
>
> Tyler, the actual value of the 9V is probably not so critical that
> touching it up
> would benefit you and I certainly would not recommend it if the rig was
> operating normally.
>
> However, if that adjustment VR1 is intermittent, then it will affect both
> the 9V
> and the 3.3V levels. Try this: with the power off, mark the physical
> setting of
> the trimmer VR1 as closely as you can, then turn it limit to limit several
> times.
> Reset it to the marked position, then turn on the power and set the VR1
> for
> 9V measured from Terminal 9 to chassis. If it continues to act up, we will
> look into it further.
>
> Alan, KD5R
>
> From: tfrugia81
> Sent: Friday, April 12, 2013 6:39 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: ts520se sidetone question
>
> One question, is it worth adjusting the AVR to be closer to 9v? I know the
> difference is minimal, but I thought I would ask. The service manual (page
> 10, sec 3-11) shows how to adjust it for 9v +/- 0.2v. I'm curious if 8.92
> (what I'm reading under normal/working conditions) vs 8.98 to 9.02v might
> be enough for concern.
>
> 73
>
> [Non-text portions of this message have been removed]
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>

[Non-text portions of this message have been removed]

Yahoo! Groups Links

41712. Reduced HT voltage

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-14 10:43:07 UTC
From: dave
Topic: 41712 Message: 41712

Hi, I was recently thinking of reducing the output from either my 820 or 530 to a lower level, not quite QRP but around 10 to 25 watt level. It occurred to me that the easiest way to do this would be one of the following methods, one , move the HT tap on the transformer down to the 400v tag or ,two, remove the doubler and fit full wave IE 400-0-400 bridge rectifier. This will have some effect on the anode impedance but the tank circuit should easily be taken care of, what do you think and has anyone tried a similar thing. Moving the HT to the 400v tag is the easiest and simplicity itself to restore to original.

41713. Re: Transformer smoking

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-14 10:51:50 UTC
From: dave
Topic: 41659 Message: 41713

I solved this problem for a guy years ago, nothing wrong with the eqpt but he bought the rig used and the switch at the left end of the row was at TX, every time he plugged it in the PA was running flat out off tune, things got warm very rapidly. Not having seen the rig before he had not noticed, once the smoke started his brain went to panic mode!.
Dave
G8JMK
--- In TS-520_820_530_830@yahoogroups.com, "yioutta_99" <yioutta_99@...> wrote:
>
> can you feel the transformer ,after you unplug the unit? is it hot? transformers hold heat for a long time. if not, i would agree that its something else. is it drawing a lot of current on power up? youll need a inline power meter for checking. A bad transformer will probably draw more current than a resistor. follow your nose to a burnt part... it could be under the chassis as well.
>
> steve
> N7lwf
>
> --- In TS-520_820_530_830@yahoogroups.com, "Brad Allen" <kb2chy@> wrote:
> >
> > Of course it's fixable providing the transformer is not shorted out now. Do
> > you have a call? What are your abilities to do such work? Have you got a
> > schematic to isolate the problem? It seems to me if it is the primary
> > smoking, it would blow a fuse. The secondary, well there are other
> > components that would blow before smoking the transformer. The thing is that
> > transformer is not going to smoke till a winding gets hot. I believe you
> > should isolate the issue then find out why the fuse did not blow. Maybe
> > check a little harder to find what is REALLY smoking in there. Transformer
> > is not going to smoke when you plug it in. The load will blow a fuse first.
> > Look deeper, maybe It's a capacitor or a power resistor (bleeder) that is
> > smoking. Brad KB2CHY
> >
> >
> >
> > _____
> >
> > From: TS-520_820_530_830@yahoogroups.com
> > [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Garry Walker
> > Sent: Thursday, April 11, 2013 6:04 PM
> > To: TS-520_820_530_830@yahoogroups.com
> > Subject: [TS-520_820_530_830] Transformer smoking
> >
> >
> >
> >
> >

> > Hi. I plug in my ts830 and the transformer is smoking upon switch on. Is
> > this fixable or is it time for a replacement? If I need to replace, anyone
> > have a source at reasonable cost?
> >
> > Thanks.
> >
> > G
> >
> > [Non-text portions of this message have been removed]
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> > [Non-text portions of this message have been removed]
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>

41714. Re: TS 830S transformer

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-14 12:50:06 UTC
From: w5rkl
Topic: 41664 Message: 41714

Gary did not say "when" the transformer supposedly started smoking. Did it occur when power was first applied or did it occur after the 830 was powered up for any length of time?

Gary needs to do some troubleshooting to determine if, in fact, the power transformer is smoking. It's quite possible the smoke is coming from a component on the Rectifier Unit or wiring around the power supply area that's seeping through small openings around the transformer giving the false impression the transformer is smoking.

73
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Garry W" <walker.garry@...> wrote:
>
> Looks like my transformer is smoking. Should I assume the transformer has had it or is there something else to check. If it's had it, can these things get rebuilt or can spares still be found.
>
> thanks
>
> Garry K5XGB / G0IHB / F5VDM
>

41715. Re: In need of RF board X44-1360-00

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-14 14:43:31 UTC
From: bartbrummans
Topic: 41594 Message: 41715

Shameless bump....perhaps someone has the parts...

--- In TS-520_820_530_830@yahoogroups.com, "bbrummans" <cocobean64@...> wrote:
>
> Hello everyone,
>
> I'm in need of an RF board for my KW Hybrid.
> Board # X44-1360-00.
>
> Both the TS-530 and TS-830 have these. If you have one available please e-mail me at BBrummans@...
>
> Shipping would be to 49417 and my preferred payment method is Paypal.
>
> 73
> Bart
> KB8BAB
>

41716. Re: Reduced HT voltage

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-14 15:19:25 UTC
From: Terry Wagoner
Topic: 41712 Message: 41716

Decreasing Anode supply voltage is not the "easiest and simplest" method to reduce output power or have a load control.

Two much easier ways:

1. Use the 9vdc battery and pot to provide negative control voltage to the ALC bus line. This controls TIF Amp rf output level.

2. Add a pot to control the screen grid voltage (210A) of the 12BY7A Driver tube. Can add a fixed resistor to lower the screen grid voltage (start with approx 33k ohm) or add a pot. HeathKit used a 25k ohm pot as a Load control by varying the screen grid voltage of the 5763 Driver Tube in its DX-100. This results in having a "load control" that adjusts the level of RF output from the Driver stage to the Finals.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "dave" <bigdave2uk@...> wrote:
>
> Hi, I was recently thinking of reducing the output from either my 820 or 530 to a lower level, not quite QRP but around 10 to 25 watt level. It occurred to me that the easiest way to do this would be one of the following methods, one , move the HT tap on the transformer down to the 400v tag or ,two, remove the doubler and fit full wave IE 400-0-400 bridge rectifier. This will have some effect on the anode impedance but the tank circuit should easily be taken care of, what do you think and has anyone tried a similar thing. Moving the HT to the 400v tag is the easiest and simplicity itself to restore to original.
>

41717. Re: [TS-520_820_530_830] Tune-Up procedure for TS-820S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-14 11:32:56 UTC
From: Paul Nussbaum
Topic: 41705 Message: 41717

Here are my long winded thoughts about it. Maybe you will find something here that is helpful...
In addition to the TS820S user manual, and service manual, I have found a handful of tune-up procedures for this on the Internet - they are all similar and all different, and none of them seems to address specific questions like this...

1] Where to set the carrier (CAR) when peaking the DRIVE with the meter on ALC on TUN mode

Some methods indicate a starting setting for CAR at 1/2 to 3/4 up (past 12 o'clock) and say reduce it if the meter pegs the right side. Some say start it about 9 to 10 o'clock. One says says set the CAR so that the DRIVE peak is about 1/8" to 1/4" just past the "ALC box"... so it lines up about where the 250ma line is on the meter.

The user manual states that the nominal Ip for CW operation should be 200ma. I find that if I start with the CAR very low, peak the DRIVE in ALC, then bring up the CAR so that the DRIVE peak sets at the top of the ALC box, after the tuneup, I have 200ma on the meter when set to Ip. For my high bands, this is a CAR of about 9-10 o'clock with CW putting out 90-100 watts.

So, what I do is set the CAR so that the DRIVE peak on ALC is at the top of the ALC box.

2] Most of the procedures then have you dip the PLATE with the meter on Ip in TUN mode.

It is hard to see the dip using a dummy load at the reduced output power of TUN mode.

I actually skip this step and do the next step of peaking the RF output using the PLATE and LOAD in TUN mode rather than CW mode.

If you do this PLATE and LOAD walking up the RF in CW mode (after dipping the PLATE in TUN mode) as most procedures indicate, you have to do it in steps of a few seconds, switching back and forth from SEND to Receive. Doing it in TUN at reduced power, you can do the whole walk up in one SEND session.

3] Most procedures, after dipping the plate in TUN, have you switch mode to CW, set the meter to RF, and use the PLATE and LOAD alternating to walk up the peak RF. Typically, they then say you are ready to go, but when I do that, the Ip is well beyond the 225ma so many recommend as max Ip. Pulling it back down using the LOAD control is not recommended because of noise balance. Pulling it down with the CAR control tends to put you in a loop of re-peaking the RF with the PLATE and LOAD, then checking Ip and dipping the PLATE again...

4] It is never mentioned, but after setting the bias to 60ma, one will notice (when the key is plugged in) that switching to SEND shows 75ma in CW (but 60ma in either USD or LSB). CW is class C operation on these things, and the 75ma bias in CW mode is correct.

So, in summary, here is how I do it - just three steps - it is fast, I think i is safe for the tubes, and it results in what I think are the correct values for operation:

1]Meter - ACL
Mode - TUN
CAR - way down (just enough to get a meter movement)
Switch to SEND
Peak DRIVE
Bring up CAR to set the DRIVE peak at the top of the ALC box
Switch to Receive

2]
Meter - RF
Mode - TUN (not CW)
Switch to SEND
Walk up peak RF with PLATE and LOAD
Switch to Receive

3]
Meter - Ip
Mode - CW
Switch to SEND
Dip the PLATE
Switch to Receive

What I find using this method is that the plate dip ends up at about 200ma and output is 90-100W for the high bands. The whole process takes about 15 seconds. Dipping the plate last lets you verify the Ip value at the same time, and if the neutralization of your finals is very close, the last step of dipping the plate will need virtually no adjustment - the walking up of the plate and load for max RF will be right there.

This method comes from http://www.hybridrestore.com/tuning-your-hybrid/

here

The only difference being that I don't do the very last part of peaking RF out... his procedure is for repair testing, so he goes to 225ma and is looking for output from a performance / problem perspective. I like to go with 200ma for the long term.

Hope this helps.
Paul

--- On Sat, 4/13/13, michael Miller <w9mvm@...> wrote:

From: michael Miller <w9mvm@yahoo.com>
Subject: Re: [TS-520_820_530_830] Tune-Up procedure for TS-820S
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Date: Saturday, April 13, 2013, 7:20 PM

Hi Burton, you can find the tuneup procedure for "kenwood HYBRID" at www.K4eaa.com/tune-up.htm I hope that this will help you. W9MVM.

BEST 73 and GODS BLESSINGS, MIKE & Princess Ruth.

>_____
> From: bsmply <bsmply@...>
>To: TS-520_820_530_830@yahoogroups.com

>Sent: Saturday, April 13, 2013 6:14 PM
>Subject: [TS-520_820_530_830] Tune-Up procedure for TS-820S
>
>
>
>
>Greetings to the group. I tried to join today's 40m net on my TS-820S, but I was not heard, so I had to fail back to my Yeasu FT-897 :(. Oh well.
>
>First, my name is Burton (I go by anything close to it). I've been a member of the group for a while, but this is my first post. I've enjoyed the group and all the help I've seen on here.
>
>I think the reason nobody could hear me on the group net with my 820S is I'm still a rookie at the tune-up procedure when changing bands. I tried to follow the procedure listed in the files section of this group, specifically for the 820S. Here's the link - http://groups.yahoo.com/group/TS-520_820_530_830/files/OPERATOR%20AIDS (file--> operator aids --> tuneup.doc). I don't know if it's the rig or my lack of knowledge on how to use it.
>
>Is this the correct document to be used? If so, I have some comments/questions about this procedure.
>
>On page 1, step 1: Why is the position of the "standby switch" listed twice?
>
>On page 2, step 5: With the meter set to "ALC", the procedure states to "peak the meter", however it's not clear if this is meant to only peak the meter within the ACL scale, or to the edge of the meter. Which peak and I shooting for?
>
>On page 2, step 6: My meter starts at about 225ma, then when I flip the standby switch to "send", the meter drops to ~60 - 90 ma (never exceeds 100 ma), but there is no specific "dip" - ie, regardless of how I adjust the plate knob, the meter appears to drop, then stays around the same reading and does not really move until I release the standby switch.
>
>Since I'm not sure about the settings, I've never really moved the "car" setting from the 9 o'clock position as stated in step 1. The manual defined the CAR setting as the carrier level adjustment for CW and implies that adjusting it will not affect SSB. Am I interpreting this incorrectly?
>
>I guess I'm a little confused. Following the net, I fired up the 820 again and found the W3SGJ special event booming on 7.240.0 and tried to call out, but I made a hybird rookie mistake, I turned off the heaters while listening ... and forgot to turn them back on until it was too late. I guess I'm not the only person to make this mistake.
>
>I have plans next weekend and will not be able to try the net then. Maybe some other time.
>
>Also, just wondering if anyone from this group is in the greater Philadelphia area and would be willing to make a trip to my QTH to show me how to tune this rig?
>

>73,
>
>KC2OUC, Burton
>
>
>

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Yahoo! Groups Links

[Non-text portions of this message have been removed]

41718. Re: Tune-Up procedure for TS-820S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-14 11:59:23 UTC
From: paul.nussbaum
Topic: 41705 Message: 41718

In addition to the TS820S user manual, and service manual, I have found a handful of tune-up procedures for this on the Internet - they are all similar and all different, and none of them seems to address specific questions like this...

1] Where to set the carrier (CAR) when peaking the DRIVE with the meter on ALC on TUN mode

Some methods indicate a starting setting for CAR at 1/2 to 3/4 up (past 12 o'clock) and say reduce it if the meter pegs the right side. Some say start it about 9 to 10 o'clock. One says says set the CAR so that the DRIVE peak is about 1/8" to 1/4" just past the "ALC box"... so it lines up about where the 250ma line is on the meter.

The user manual states that the nominal Ip for CW operation should be 200ma. I find that if I start with the CAR very low, peak the DRIVE in ALC, then bring up the CAR so that the DRIVE peak sets at the top of the ALC box, after the tuneup, I have 200ma on the meter when set to Ip. For my high bands, this is a CAR of about 9-10 o'clock with CW putting out 90-100 watts.

So, what I do is set the CAR so that the DRIVE peak on ALC is at the top of the ALC box.

2] Most of the procedures then have you dip the PLATE with the meter on Ip in TUN mode. It is hard to see the dip using a dummy load at the reduced output power of TUN mode.

I actually skip this step and do the next step of peaking the RF output using the PLATE and LOAD in TUN mode rather than CW mode.

If you do this PLATE and LOAD walking up the RF in CW mode (after dipping the PLATE in TUN mode) as most procedures indicate, you have to do it in steps of a few seconds, switching back and forth from SEND to Receive. Doing it in TUN at reduced power, you can do the whole walk up in one SEND session.

3] Most procedures, after dipping the plate in TUN, have you switch mode to CW, set the meter to RF, and use the PLATE and LOAD alternating to walk up the peak RF. Typically, they then say you are ready to go, but when I do that, the Ip is well beyond the 225ma so many recommend as max Ip. Pulling it back down using the LOAD control is not recommended because of noise balance. Pulling it down with the CAR control tends to put you in a loop of re-peaking the RF with the PLATE and LOAD, then checking Ip and dipping the PLATE again...

4] It is never mentioned, but after setting the bias to 60ma, one will notice (when the key is plugged in) that switching to SEND shows 75ma in CW (but 60ma in either USD or LSB). CW is class C operation on these things, and the 75ma bias in CW mode is correct.

So, in summary, here is how I do it - just three steps - it is fast, I think i is safe for the tubes, and it results in what I think are the correct values for operation:

1]
Meter - ACL
Mode - TUN
CAR - way down (just enough to get a meter movement)

Switch to SEND
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Bring up CAR to set the DRIVE peak at the top of the ALC box
Switch to Receive

2]
Meter - RF
Mode - TUN (not CW)
Switch to SEND
Walk up peak RF with PLATE and LOAD
Switch to Receive

3]
Meter - Ip
Mode - CW
Switch to SEND
Dip the PLATE
Switch to Receive

What I find using this method is that the plate dip ends up at about 200ma and output is 90-100W for the high bands. The whole process takes about 15 seconds. Dipping the plate last lets you verify the Ip value at the same time, and if the neutralization of your finals is very close, the last step of dipping the plate will need virtually no adjustment - the walking up of the plate and load for max RF will be right there.

This method comes from http://www.hybridrestore.com/tuning-your-hybrid/

The only difference being that I don't do the very last part of peaking RF out... his procedure is for repair testing, so he goes to 225ma and is looking for output from a performance / problem perspective. I like to go with 200ma for the long term.

Hope this helps...
Paul

41719. Re: Transformer smoking

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-14 14:34:48 UTC
From: Garry W
Topic: 41659 Message: 41719

Hi

Thanks for all the responses so far. Yes it blew the fuse when I first plugged it in, so I upped the fuse to see what would happen. It seems that the smoke is from the transformer and when I switched off, I could hear 'crackling'inside the transformer. I have now purchased a replacement and removed the original.

I did pit power back into the old one once removed from the 830S and there was sign of a problem, however without any load on the transformer. I will swap the other out ans see what happens

regards

Garry

--- In TS-520_820_530_830@yahoogroups.com, "dave" <bigdave2uk@...> wrote:
>
>
> I solved this problem for a guy years ago, nothing wrong with the eqpt but he bought the rig used and the switch at the left end of the row was at TX, every time he plugged it in the PA was running flat out off tune, things got warm very rapidly. Not having seen the rig before he had not noticed, once the smoke started his brain went to panic mode!.
> Dave
> G8JMK
> --- In TS-520_820_530_830@yahoogroups.com, "yioutta_99" <yioutta_99@> wrote:
> >
> > can you feel the transformer ,after you unplug the unit? is it hot? transformers hold heat for a long time. if not, i would agree that its something else. is it drawing a lot of current on power up? youll need a inline power meter for checking. A bad transformer will probably draw more current than a resistor. follow your nose to a burnt part... it could be under the chassis as well.
> >
> > steve
> > N7lwf
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Brad Allen" <kb2chy@> wrote:
> > >
> > > Of course it's fixable providing the transformer is not shorted out now. Do
> > > you have a call? What are your abilities to do such work? Have you got a
> > > schematic to isolate the problem? It seems to me if it is the primary
> > > smoking, it would blow a fuse. The secondary, well there are other
> > > components that would blow before smoking the transformer. The thing is that
> > > transformer is not going to smoke till a winding gets hot. I believe you
> > > should isolate the issue then find out why the fuse did not blow. Maybe
> > > check a little harder to find what is REALLY smoking in there. Transformer
> > > is not going to smoke when you plug it in. The load will blow a fuse first.

> > > Look deeper, maybe It's a capacitor or a power resistor (bleeder) that is
> > > smoking. Brad KB2CHY
> > >
> > >
> > >
> > > _____
> > >
> > > From: TS-520_820_530_830@yahoogroups.com
> > > [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Garry Walker
> > > Sent: Thursday, April 11, 2013 6:04 PM
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Subject: [TS-520_820_530_830] Transformer smoking
> > >
> > >
> > >
> > >
> > >
> > > Hi. I plug in my ts830 and the transformer is smoking upon switch on. Is
> > > this fixable or is it time for a replacement? If I need to replace, anyone
> > > have a source at reasonable cost?
> > >
> > > Thanks.
> > >
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41720. Re: [TS-520_820_530_830] Re: Transformer smoking

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-14 16:31:18 UTC
From: Mike
Topic: 41659 Message: 41720

Okay. I would never have done that nor would I have ever suggested doing
that. Therefore, I have nothing further to contribute.

73
Mike

On 4/14/2013 9:34 AM, Garry W wrote:
>
> Hi
>
> Thanks for all the responses so far. Yes it blew the fuse when I first
> plugged it in, so I upped the fuse to see what would happen. It seems
> that the smoke is from the transformer and when I switched off, I
> could hear 'crackling'inside the transformer. I have now purchased a
> replacement and removed the original.
>
> I did pit power back into the old one once removed from the 830S and
> there was sign of a problem, however without any load on the
> transformer. I will swap the other out ans see what happens
>
> regards
>
> Garry
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "dave" <bigdave2uk@...>
> wrote:
> >
> >
> > I solved this problem for a guy years ago, nothing wrong with the
> eqpt but he bought the rig used and the switch at the left end of the
> row was at TX, every time he plugged it in the PA was running flat out
> off tune, things got warm very rapidly. Not having seen the rig before
> he had not noticed, once the smoke started his brain went to panic mode!.
> > Dave
> > G8JMK
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "yioutta_99"
> <yioutta_99@> wrote:
> > >
> > > can you feel the transformer ,after you unplug the unit? is it
> hot? transformers hold heat for a long time. if not, i would agree
> that its something else. is it drawing a lot of current on power up?
> youll need a inline power meter for checking. A bad transformer will
> probably draw more current than a resistor. follow your nose to a

> burnt part... it could be under the chassis as well.
> > >
> > > steve
> > > N7lwf
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Brad Allen" <kb2chy@>
> wrote:
> > > >
> > > > Of course it's fixable providing the transformer is not shorted
> out now. Do
> > > > you have a call? What are your abilities to do such work? Have
> you got a
> > > > schematic to isolate the problem? It seems to me if it is the
> primary
> > > > smoking, it would blow a fuse. The secondary, well there are other
> > > > components that would blow before smoking the transformer. The
> thing is that
> > > > transformer is not going to smoke till a winding gets hot. I
> believe you
> > > > should isolate the issue then find out why the fuse did not
> blow. Maybe
> > > > check a little harder to find what is REALLY smoking in there.
> Transformer
> > > > is not going to smoke when you plug it in. The load will blow a
> fuse first.
> > > > Look deeper, maybe It's a capacitor or a power resistor
> (bleeder) that is
> > > > smoking. Brad KB2CHY
> > > >
> > > >
> > > >
> > > > _____
> > > >
> > > > From: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > [mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Garry Walker
> > > > Sent: Thursday, April 11, 2013 6:04 PM
> > > > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > Subject: [TS-520_820_530_830] Transformer smoking
> > > >
> > > >
> > > >
> > > >
> > > >
> > > > Hi. I plug in my ts830 and the transformer is smoking upon
> switch on. Is
> > > > this fixable or is it time for a replacement? If I need to

> replace, anyone
> > > > have a source at reasonable cost?
> > > >
> > > > Thanks.
> > > >
> > > > G
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> > > > [Non-text portions of this message have been removed]
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41721. Re: [TS-520_820_530_830] TS-530S back two switches

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-14 17:17:10 UTC
From: Joseph Stiles
Topic: 41683 Message: 41721

Rob,

  You are welcome. Before you attempt to remove the mods...take some good digital pics...and save them.

73 Joe
WB7UQU

_____
From: Robert Reyes <rkings1956@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, April 13, 2013 9:37 PM
Subject: Re: [TS-520_820_530_830] TS-530S back two switches

Thanks Joe,

I will wait to get the rig in and will remove the mod.

Rob
kd6fsk

--- On Sat, 4/13/13, Joseph Stiles <stilesjoseph@yahoo.com> wrote:

From: Joseph Stiles <stilesjoseph@...>
Subject: Re: [TS-520_820_530_830] TS-530S back two switches
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Date: Saturday, April 13, 2013, 6:18 PM

Rob,

That is very common. You can leave it be.....and mark the switches as to what they do....ie..."up" CB..."down" HAM....or remove the mods.
Depending on which way the mods were done...it could take 10 minutes to and hour or more to properly remove.

  It is possible that the 10 meter coils..."ANT," "MIX," and "XMIT(or drive) coils my have been "adjusted."

  Please note that: It is illegal for you to operate this rig in/on the 11meter(CB) band...or any others for that matter...outside of the band plan/restrictions/conditions of your license...except for some very rare instances spelled out in Part 97 of the FCC Rules & Regulations.

It's up to you what you choose to with it. As Stated to another member of this board..ANY rig that crosses by path or bench...will have ANY CB HACK or
FREE BANDING REMOVED..or I won't work on it.

73 Joe
WB7UQU

From: Robert Reyes <rkings1956@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, April 12, 2013 10:34 PM
Subject: Re: [TS-520_820_530_830] TS-530S back two switches

Joe,

I just received a msg from person I purchased the ts-530s and he stated that switches are for the CB band. He said if there up its for CB and down is for Ham bands. Is this going to affect the rig or do I just leave it alone. He also stated that the rig is working on all bands with 100 watts output.

Rob
KD6FSK

--- On Sat, 4/13/13, Joseph Stiles <stilesjoseph@...> wrote:

From: Joseph Stiles <stilesjoseph@...>
Subject: Re: [TS-520_820_530_830] TS-530S back two switches
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Date: Saturday, April 13, 2013, 2:07 AM

Rob,

  I took a look....they could be just about anything. Need to see the inside....and be able to see where the wires go.

  The two most common I've seen with this switch set up are: FREE BANDING...aka CB HACK. It alters the PLL signal path
       to get above, in, and, below the CB band.

   The second, is an aftermarket modification to switch filters in/out.

73 Joe
WB7UQU

From: rkings1956 <rkings1956@...m>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, April 12, 2013 5:01 PM
Subject: [TS-520_820_530_830] TS-530S back two switches

Hi Group,

I purchased a TS-530s and have not received yet. I notice in the photos
that the back of the rig has two added switches. I was wondering if anyone has any idea what they may be for? I provide a photo in the groups photo section under my callsigns KD6FSK. The person that I purchased the rig from has no idea. I would appreciate any help.

Rob
KD6FSK

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Yahoo! Groups Links

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41722. Re: [TS-520_820_530_830] TS-530S back two switches

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-14 17:31:53 UTC
From: Robert Reyes
Topic: 41683 Message: 41722

Ok Joe, will do.

--- On Sun, 4/14/13, Joseph Stiles <stilesjoseph@...m> wrote:

From: Joseph Stiles <stilesjoseph@...>
Subject: Re: [TS-520_820_530_830] TS-530S back two switches
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Date: Sunday, April 14, 2013, 5:17 PM

Rob,

  You are welcome. Before you attempt to remove the mods...take some good digital pics...and save them.

73 Joe
WB7UQU

From: Robert Reyes <rkings1956@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, April 13, 2013 9:37 PM
Subject: Re: [TS-520_820_530_830] TS-530S back two switches

Thanks Joe,

I will wait to get the rig in and will remove the mod.

Rob
kd6fsk

--- On Sat, 4/13/13, Joseph Stiles <stilesjoseph@...> wrote:

From: Joseph Stiles <stilesjoseph@...>
Subject: Re: [TS-520_820_530_830] TS-530S back two switches
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Date: Saturday, April 13, 2013, 6:18 PM

Rob,

That is very common. You can leave it be.....and mark the switches as to what they do....ie..."up" CB..."down" HAM....or remove the mods.
Depending on which way the mods were done...it could take 10 minutes to and hour or more to properly remove.

  It is possible that the 10 meter coils..."ANT," "MIX," and "XMIT(or drive) coils my have been "adjusted."

  Please note that: It is illegal for you to operate this rig in/on the 11meter(CB) band...or any others for that matter...outside of the band plan/restrictions/conditions

of your license...except for some very rare instances spelled out in Part 97 of the FCC Rules & Regulations.

It's up to you what you choose to with it. As Stated to another member of this board..ANY rig that crosses by path or bench...will have ANY CB HACK or
FREE BANDING REMOVED..or I won't work on it.

73 Joe
WB7UQU

From: Robert Reyes <rkings1956@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, April 12, 2013 10:34 PM
Subject: Re: [TS-520_820_530_830] TS-530S back two switches

Joe,

I just received a msg from person I purchased the ts-530s and he stated that switches are for the CB band. He said if there up its for CB and down is for Ham bands. Is this going to affect the rig or do I just leave it alone. He also stated that the rig is working on all bands with 100 watts output.

Rob
KD6FSK

--- On Sat, 4/13/13, Joseph Stiles <stilesjoseph@...> wrote:

From: Joseph Stiles <stilesjoseph@...>
Subject: Re: [TS-520_820_530_830] TS-530S back two switches
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Date: Saturday, April 13, 2013, 2:07 AM

Rob,

  I took a look....they could be just about anything. Need to see the inside....and be able to see where the wires go.

  The two most common I've seen with this switch set up are: FREE BANDING...aka CB HACK. It alters the PLL signal path
       to get above, in, and, below the CB band.

   The second, is an aftermarket modification to switch filters in/out.

73 Joe
WB7UQU

From: rkings1956 <rkings1956@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, April 12, 2013 5:01 PM
Subject: [TS-520_820_530_830] TS-530S back two switches

Hi Group,

I purchased a TS-530s and have not received yet. I notice in the photos
that the back of the rig has two added switches. I was wondering if anyone has any idea
what they may be for? I provide a photo in the groups photo section under my callsigns
KD6FSK. The person that I purchased the rig from has no idea. I would appreciate any help.

Rob
KD6FSK

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Yahoo! Groups Links

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41723. Re: Tune-Up procedure for TS-820S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-14 17:38:19 UTC
From: f_canuso
Topic: 41705 Message: 41723

Hi Burton,

I am located in Cherry Hill, NJ and might be able to help you. I have two Kenwood hybrids, a TS-830S and TS-520S. Contact me off list if you want me to help.

73,
Tony (N2ATB)

--- In TS-520_820_530_830@yahoogroups.com, "bsmply" <bsmply@...> wrote:
>
> Greetings to the group. I tried to join today's 40m net on my TS-820S, but I was not heard, so I had to fail back to my Yeasu FT-897 :(. Oh well.
>
> First, my name is Burton (I go by anything close to it). I've been a member of the group for a while, but this is my first post. I've enjoyed the group and all the help I've seen on here.
>
> I think the reason nobody could hear me on the group net with my 820S is I'm still a rookie at the tune-up procedure when changing bands. I tried to follow the procedure listed in the files section of this group, specifically for the 820S. Here's the link - http://groups.yahoo.com/group/TS-520_820_530_830/files/OPERATOR%20AIDS (file--> operator aids --> tuneup.doc). I don't know if it's the rig or my lack of knowledge on how to use it.
>
> Is this the correct document to be used? If so, I have some comments/questions about this procedure.
>
> On page 1, step 1: Why is the position of the "standby switch" listed twice?
>
> On page 2, step 5: With the meter set to "ALC", the procedure states to "peak the meter", however it's not clear if this is meant to only peak the meter within the ACL scale, or to the edge of the meter. Which peak and I shooting for?
>
> On page 2, step 6: My meter starts at about 225ma, then when I flip the standby switch to "send", the meter drops to ~60 - 90 ma (never exceeds 100 ma), but there is no specific "dip" - ie, regardless of how I adjust the plate knob, the meter appears to drop, then stays around the same reading and does not really move until I release the standby switch.
>
> Since I'm not sure about the settings, I've never really moved the "car" setting from the 9 o'clock position as stated in step 1. The manual defined the CAR setting as the carrier level adjustment for CW and implies that adjusting it will not affect SSB. Am I interpreting this incorrectly?
>
> I guess I'm a little confused. Following the net, I fired up the 820 again and found the W3SGJ special event booming on 7.240.0 and tried to call out, but I made a hybird rookie mistake, I turned off the heaters while listening ... and forgot to turn them back on until

it was too late. I guess I'm not the only person to make this mistake.
>
> I have plans next weekend and will not be able to try the net then. Maybe some other time.
>
> Also, just wondering if anyone from this group is in the greater Philadelphia area and would be willing to make a trip to my QTH to show me how to tune this rig?
>
> 73,
>
> KC2OUC, Burton
>

41724. KENWOOD HYBRID USER NET (April 14th, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-14 18:38:31 UTC
From: mvgilger
Topic: 41724 Message: 41724

The Saturday's net on 40 meter we had 17 stations checking with good band conditions. There were 2 new stations checking in, N9TB, KA1SJD, KC2OUC. Out of those, there was:

6 running TS-520(x)
1 running TS-530(x)
2 running TS-820(x)
2 running TS-830S

I was running my TS-940s. The rest were running non hybrids of one model or another.

The Sunday's net on 20 meter we had 10 stations checking in under very poor band conditions. We had 1 new check-in, W0HR

Out of those, there was:

3 running TS-520(x)
0 running TS-530(x)
1 running TS-820(x)
4 running TS-830S

I was running my TS-940s. The rest were running non hybrids of one model or another.

We have been having several people checking in regularly with their TS-430, TS-440, and TS-940's, which of course is not a hybrid, although over 30+ years old. Everyone is welcome as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a net control station, please send me an email. Currently it's just myself, WB2KNR and WB0SGA. I would like to get several more. If we do, we can alternate so everyone might be on a 3-4 week rotation. It's a lot of fun and a good way to make sure you station is optimized.

For anyone that has not heard, we have a new web site that WB4HFN is hosting. He currently has a very nice site for Drake, Collins and Heathkit and now Kenwood Hybrids. Good quality manuals plus sale flyers and brochures will be found here, along with user supplied information for all Hybrids.

His URL is:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754 check-ins, Sunday total 563 check-ins

November 2012, Saturday's, net total = 47, Sundays total = 20
December 2012, Saturday's, net total = 74, Sunday's total = 70
January 2013, Saturday's, net total = 93, Sunday's total = 87
February 2013, Saturday's net total = 103, Sundays total = 87
March 2013, Saturday's, net total = 112, Sunday's total =39

April 2013, Saturday's net total = 33, Sunday's total = 19 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

41725. Re: [TS-520_820_530_830] Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-14 20:29:28 UTC
From: Tyler Frugia
Topic: 41132 Message: 41725

Thanks Alan and Roger!

I check vr1 again and it appears ok to my eye. I may rotate it several times again to see if I notice anything.

I measured the three lines again (14v, 9v, and 3.3v) on the Fix-Avr board.

Here is what they read, working vs deaf:

14.29v working 14.76v deaf
8.99v working 6.16v deaf
3.31v working 2.2v deaf

I appreciate the help guys!

Sent from my iPhone

On Apr 13, 2013, at 10:24 PM, "Alan Riley" <arr44@...> wrote:

> I think what you observed with the relay is an effect rather than the
> cause of your problem. The two relays are not activated while in the
> receive state. That is why you didn't observe any relay activity when
> the receiver went deaf. They are supplied with 12V by Q8 in the VOX
> unit when transmitting. When the 9V came back up to normal, a transient
> probably caused Q8 to turn on briefly causing the relay action. Q8 is
> normally cut off and thus doesn't supply any voltage to the relay coils.
>
> It still appears to me that the problem is on the FIX CH AVR unit. One
> other thing to check though is to verify that the 14V coming into the
> FIX CH AVR unit remains at 14V at the same time that the 9V output
> is acting up. If the 14V is steady then we will look closer at the 9V
> problem. Roger (AE3RT) made a good suggestion on looking closely
> at VR1.
>
> Alan, KD5R
>
> -----Original Message-----
> From: Tyler Frugia
> Sent: Saturday, April 13, 2013 3:49 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [TS-520_820_530_830] Re: ts520se sidetone question
>
> I took the relay cover off so I could see what was happening when the radio
> goes deaf. I made a video of it
> (http://www.youtube.com/watch?v=9YHssBUzq20).
> The radio goes deaf at 1m 27s, and comes back at 2m 2s.
>

> The relay doesn't seem to do anything when the radio goes 'deaf', but
> definitely flutters when it comes back alive. Is it still worth cleaning
> it out, or is this just a byproduct of the real issue?
>
> Thanks for any help!
>
> -Tyler
> k7fru
>
> On Sat, Apr 13, 2013 at 1:22 PM, Tyler Frugia <tfrugia@...> wrote:
>
> > Thanks Allan. I did as you suggested, but having same symptoms.
> >
> > However, I think I have a HUGE clue. While tooth picking around the AF
> > board, the radio went deaf. Since I had the bottom open and was near it,
> > I
> > heard the relay RL2 CLICK and audio was restored. I noticed this twice!
> > I've previously pulled the relay and reseated it (looks brand new), but
> > now I believe this is the culprit. I'll look trough my previous notes to
> > see what the next step may be.
> >
> > 73!
> >
> > Sent from my iPhone
> >
> > On Apr 12, 2013, at 8:19 PM, "Alan Riley" <arr44@suddenlink.net> wrote:
> >
> >
> >
> >
> > Tyler, the actual value of the 9V is probably not so critical that
> > touching it up
> > would benefit you and I certainly would not recommend it if the rig was
> > operating normally.
> >
> > However, if that adjustment VR1 is intermittent, then it will affect both
> > the 9V
> > and the 3.3V levels. Try this: with the power off, mark the physical
> > setting of
> > the trimmer VR1 as closely as you can, then turn it limit to limit several
> > times.
> > Reset it to the marked position, then turn on the power and set the VR1
> > for
> > 9V measured from Terminal 9 to chassis. If it continues to act up, we will
> > look into it further.
> >
> > Alan, KD5R
> >
> > From: tfrugia81
> > Sent: Friday, April 12, 2013 6:39 PM
> > To: TS-520_820_530_830@yahoogroups.com

> > Subject: [TS-520_820_530_830] Re: ts520se sidetone question
> >
> > One question, is it worth adjusting the AVR to be closer to 9v? I know the
> > difference is minimal, but I thought I would ask. The service manual (page
> > 10, sec 3-11) shows how to adjust it for 9v +/- 0.2v. I'm curious if 8.92
> > (what I'm reading under normal/working conditions) vs 8.98 to 9.02v might
> > be enough for concern.
> >
> > 73
> >
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41726. Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-14 23:15:52 UTC
From: rc143dr
Topic: 41132 Message: 41726

Hello Alan,

It seems like something is definately malfunctioning in the regulator circuit rather than a short circuit of some sort since the 14v line increases when the issue happens. I would think that this indicates a decrease in loading since the 14v is an unregulated supply.

Also, the 3.3v is derived from the 9v and changes in exact proportion to the change in the 9v. So the issue seems to be coming from the regulation circuit for the 9v in my mind.

I have had issues with some of the older transistors in the TS-820/TS-520 becoming marginal in their operation due to age. But only in oscillating circuits.

It seems interesting that the 9v seems to lock into the zener diode reference voltage when it does fail, instead of driving the output voltage of the regulator circuit to the 9v it should. I will need to think more about this circuit to think of a failure that would cause this scenario, although Q6 and its associated componants would appear to be at the center of what is happening here. It might be interesting if you have some canned air to blow it on Q6 to see if the issue goes away when this is done. You can also carefully (without spitting) blow through a straw to cool the transistor.

Otherwise, I think the next step would be to start probing different points in the feedback/regulation circuit to see which part of the regulator circuit is breaking down.

I'll give it more thought, but there is my two cents worth.

73,

Roger (AE3RT)

--- In TS-520_820_530_830@yahoogroups.com, Tyler Frugia <tfrugia@...> wrote:
>
> Thanks Alan and Roger!
>
> I check vr1 again and it appears ok to my eye. I may rotate it several times again to see if I notice anything.
>
> I measured the three lines again (14v, 9v, and 3.3v) on the Fix-Avr board.
>
> Here is what they read, working vs deaf:
>
> 14.29v working 14.76v deaf
> 8.99v working 6.16v deaf
> 3.31v working 2.2v deaf
>
> I appreciate the help guys!
>
>

> Sent from my iPhone
>
> On Apr 13, 2013, at 10:24 PM, "Alan Riley" <arr44@...> wrote:
>
> > I think what you observed with the relay is an effect rather than the
> > cause of your problem. The two relays are not activated while in the
> > receive state. That is why you didn't observe any relay activity when
> > the receiver went deaf. They are supplied with 12V by Q8 in the VOX
> > unit when transmitting. When the 9V came back up to normal, a transient
> > probably caused Q8 to turn on briefly causing the relay action. Q8 is
> > normally cut off and thus doesn't supply any voltage to the relay coils.
> >
> > It still appears to me that the problem is on the FIX CH AVR unit. One
> > other thing to check though is to verify that the 14V coming into the
> > FIX CH AVR unit remains at 14V at the same time that the 9V output
> > is acting up. If the 14V is steady then we will look closer at the 9V
> > problem. Roger (AE3RT) made a good suggestion on looking closely
> > at VR1.
> >
> > Alan, KD5R
> >
> > -----Original Message-----
> > From: Tyler Frugia
> > Sent: Saturday, April 13, 2013 3:49 PM
> > To: TS-520_820_530_830@yahoogroups.com
> > Subject: Re: [TS-520_820_530_830] Re: ts520se sidetone question
> >
> > I took the relay cover off so I could see what was happening when the radio
> > goes deaf. I made a video of it
> > (http://www.youtube.com/watch?v=9YHssBUzq20).
> > The radio goes deaf at 1m 27s, and comes back at 2m 2s.
> >
> > The relay doesn't seem to do anything when the radio goes 'deaf', but
> > definitely flutters when it comes back alive. Is it still worth cleaning
> > it out, or is this just a byproduct of the real issue?
> >
> > Thanks for any help!
> >
> > -Tyler
> > k7fru
> >
> > On Sat, Apr 13, 2013 at 1:22 PM, Tyler Frugia <tfrugia@...> wrote:
> >
> > > Thanks Allan. I did as you suggested, but having same symptoms.
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> > > Sent from my iPhone
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> > > On Apr 12, 2013, at 8:19 PM, "Alan Riley" <arr44@...> wrote:
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> > > Alan, KD5R
> > >
> > > From: tfrugia81
> > > Sent: Friday, April 12, 2013 6:39 PM
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Subject: [TS-520_820_530_830] Re: ts520se sidetone question
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> > ------------------------------------
> >
> > Yahoo! Groups Links
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41727. Re: [TS-520_820_530_830] Re: Transformer smoking

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-14 23:54:57 UTC
From: Dave & Loraine
Topic: 41659 Message: 41727

Hi Gary,
What's the serial number of your rig?
73 Dave f4eyk

[Non-text portions of this message have been removed]

41728. Re: [TS-520_820_530_830] Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-15 00:28:32 UTC
From: Tyler Frugia
Topic: 41132 Message: 41728

Hi Roger!

Thanks for the info. Very good points.

I took a closer look at Q6. It looks like it has been out of the board at some point (fresh solder on all 3 legs). It is the right part #.

While poking around the radio went deaf once and has not done it again. I'm going to let it "cool down" more and try again. I will run to town and get more air.

73, and thanks again for the help!

-Tyler
K7FRU

Sent from my iPhone

On Apr 14, 2013, at 4:15 PM, "rc143dr" <rc143dr@...> wrote:

> Hello Alan,
>
> It seems like something is definately malfunctioning in the regulator circuit rather than a short circuit of some sort since the 14v line increases when the issue happens. I would think that this indicates a decrease in loading since the 14v is an unregulated supply.
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> Also, the 3.3v is derived from the 9v and changes in exact proportion to the change in the 9v. So the issue seems to be coming from the regulation circuit for the 9v in my mind.
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> I have had issues with some of the older transistors in the TS-820/TS-520 becoming marginal in their operation due to age. But only in oscillating circuits.
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> It seems interesting that the 9v seems to lock into the zener diode reference voltage when it does fail, instead of driving the output voltage of the regulator circuit to the 9v it should. I will need to think more about this circuit to think of a failure that would cause this scenario, although Q6 and its associated componants would appear to be at the center of what is happening here. It might be interesting if you have some canned air to blow it on Q6 to see if the issue goes away when this is done. You can also carefully (without spitting) blow through a straw to cool the transistor.
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> Otherwise, I think the next step would be to start probing different points in the feedback/regulation circuit to see which part of the regulator circuit is breaking down.
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> I'll give it more thought, but there is my two cents worth.
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> Roger (AE3RT)

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> --- In TS-520_820_530_830@yahoogroups.com, Tyler Frugia <tfrugia@...> wrote:
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> > Thanks Alan and Roger!
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> > I check vr1 again and it appears ok to my eye. I may rotate it several times again to see if I notice anything.
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> > I measured the three lines again (14v, 9v, and 3.3v) on the Fix-Avr board.
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> > > -----Original Message-----
> > > From: Tyler Frugia
> > > Sent: Saturday, April 13, 2013 3:49 PM
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Subject: Re: [TS-520_820_530_830] Re: ts520se sidetone question
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41729. Re: [TS-520_820_530_830] Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-15 01:28:41 UTC
From: Alan Riley
Topic: 41132 Message: 41729

I agree 100% with Roger...you have a problem with the regulator since the 14V line was not loaded down when the 9V line dropped.

Take some voltage measurements on the transistors in the regulator circuit under normal and deaf conditions. Also inspect closely the solder connections on Q6 since you said it has been replaced.

Alan, KD5R

From: Tyler Frugia
Sent: Sunday, April 14, 2013 7:28 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: ts520se sidetone question

Hi Roger!

Thanks for the info. Very good points.

I took a closer look at Q6. It looks like it has been out of the board at some point (fresh solder on all 3 legs). It is the right part #.

While poking around the radio went deaf once and has not done it again. I'm going to let it "cool down" more and try again. I will run to town and get more air.

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41730. Re: [TS-520_820_530_830] Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-15 02:50:54 UTC
From: Tyler Frugia
Topic: 41132 Message: 41730

Excellent, thanks guys!

I took some measurements on Q6 and Q7. Numbers show collector, base, and emitter respectively.

Q6 normal conditions:
6.02, 5.95, 5.37

Q6 while deaf:
4.06, 4.53, 5.31

Q7 normal conditions:
6.04, 9.02, 5.40

Q7 while deaf:
5.95, 6.09, 5.30

Sent from my iPhone

On Apr 14, 2013, at 6:28 PM, "Alan Riley" <arr44@...> wrote:

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> > > > > > 9V measured from Terminal 9 to chassis. If it continues to act up, we will
> > > > > > look into it further.
> > > > > >
> > > > > > Alan, KD5R
> > > > > >
> > > > > > From: tfrugia81
> > > > > > Sent: Friday, April 12, 2013 6:39 PM
> > > > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > > > > Subject: [TS-520_820_530_830] Re: ts520se sidetone question
> > > > > >
> > > > > > One question, is it worth adjusting the AVR to be closer to 9v? I know the
> > > > > > difference is minimal, but I thought I would ask. The service manual (page
> > > > > > 10, sec 3-11) shows how to adjust it for 9v +/- 0.2v. I'm curious if 8.92
> > > > > > (what I'm reading under normal/working conditions) vs 8.98 to 9.02v might
> > > > > > be enough for concern.
> > > > > >
> > > > > > 73
> > > > > >
> > > > > > [Non-text portions of this message have been removed]
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41731. TS820s problem

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-15 05:12:40 UTC
From: Ravi
Topic: 41731 Message: 41731

Hi friends,

My friend 4s7ef, recently developed a problem in his 820S.According to him this is how he described the problem.

1.To-day I switched on the rig and listing on 40 meters.Every thing was ok and signals were 59+
2.Had a QSO on 40 meters with another HAM and received him at 59+
3.Suddenly his signal level dropped to 53.
4.Then switched off the AGC then the S meter needle swung to the extreme right
5.Transmission got distorted
6.Switched off 820s

Am going to get his rig to see what has gone wrong.Grateful if any one points me to probable areas to look at.

73's de 4s6rav (Ravi)

41732. Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-15 05:18:27 UTC
From: rc143dr
Topic: 41132 Message: 41732

Hello Allen,

I suspect your base and collector readings are reversed because of the Japanese transistor configuration (bce not cbe as we are used to in usa
).

With that in mind it looks like vr1 still is ok when the radio goes deaf. It is 2/3 of the output voltage under both cases.

Q7 appears to still be biased on by the base emitter values shown, but Q6 appears to have become shut off during the malfunction. But since the voltage at the base of Q6 is only about 4 volts that would be expected with a emitter voltage of 5.3 volts.

This is the fun of feedback circuits:-) How did we get to this state? I suspect the real culprit is Q5 or Q4. The feedback/servo correction of the regulator circuit should not have allowed this state to occur. The reduction of output voltage should have caused Q5 to drive Q4 to regulate the current and keep the voltage at a proper level. It appears that even during the fault condition that Q5's base emitter junction should still be on allowing Q4 to be on. This would be what I would look at next.

I still don't think a short circuit on the regulated output would get us to this state, I suspect Q5 has stopped working properly to get us to this state. You might try cooling Q5 with air to see if the circuit gets out of its funk.

I hope this helps.

73,

Roger (AE3RT)

--- In TS-520_820_530_830@yahoogroups.com, Tyler Frugia <tfrugia@...> wrote:
>
> Excellent, thanks guys!
>
> I took some measurements on Q6 and Q7. Numbers show collector, base, and emitter respectively.
>
> Q6 normal conditions:
> 6.02, 5.95, 5.37
>
> Q6 while deaf:
> 4.06, 4.53, 5.31
>
>
> Q7 normal conditions:
> 6.04, 9.02, 5.40
>

> Q7 while deaf:
> 5.95, 6.09, 5.30
>
>
>
> Sent from my iPhone
>
> On Apr 14, 2013, at 6:28 PM, "Alan Riley" <arr44@...> wrote:
>
> > I agree 100% with Roger...you have a problem with the regulator since the 14V line
> > was not loaded down when the 9V line dropped.
> >
> > Take some voltage measurements on the transistors in the regulator circuit under
> > normal and deaf conditions. Also inspect closely the solder connections on Q6
> > since you said it has been replaced.
> >
> > Alan, KD5R
> >
> > From: Tyler Frugia
> > Sent: Sunday, April 14, 2013 7:28 PM
> > To: TS-520_820_530_830@yahoogroups.com
> > Subject: Re: [TS-520_820_530_830] Re: ts520se sidetone question
> >
> > Hi Roger!
> >
> > Thanks for the info. Very good points.
> >
> > I took a closer look at Q6. It looks like it has been out of the board at some point
(fresh solder on all 3 legs). It is the right part #.
> >
> > While poking around the radio went deaf once and has not done it again. I'm going to
let it "cool down" more and try again. I will run to town and get more air.
> >
> > 73, and thanks again for the help!
> >
> > -Tyler
> > K7FRU
> >
> > Sent from my iPhone
> >
> > On Apr 14, 2013, at 4:15 PM, "rc143dr" <mailto:rc143dr%40embarqmail.com> wrote:
> >
> > > Hello Alan,
> > >
> > > It seems like something is definately malfunctioning in the regulator circuit rather
than a short circuit of some sort since the 14v line increases when the issue happens. I
would think that this indicates a decrease in loading since the 14v is an unregulated
supply.
> > >
> > > Also, the 3.3v is derived from the 9v and changes in exact proportion to the change

in the 9v. So the issue seems to be coming from the regulation circuit for the 9v in my mind.
> > >
> > > I have had issues with some of the older transistors in the TS-820/TS-520 becoming marginal in their operation due to age. But only in oscillating circuits.
> > >
> > > It seems interesting that the 9v seems to lock into the zener diode reference voltage when it does fail, instead of driving the output voltage of the regulator circuit to the 9v it should. I will need to think more about this circuit to think of a failure that would cause this scenario, although Q6 and its associated componants would appear to be at the center of what is happening here. It might be interesting if you have some canned air to blow it on Q6 to see if the issue goes away when this is done. You can also carefully (without spitting) blow through a straw to cool the transistor.
> > >
> > > Otherwise, I think the next step would be to start probing different points in the feedback/regulation circuit to see which part of the regulator circuit is breaking down.
> > >
> > > I'll give it more thought, but there is my two cents worth.
> > >
> > > 73,
> > >
> > > Roger (AE3RT)
> > >
> > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, Tyler Frugia <tfrugia@> wrote:
> > > >
> > > > Thanks Alan and Roger!
> > > >
> > > > I check vr1 again and it appears ok to my eye. I may rotate it several times again to see if I notice anything.
> > > >
> > > > I measured the three lines again (14v, 9v, and 3.3v) on the Fix-Avr board.
> > > >
> > > > Here is what they read, working vs deaf:
> > > >
> > > > 14.29v working 14.76v deaf
> > > > 8.99v working 6.16v deaf
> > > > 3.31v working 2.2v deaf
> > > >
> > > > I appreciate the help guys!
> > > >
> > > >
> > > > Sent from my iPhone
> > > >
> > > > On Apr 13, 2013, at 10:24 PM, "Alan Riley" <arr44@> wrote:
> > > >
> > > > > I think what you observed with the relay is an effect rather than the
> > > > > cause of your problem. The two relays are not activated while in the
> > > > > receive state. That is why you didn't observe any relay activity when
> > > > > the receiver went deaf. They are supplied with 12V by Q8 in the VOX
> > > > > unit when transmitting. When the 9V came back up to normal, a transient
> > > > > probably caused Q8 to turn on briefly causing the relay action. Q8 is

> > > > > normally cut off and thus doesn't supply any voltage to the relay coils.
> > > > >
> > > > > It still appears to me that the problem is on the FIX CH AVR unit. One
> > > > > other thing to check though is to verify that the 14V coming into the
> > > > > FIX CH AVR unit remains at 14V at the same time that the 9V output
> > > > > is acting up. If the 14V is steady then we will look closer at the 9V
> > > > > problem. Roger (AE3RT) made a good suggestion on looking closely
> > > > > at VR1.
> > > > >
> > > > > Alan, KD5R
> > > > >
> > > > > -----Original Message-----
> > > > > From: Tyler Frugia
> > > > > Sent: Saturday, April 13, 2013 3:49 PM
> > > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > > > Subject: Re: [TS-520_820_530_830] Re: ts520se sidetone question
> > > > >
> > > > > I took the relay cover off so I could see what was happening when the radio
> > > > > goes deaf. I made a video of it
> > > > > (http://www.youtube.com/watch?v=9YHssBUzq20).
> > > > > The radio goes deaf at 1m 27s, and comes back at 2m 2s.
> > > > >
> > > > > The relay doesn't seem to do anything when the radio goes 'deaf', but
> > > > > definitely flutters when it comes back alive. Is it still worth cleaning
> > > > > it out, or is this just a byproduct of the real issue?
> > > > >
> > > > > Thanks for any help!
> > > > >
> > > > > -Tyler
> > > > > k7fru
> > > > >
> > > > > On Sat, Apr 13, 2013 at 1:22 PM, Tyler Frugia <tfrugia@> wrote:
> > > > >
> > > > > > Thanks Allan. I did as you suggested, but having same symptoms.
> > > > > >
> > > > > > However, I think I have a HUGE clue. While tooth picking around the AF
> > > > > > board, the radio went deaf. Since I had the bottom open and was near it,
> > > > > > I
> > > > > > heard the relay RL2 CLICK and audio was restored. I noticed this twice!
> > > > > > I've previously pulled the relay and reseated it (looks brand new), but
> > > > > > now I believe this is the culprit. I'll look trough my previous notes to
> > > > > > see what the next step may be.
> > > > > >
> > > > > > 73!
> > > > > >
> > > > > > Sent from my iPhone
> > > > > >
> > > > > > On Apr 12, 2013, at 8:19 PM, "Alan Riley" <arr44@> wrote:
> > > > > >
> > > > > >

> > > > > >
> > > > > > Tyler, the actual value of the 9V is probably not so critical that
> > > > > > touching it up
> > > > > > would benefit you and I certainly would not recommend it if the rig was
> > > > > > operating normally.
> > > > > >
> > > > > > However, if that adjustment VR1 is intermittent, then it will affect both
> > > > > > the 9V
> > > > > > and the 3.3V levels. Try this: with the power off, mark the physical
> > > > > > setting of
> > > > > > the trimmer VR1 as closely as you can, then turn it limit to limit several
> > > > > > times.
> > > > > > Reset it to the marked position, then turn on the power and set the VR1
> > > > > > for
> > > > > > 9V measured from Terminal 9 to chassis. If it continues to act up, we will
> > > > > > look into it further.
> > > > > >
> > > > > > Alan, KD5R
> > > > > >
> > > > > > From: tfrugia81
> > > > > > Sent: Friday, April 12, 2013 6:39 PM
> > > > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > > > > Subject: [TS-520_820_530_830] Re: ts520se sidetone question
> > > > > >
> > > > > > One question, is it worth adjusting the AVR to be closer to 9v? I know the
> > > > > > difference is minimal, but I thought I would ask. The service manual (page
> > > > > > 10, sec 3-11) shows how to adjust it for 9v +/- 0.2v. I'm curious if 8.92
> > > > > > (what I'm reading under normal/working conditions) vs 8.98 to 9.02v might
> > > > > > be enough for concern.
> > > > > >
> > > > > > 73
> > > > > >
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41733. Re: TS820s problem

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-15 19:35:35 UTC
From: Terry Wagoner
Topic: 41731 Message: 41733

Ravi:

It is hard to do 3rd party help as cant ask clarifying questions directly to rig operator who witnessed the problem. Here are some suggestions based on my interpretation of what you have posted:

1. Remove Aux Relay from Relay Unit Board and clean contacts with copy paper wetted with contact cleaner while applying gentle pressure to the armature.

2. When switching AGC to Off position it is not uncommon for audio to be distorted on strong signals so you need to ride the RF gain control. However, S-meter should not peg with AGC in off position unless he ran RF gain pot full CCW. Anytime S meter pegs with no signal you have very low voltage on the AGC bus line (rail). The lower the voltage the higher the S-meter will indicate. May be a couple of things going on here. It sounds like may have lost -6vdc. -6vdc is used to back bias the AGC detector diodes to establish agc threshold. -6vdc is also applied to base of AGC detector amp Q16 when you place AGC switch in OFF position to keep transistor biased off so no affect on agc bus line with strong signals detected by the AGC diodes.

3. Suggest you read couple of dc voltages at IF board. At Conn IF-3 Pin 7. Should be approx -5.9vdc with AGC switch in Off position and approx -5.6 vdc with AGC in Fast or Slow position. Also, suggest you measure AGL at Pin 6. Should be 3.3 vdc. Problem is most hams do not have a high Z meter for AGC bus line (rail) measurement. Using a 11 meg ohm VTVM you will likely pull Pin 6 down to approx 2.7 vdc. Cheap DMM even worse. Much less than 2.7vdc and I would check RF-1 at AVR board. Dont need high Z meter to measure RF-1.

Terry K9TW

dIn TS-520_820_530_830@yahoogroups.com, "Ravi" <mindover2003@...> wrote:
>
> Hi friends,
>
> My friend 4s7ef, recently developed a problem in his 820S.According to him this is how he described the problem.
>
> 1.To-day I switched on the rig and listing on 40 meters.Every thing was ok and signals were 59+
> 2.Had a QSO on 40 meters with another HAM and received him at 59+
> 3.Suddenly his signal level dropped to 53.
> 4.Then switched off the AGC then the S meter needle swung to the extreme right
> 5.Transmission got distorted
> 6.Switched off 820s
>
> Am going to get his rig to see what hai gone wrong.Grateful if any one points me to probable areas to look at.
>

> 73's de 4s6rav (Ravi)
>

41734. Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-15 20:08:24 UTC
From: Terry Wagoner
Topic: 41132 Message: 41734

A suggested approach:

If you want to get your rig back on the air buy a replacement AVR board from Bob Mansker. Easy to dummy load test the 9vdc regulated and 3.3 RF-1 on your bench before you install the replacement board.

Then you can spend your free time troubleshooting the old board out of the rig where you will have ready access to get CBE readings from the foil side of the board. You already know someone before you has worked on the board and you replaced the reference zener based on someones good intentions. There are couple of folks here who appear to understand transistor testing and linear regulators. Make it easy on yourself by gaining ready access to foil side of board and learn in the process.

This is a pretty old and simple series pass regulator. Once you can easily access the transistor leads you can take CBE readings and can test transistors by doing forward bias turn on and turn off testing.

I can help you with dummy load sizing for bench testing.

Ordinarily I would not recommend replacing active devices that have not failed but Q4 pass transistor runs pretty hot in this regulator. If you take board out you may want to consider replacing it. I think there are couple of fellows on here who have supply of original devices.

Just a suggestion to get you back on air quickly. If in no rush to get rig back on the air proceed as you are. Just be very careful not to drop any solder or wire clippings into rig when repairing board in place.

I will let the fellows helping you proceed with how to troubleshoot this circuit.

Terry K9TW

41735. TS 520 Final Amp wafer band switch arcing

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-16 00:23:20 UTC
From: Dadatcomputer
Topic: 41735 Message: 41735

I have a TS 520 that when I transmit on SSB arcing occurs on the band switch wafer under the Final amp compartment. Has anyone else had this happen and is there any replacement parts available to replace the arced wafer. Wonder if cleaning and corona dope would help.

41736. Re: [TS-520_820_530_830] Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-16 01:26:11 UTC
From: Tyler Frugia
Topic: 41132 Message: 41736

Hi Guys,

Thanks for the email Terry. You may be right. I'm not in a huge rush to get the radio fixed, and I'd definitely rather spend $4-5 on parts than $50+ on a new board if possible. If that's what is needed I'm happy to do it though (I understand my lack of experience with electronics is another factor here). I am enjoying the experience though, and learning a lot looking through the schematics and with the help of Alan, Roger, and others. I appreciate all of the help, and if a new board is the best solution, that sounds good to me (this IS my first rodeo with this type of repair :)).

I took measurements on the 3 legs of Q4 and Q5. You were right, Roger, I was wrong on my CBE.

Q5 reads the following, in BCE:

Good: 5.94, 13.5, 5.33
Bad : 4.64, 4.6, 3.96

Since Q4 is circular, I wasn't sure how to read it. I will refer back to the schematics to determine which is BCE, and will update this, but the readings were:

Good: 9.00, 14.34, 13.65
Bad : 6.18, 14.75, 3.96

One more thing. Q4 DOES get hot while the radio is deaf. Q5 gets warm, but not too hot. However, the large blue resistor on the top right of the board gets too hot to touch (here is a picture of it: http://screencast.com/t/CiEUSXSh4a2). I blew on that resistor while it was 'deaf' and it came back to working pretty quick, although that may have just been a coincidence.

If this helps please let me know. If a new board is the best solution, please let me know as well, but I'm willing to do/try whatever is best!

73,

-Tyler
k7fru

On Mon, Apr 15, 2013 at 1:08 PM, Terry Wagoner <wagstw46@...> wrote:

> **
>
>
> A suggested approach:

>
> If you want to get your rig back on the air buy a replacement AVR board
> from Bob Mansker. Easy to dummy load test the 9vdc regulated and 3.3 RF-1
> on your bench before you install the replacement board.
>
> Then you can spend your free time troubleshooting the old board out of the
> rig where you will have ready access to get CBE readings from the foil side
> of the board. You already know someone before you has worked on the board
> and you replaced the reference zener based on someones good intentions.
> There are couple of folks here who appear to understand transistor testing
> and linear regulators. Make it easy on yourself by gaining ready access to
> foil side of board and learn in the process.
>
> This is a pretty old and simple series pass regulator. Once you can easily
> access the transistor leads you can take CBE readings and can test
> transistors by doing forward bias turn on and turn off testing.
>
> I can help you with dummy load sizing for bench testing.
>
> Ordinarily I would not recommend replacing active devices that have not
> failed but Q4 pass transistor runs pretty hot in this regulator. If you
> take board out you may want to consider replacing it. I think there are
> couple of fellows on here who have supply of original devices.
>
> Just a suggestion to get you back on air quickly. If in no rush to get rig
> back on the air proceed as you are. Just be very careful not to drop any
> solder or wire clippings into rig when repairing board in place.
>
> I will let the fellows helping you proceed with how to troubleshoot this
> circuit.
>
> Terry K9TW
>
>
>

[Non-text portions of this message have been removed]

41737. Re: TS 520 Final Amp wafer band switch arcing

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-16 02:14:13 UTC
From: Bob
Topic: 41735 Message: 41737

I have the complete band switch for the 520...
Sell them for $22.00 plus $3.00 to mail...
You might try cleaning with DeoxiTT first though...
Bob
****

--- In TS-520_820_530_830@yahoogroups.com, "Dadatcomputer" <kansas_tech206@...> wrote:
>
> I have a TS 520 that when I transmit on SSB arcing occurs on the band switch wafer under the Final amp compartment. Has anyone else had this happen and is there any replacement parts available to replace the arced wafer. Wonder if cleaning and corona dope would help.
>

41738. Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-16 02:24:04 UTC
From: rc143dr
Topic: 41132 Message: 41738

Hello Tyler,

Q5's BE junction looks to be on, but Q4's is definitely not on!

Q5 appears to have collector current flowing and CE voltage drop of 0.64 which appears to indicate it is operational in the fault condition.

Q4, however, is definitely off and would appear to be your problem. There is no reason Q4 should not be active and the readings indicate that it is not.

Have you tried to cool Q4 when the fault occurs?

If you would like, you could get a new board, but at this point everything seems to point at Q4 as the failing component.

Hope this helps.

73,

Roger (AE3RT)

--- In TS-520_820_530_830@yahoogroups.com, Tyler Frugia <tfrugia@...> wrote:
>
> Hi Guys,
>
> Thanks for the email Terry. You may be right. I'm not in a huge rush to
> get the radio fixed, and I'd definitely rather spend $4-5 on parts than
> $50+ on a new board if possible. If that's what is needed I'm happy to do
> it though (I understand my lack of experience with electronics is another
> factor here). I am enjoying the experience though, and learning a lot
> looking through the schematics and with the help of Alan, Roger, and
> others. I appreciate all of the help, and if a new board is the best
> solution, that sounds good to me (this IS my first rodeo with this type of
> repair :)).
>
> I took measurements on the 3 legs of Q4 and Q5. You were right, Roger, I
> was wrong on my CBE.
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> Q5 reads the following, in BCE:
>
> Good: 5.94, 13.5, 5.33
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>
> Since Q4 is circular, I wasn't sure how to read it. I will refer back to
> the schematics to determine which is BCE, and will update this, but the
> readings were:
>

> Good: 9.00, 14.34, 13.65
> Bad : 6.18, 14.75, 3.96
>
> One more thing. Q4 DOES get hot while the radio is deaf. Q5 gets warm,
> but not too hot. However, the large blue resistor on the top right of the
> board gets too hot to touch (here is a picture of it:
> http://screencast.com/t/CiEUSXSh4a2). I blew on that resistor while it was
> 'deaf' and it came back to working pretty quick, although that may have
> just been a coincidence.
>
> If this helps please let me know. If a new board is the best solution,
> please let me know as well, but I'm willing to do/try whatever is best!
>
>
> 73,
>
> -Tyler
> k7fru
>
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>
>
>
>
> On Mon, Apr 15, 2013 at 1:08 PM, Terry Wagoner <wagstw46@...> wrote:
>
> > **
> > >
> > >
> > A suggested approach:
> > >
> > If you want to get your rig back on the air buy a replacement AVR board
> > from Bob Mansker. Easy to dummy load test the 9vdc regulated and 3.3 RF-1
> > on your bench before you install the replacement board.
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> > Then you can spend your free time troubleshooting the old board out of the
> > rig where you will have ready access to get CBE readings from the foil side
> > of the board. You already know someone before you has worked on the board
> > and you replaced the reference zener based on someones good intentions.
> > There are couple of folks here who appear to understand transistor testing
> > and linear regulators. Make it easy on yourself by gaining ready access to
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> > >
> > This is a pretty old and simple series pass regulator. Once you can easily
> > access the transistor leads you can take CBE readings and can test
> > transistors by doing forward bias turn on and turn off testing.
> > >
> > I can help you with dummy load sizing for bench testing.

> >
> > Ordinarily I would not recommend replacing active devices that have not
> > failed but Q4 pass transistor runs pretty hot in this regulator. If you
> > take board out you may want to consider replacing it. I think there are
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> > Just a suggestion to get you back on air quickly. If in no rush to get rig
> > back on the air proceed as you are. Just be very careful not to drop any
> > solder or wire clippings into rig when repairing board in place.
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> > I will let the fellows helping you proceed with how to troubleshoot this
> > circuit.
> >
> > Terry K9TW
> >
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>
> [Non-text portions of this message have been removed]
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41739. Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-16 02:40:05 UTC
From: rc143dr
Topic: 41132 Message: 41739

Hello Tyler,

Also, if I am looking at the correct resistor (R21) appears to be part of the -6v circuit not the 9v circuit. However, the board you have is very different from the board in my 520s...

Looking at the 520se service manual shows that this -6 is generated off of the -C dc ("100"v DC) off the rectifier board in the 520se. There is quite a voltage drop and just a basic power calculation would seem to indicate that this resistor would normally run pretty hot! This would seem to be normal.

73,

Roger (AE3RT)

--- In TS-520_820_530_830@yahoogroups.com, Tyler Frugia <tfrugia@...> wrote:
>
> Hi Guys,
>
> Thanks for the email Terry. You may be right. I'm not in a huge rush to
> get the radio fixed, and I'd definitely rather spend $4-5 on parts than
> $50+ on a new board if possible. If that's what is needed I'm happy to do
> it though (I understand my lack of experience with electronics is another
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> looking through the schematics and with the help of Alan, Roger, and
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> Q5 reads the following, in BCE:
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> http://screencast.com/t/CiEUSXSh4a2). I blew on that resistor while it was
> 'deaf' and it came back to working pretty quick, although that may have
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> If this helps please let me know. If a new board is the best solution,
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> -Tyler
> k7fru
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> On Mon, Apr 15, 2013 at 1:08 PM, Terry Wagoner <wagstw46@...> wrote:
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41740. Re: [TS-520_820_530_830] Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-16 03:31:30 UTC
From: Tyler Frugia
Topic: 41132 Message: 41740

Excellent, thanks Roger. I don't see R21 on the schematic, but that's what it shows on the board.

I will replace Q4. NTE129 appears to be the replacement. Does the (l) at the end of 2SA606 (l) designate a different model, or will the standard NTE129 work ok? I will pick up several.

73,

-Tyler
K7FRU

Sent from my iPhone

On Apr 15, 2013, at 7:40 PM, "rc143dr" <rc143dr@...> wrote:

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> Also, if I am looking at the correct resistor (R21) appears to be part of the -6v circuit not the 9v circuit. However, the board you have is very different from the board in my 520s...
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> Looking at the 520se service manual shows that this -6 is generated off of the -C dc ("100"v DC) off the rectifier board in the 520se. There is quite a voltage drop and just a basic power calculation would seem to indicate that this resistor would normally run pretty hot! This would seem to be normal.
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41741. Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-16 14:11:55 UTC
From: Brian Allen
Topic: 41132 Message: 41741

I had a dead side tone. You don't have to spend $50 on a board. i purchased mine off ebay for $15 to the door. I really wanted to repair on a component level but for that price, it was hard to justify. Switched the board out and it works great. I narrowed it down to a transistor. I'm gong to remove it to take readings and hopefully fix the board and have a back up!

[Non-text portions of this message have been removed]

41742. TS-830S - AGC speed too fast in slow position

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-16 12:29:14 UTC
From: i1gte_marco
Topic: 41742 Message: 41742

Hi to all,
the time constant of the AGC of my TS-830S (slow position) is, in my opinion, too fast and I would like to change the value of C177 in the IF unit.
I would like to know if anyone has done this change and what is the value used to replace C177.
73'
Marco I1GTE

41743. Re: Inrush Current Limiters for the TS830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-16 15:01:20 UTC
From: hpdd709
Topic: 41743 Message: 41743

All the recent postings on smoking transformers and such has caught my attention. I looked at the drawings for the TS830 and really don't see any inrush current limitation on AC for the power supply and also the filiment circuit for the finals. With these old eyes, maybe I missed something.

Has anyone installed any devices such as thermisters for inrush current? If so,and keeping current requirements in mind, what level of resistance did you use and make and model/part number?

Or am I just smoking something? lol

Enjoy the hobby as I do,

73,

Mike K3MG

41744. Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-16 16:48:59 UTC
From: rc143dr
Topic: 41132 Message: 41744

Hello Tyler,

It looks like the NTE part has the ebc not ecb lead pattern like the 2SA606. You might want to make sure you can swap leads without adding lead length. (Though it is being used for a pass transistor, it has a pretty high frequency bandwidth.) Couldn't find info on the L at the end of the part number. You may be able to find an actual 2SA606, if you have to. Or you can go the extra board route if that is simpler.

On the TS-520SE the -6v is generated by a simple resistor/zener shown on the schematic lower left. That is labeled R21 on the schematic for the 520SE. It is so basic it is easily overlooked on the schematic.

73,

Roger (AE3RT)

--- In TS-520_820_530_830@yahoogroups.com, Tyler Frugia <tfrugia@...> wrote:
>
> Excellent, thanks Roger. I don't see R21 on the schematic, but that's what it shows on the board.
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> I will replace Q4. NTE129 appears to be the replacement. Does the (l) at the end of 2SA606 (l) designate a different model, or will the standard NTE129 work ok? I will pick up several.
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> > > On Mon, Apr 15, 2013 at 1:08 PM, Terry Wagoner <wagstw46@> wrote:
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41745. Re: [TS-520_820_530_830] Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-16 18:24:57 UTC
From: Tyler Frugia
Topic: 41132 Message: 41745

Hi Roger,

Good point, unfortunately (again) I overlooked the ebc/ecb and already ordered 3 of them. I will try and make it work. The one currently on the board has insulators on each leg, I suppose in a worst case scenario I can do the same if I have to swap the two legs.

Parts should be here next week, I will let you know how it goes!

I still cannot see R21 on the schematic. I see the -6 line with the resistor and zener diode, but it's labeled R23 on my schematic. Unless I'm looking at it wrong, which is a possibility :)

-Tyler
K7FRU

On Tue, Apr 16, 2013 at 9:48 AM, rc143dr <rc143dr@...> wrote:

> **
>
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> Hello Tyler,
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> It looks like the NTE part has the ebc not ecb lead pattern like the
> 2SA606. You might want to make sure you can swap leads without adding lead
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41746. Re: [TS-520_820_530_830] Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-16 19:18:57 UTC
From: Mike
Topic: 41132 Message: 41746

I've used NTE replacements where the NTE lead orientation is different then the original transistor leads.

The first thing is to remove the bad transistor. This can be done using small wire cutting dikes, cutting the leads. Once the leads have been cut and the body of the bad transistor is out of the board you should see the remaining lead that can be removedusing Hemostats to grasp the leads then heat the foil side and gently pull the lead from the board. Once all leads have been removed, remove the solder from around the lead holes so the holes are free of solder and light passes freely through the holes. I use a solder sucker then check the holes using a bright flash light. If all the solder is removed the holes will appear clear and "round".

Next, inspect the new transistor, identify each "E"mitter', "B"ase, and "C"olector leads. Draw a picture on a piece of paper showing the leads so you don't forget. You would be surprised how many transistors get installed incorrectly because the person "forgets" which lead is which and "assumes" they have it right but find out later they made a mistake. By that time it's too late.

Next, carefully bend the leads, ensuring they do not short, so the transistor can be installed with the correct leads in the correct holes. This is where the "Xray" pictures in the service manual come in handy. The board MUST be thoroughly inspected so the person installing the transistor KNOWS which holes are for the "E", "B", and "C" leads.

Once the transistor leads have been oriented properly and pushed through the "Correct" holes, AGAIN, closely inspect the leads to "ENSURE" they are NOT shorted, holdthe body of the transistor with you finger, applying just enough pressure to ensure the transistor does NOT fail, then turn the board over and bend the leads "slightly" so the transistor cannot failout when you remove your finger. Connect heat sinks to the lead(s) on the component side for the leads being soldered, attaching the clips as far from the body as possible. This may not be easy but it will protect the transistor from excessive heat that can easily damage the transistor.

Next, apply solder to the soldering pencil's "Clean tip",just enough to coat the "tip", then apply heat to the lead and PC foillead pad. Apply solder and when the solder flows freely onto the foil pad and the lead remove the heat and allow the solder to cool and solidify. Move the heat sink to the next lead and repeat the process until all leads are soldered.

Turn the board over, remove the heat sink clip, and thoroughly inspect the transistor leadsto ensure the leads are not shorted against each

otheror to another component(s) and the body of the transistor is not shorting to anything else. If all is okay then clip the excess from each lead on the foil side of the board.

Next, thoroughly inspect the foil side, looking for solder bridges, even a very thin trace of solder that you can't see that is not suppose to be there can result in a short. I use a bright flash light shinning directly at the component side while looking through a magnifying glass at the foil side. I've found more shorts plus cracks in foil runsusing this method.

If all is okay then install the board and test.

73
Mike
W5RKL

On 4/16/2013 11:48 AM, rc143dr wrote:
>
> Hello Tyler,
>
> It looks like the NTE part has the ebc not ecb lead pattern like the
> 2SA606. You might want to make sure you can swap leads without adding
> lead length. (Though it is being used for a pass transistor, it has a
> pretty high frequency bandwidth.) Couldn't find info on the L at the
> end of the part number. You may be able to find an actual 2SA606, if
> you have to. Or you can go the extra board route if that is simpler.
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> On the TS-520SE the -6v is generated by a simple resistor/zener shown
> on the schematic lower left. That is labeled R21 on the schematic for
> the 520SE. It is so basic it is easily overlooked on the schematic.
>
> 73,
>
> Roger (AE3RT)
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Tyler Frugia
> <tfrugia@...> wrote:
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> > Excellent, thanks Roger. I don't see R21 on the schematic, but
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> (l) at the end of 2SA606 (l) designate a different model, or will the
> standard NTE129 work ok? I will pick up several.
> >
> > 73,
> >
> > -Tyler
> > K7FRU

> >
> > Sent from my iPhone
> >
> > On Apr 15, 2013, at 7:40 PM, "rc143dr" <rc143dr@...> wrote:
> >
> > >
> > > Hello Tyler,
> > >
> > > Also, if I am looking at the correct resistor (R21) appears to be
> part of the -6v circuit not the 9v circuit. However, the board you
> have is very different from the board in my 520s...
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> > > Looking at the 520se service manual shows that this -6 is
> generated off of the -C dc ("100"v DC) off the rectifier board in the
> 520se. There is quite a voltage drop and just a basic power
> calculation would seem to indicate that this resistor would normally
> run pretty hot! This would seem to be normal.
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> > > > Hi Guys,
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> > > > Thanks for the email Terry. You may be right. I'm not in a huge
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> > > > get the radio fixed, and I'd definitely rather spend $4-5 on
> parts than
> > > > $50+ on a new board if possible. If that's what is needed I'm
> happy to do
> > > > it though (I understand my lack of experience with electronics
> is another
> > > > factor here). I am enjoying the experience though, and learning
> a lot
> > > > looking through the schematics and with the help of Alan, Roger, and
> > > > others. I appreciate all of the help, and if a new board is the best
> > > > solution, that sounds good to me (this IS my first rodeo with
> this type of
> > > > repair :)).
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> > > > I took measurements on the 3 legs of Q4 and Q5. You were right,
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> > > > Q5 reads the following, in BCE:
> > > >

> > > > Good: 5.94, 13.5, 5.33
> > > > Bad : 4.64, 4.6, 3.96
> > > >
> > > > Since Q4 is circular, I wasn't sure how to read it. I will refer
> back to
> > > > the schematics to determine which is BCE, and will update this,
> but the
> > > > readings were:
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> > > > One more thing. Q4 DOES get hot while the radio is deaf. Q5 gets
> warm,
> > > > but not too hot. However, the large blue resistor on the top
> right of the
> > > > board gets too hot to touch (here is a picture of it:
> > > > http://screencast.com/t/CiEUSXSh4a2). I blew on that resistor
> while it was
> > > > 'deaf' and it came back to working pretty quick, although that
> may have
> > > > just been a coincidence.
> > > >
> > > > If this helps please let me know. If a new board is the best
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> > > > please let me know as well, but I'm willing to do/try whatever
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> > > >
> > > >
> > > >
> > > >
> > > >
> > > >
> > > > On Mon, Apr 15, 2013 at 1:08 PM, Terry Wagoner <wagstw46@> wrote:
> > > >
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> > > > >
> > > > >
> > > > > A suggested approach:
> > > > >
> > > > > If you want to get your rig back on the air buy a replacement
> AVR board

> > > > > from Bob Mansker. Easy to dummy load test the 9vdc regulated
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> > > > > on your bench before you install the replacement board.
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> > > > > Then you can spend your free time troubleshooting the old
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> > > > > This is a pretty old and simple series pass regulator. Once
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41747. Shure mike wiring

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-17 00:23:35 UTC
From: ke7kpb
Topic: 41747 Message: 41747

I'm looking for a wiring diagram for the Shure microphone model# CR20SLE. I want to wire it up for a TS 820. The mike is a low Z type.
Robert.

41748. Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-17 01:44:29 UTC
From: rc143dr
Topic: 41132 Message: 41748

Hello Tyler,

Yes, R23 would be correct. When I looked closely at your board picture, R21 is just an empty spot. You can see that the resistor you spoke of connects to D8 so it must be R23 as you said.

Hope all goes well and that replacing Q4 solves the issue.

73,

Roger (AE3RT)

--- In TS-520_820_530_830@yahoogroups.com, Tyler Frugia <tfrugia@...> wrote:
>
> Hi Roger,
>
> Good point, unfortunately (again) I overlooked the ebc/ecb and already
> ordered 3 of them. I will try and make it work. The one currently on the
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> do the same if I have to swap the two legs.
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> -Tyler
> K7FRU
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41749. Re: Shure mike wiring

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-17 11:42:42 UTC
From: Allan C
Topic: 41747 Message: 41749

Hi Robert, I am including a link here but first I have to say this there were many models of this mic, so read the entire page the link takes you to then check out the other models you might find that most had the same wiring just a different mic cartridge.

Good Luck Allan & 73
--- In TS-520_820_530_830@yahoogroups.com, "ke7kpb" wrote:
>
> I'm looking for a wiring diagram for the Shure microphone model#
CR20SLE. I want to wire it up for a TS 820. The mike is a low Z type.
> Robert.
>

41750. Re: Shure mike wiring

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-17 11:44:42 UTC
From: Allan C
Topic: 41747 Message: 41750

Forgot to add the link in first message here it is:
http://greenbulletmics.com/ <http://greenbulletmics.com/>

From Allan 73 & God Bless.
--- In TS-520_820_530_830@yahoogroups.com, "ke7kpb" wrote:
>
> I'm looking for a wiring diagram for the Shure microphone model#
CR20SLE. I want to wire it up for a TS 820. The mike is a low Z type.
> Robert.
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[Non-text portions of this message have been removed]

41751. Re: [TS-520_820_530_830] Re: Shure mike wiring

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-17 14:16:21 UTC
From: Mike
Topic: 41747 Message: 41751

High Z microphones have a higher output level than a LOW Z microphone, resulting in lower gain design requirements in the audio amplifier the microphone is connected to.

LOW Z microphones, on the other hand, have much lower output level than a HIGH Z microphone, requiring higher gain design in the amplifier the microphone is connected to.

The use of the wrong impedance microphone can and will affect the transmitter's RF output level which also will affect the quality and level of recovered audio at the receiving end. You cannot overcome the impedance mismatch problem by turning the MIC gain UP!! The fix is to use a microphone with the proper impedance. I do not recommend using any LOW Z microphone with a transceiver such as the TS-820 that has a HIGH Z microphone requirement.

73
Mike
W5RKL

On 4/17/2013 6:42 AM, Allan C wrote:
>
>
> Hi Robert, I am including a link here but first I have to say this there
> were many models of this mic, so read the entire page the link takes you
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> > Robert.
> >
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>

[Non-text portions of this message have been removed]

41752. BS-8 conversion to BS-5 ??

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-17 16:11:05 UTC
From: n3kvl
Topic: 41752 Message: 41752

Hi All,

My search for a BS-5 to install in the SM-220 is fruitless.

Is there any publish work out there to re-work the BS8 I have to be consistent with the BS5 I need?

I can't find schematic anywhere for either..

Thanks
Archie

41753. Re: Shure mike wiring

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-17 12:56:22 UTC
From: barry_sherwood
Topic: 41747 Message: 41753

Check out this website for pin outs.

http://www.qsl.net/g4wpw/date.html

Barry, kf5gc

--- In TS-520_820_530_830@yahoogroups.com, "ke7kpb" <gunslingerbob@...> wrote:
>
> I'm looking for a wiring diagram for the Shure microphone model# CR20SLE. I want to wire it up for a TS 820. The mike is a low Z type.
> Robert.
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41754. Re: [TS-520_820_530_830] Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-17 17:37:49 UTC
From: Tyler Frugia
Topic: 41132 Message: 41754

Thanks, Roger. That makes sense.

And Mike, thanks very much for your detailed write up, I have read it
several times and will follow it!

I will update this once the part arrives. Scheduled for next week, but
hoping it gets here on Saturday :)

73,

-Tyler
k7fru

On Tue, Apr 16, 2013 at 6:44 PM, rc143dr <rc143dr@...> wrote:

> **
>
>
> Hello Tyler,
>
> Yes, R23 would be correct. When I looked closely at your board picture,
> R21 is just an empty spot. You can see that the resistor you spoke of
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> Hope all goes well and that replacing Q4 solves the issue.
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> > > Roger (AE3RT)
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, Tyler Frugia <tfrugia@>
> > > wrote:
> > > >
> > > > Excellent, thanks Roger. I don't see R21 on the schematic, but that's
> > > what it shows on the board.
> > > >
> > > > I will replace Q4. NTE129 appears to be the replacement. Does the
> (l) at
> > > the end of 2SA606 (l) designate a different model, or will the standard
> > > NTE129 work ok? I will pick up several.
> > > >
> > > > 73,
> > > >
> > > > -Tyler

> > > > K7FRU
> > > >
> > > > Sent from my iPhone
> > > >
> > > > On Apr 15, 2013, at 7:40 PM, "rc143dr" <rc143dr@> wrote:
> > > >
> > > > >
> > > > > Hello Tyler,
> > > > >
> > > > > Also, if I am looking at the correct resistor (R21) appears to be
> part
> > > of the -6v circuit not the 9v circuit. However, the board you have is
> very
> > > different from the board in my 520s...
> > > > >
> > > > > Looking at the 520se service manual shows that this -6 is generated
> > > off of the -C dc ("100"v DC) off the rectifier board in the 520se.
> There is
> > > quite a voltage drop and just a basic power calculation would seem to
> > > indicate that this resistor would normally run pretty hot! This would
> seem
> > > to be normal.
> > > > >
> > > > > 73,
> > > > >
> > > > > Roger (AE3RT)
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, Tyler Frugia <tfrugia@>
> > > wrote:
> > > > > >
> > > > > > Hi Guys,
> > > > > >
> > > > > > Thanks for the email Terry. You may be right. I'm not in a huge
> rush
> > > to
> > > > > > get the radio fixed, and I'd definitely rather spend $4-5 on
> parts
> > > than
> > > > > > $50+ on a new board if possible. If that's what is needed I'm
> happy
> > > to do
> > > > > > it though (I understand my lack of experience with electronics is
> > > another
> > > > > > factor here). I am enjoying the experience though, and learning
> a lot
> > > > > > looking through the schematics and with the help of Alan, Roger,
> and
> > > > > > others. I appreciate all of the help, and if a new board is the
> best
> > > > > > solution, that sounds good to me (this IS my first rodeo with

> this
> > > type of
> > > > > > repair :)).
> > > > > >
> > > > > > I took measurements on the 3 legs of Q4 and Q5. You were right,
> > > Roger, I
> > > > > > was wrong on my CBE.
> > > > > >
> > > > > > Q5 reads the following, in BCE:
> > > > > >
> > > > > > Good: 5.94, 13.5, 5.33
> > > > > > Bad : 4.64, 4.6, 3.96
> > > > > >
> > > > > > Since Q4 is circular, I wasn't sure how to read it. I will refer
> > > back to
> > > > > > the schematics to determine which is BCE, and will update this,
> but
> > > the
> > > > > > readings were:
> > > > > >
> > > > > > Good: 9.00, 14.34, 13.65
> > > > > > Bad : 6.18, 14.75, 3.96
> > > > > >
> > > > > > One more thing. Q4 DOES get hot while the radio is deaf. Q5 gets
> > > warm,
> > > > > > but not too hot. However, the large blue resistor on the top
> right
> > > of the
> > > > > > board gets too hot to touch (here is a picture of it:
> > > > > > http://screencast.com/t/CiEUSXSh4a2). I blew on that resistor
> while
> > > it was
> > > > > > 'deaf' and it came back to working pretty quick, although that
> may
> > > have
> > > > > > just been a coincidence.
> > > > > >
> > > > > > If this helps please let me know. If a new board is the best
> > > solution,
> > > > > > please let me know as well, but I'm willing to do/try whatever is
> > > best!
> > > > > >
> > > > > >
> > > > > > 73,
> > > > > >
> > > > > > -Tyler
> > > > > > k7fru
> > > > > >
> > > > > >
> > > > > >

> > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > > On Mon, Apr 15, 2013 at 1:08 PM, Terry Wagoner <wagstw46@>
> wrote:
> > > > > >
> > > > > > > **
> > > > > > >
> > > > > > >
> > > > > > > A suggested approach:
> > > > > > >
> > > > > > > If you want to get your rig back on the air buy a replacement
> AVR
> > > board
> > > > > > > from Bob Mansker. Easy to dummy load test the 9vdc regulated
> and
> > > 3.3 RF-1
> > > > > > > on your bench before you install the replacement board.
> > > > > > >
> > > > > > > Then you can spend your free time troubleshooting the old board
> > > out of the
> > > > > > > rig where you will have ready access to get CBE readings from
> the
> > > foil side
> > > > > > > of the board. You already know someone before you has worked on
> > > the board
> > > > > > > and you replaced the reference zener based on someones good
> > > intentions.
> > > > > > > There are couple of folks here who appear to understand
> transistor
> > > testing
> > > > > > > and linear regulators. Make it easy on yourself by gaining
> ready
> > > access to
> > > > > > > foil side of board and learn in the process.
> > > > > > >
> > > > > > > This is a pretty old and simple series pass regulator. Once you
> > > can easily
> > > > > > > access the transistor leads you can take CBE readings and can
> test
> > > > > > > transistors by doing forward bias turn on and turn off testing.
> > > > > > >
> > > > > > > I can help you with dummy load sizing for bench testing.
> > > > > > >
> > > > > > > Ordinarily I would not recommend replacing active devices that
> > > have not
> > > > > > > failed but Q4 pass transistor runs pretty hot in this
> regulator.

> > > If you
> > > > > > > take board out you may want to consider replacing it. I think
> > > there are
> > > > > > > couple of fellows on here who have supply of original devices.
> > > > > > >
> > > > > > > Just a suggestion to get you back on air quickly. If in no
> rush to
> > > get rig
> > > > > > > back on the air proceed as you are. Just be very careful not to
> > > drop any
> > > > > > > solder or wire clippings into rig when repairing board in
> place.
> > > > > > >
> > > > > > > I will let the fellows helping you proceed with how to
> > > troubleshoot this
> > > > > > > circuit.
> > > > > > >
> > > > > > > Terry K9TW
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > >
> > > > > >
> > > > > > [Non-text portions of this message have been removed]
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> > > >
> > > >
> > > > [Non-text portions of this message have been removed]
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> > >
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> > >
> > [Non-text portions of this message have been removed]
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41755. RE: [TS-520_820_530_830] Re: Shure mike wiring

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-17 22:48:14 UTC
From: Robert Port
Topic: 41747 Message: 41755

Thanks Allen. I kind of figured a low z mike wouldn't work well. Maybe I need to change the element and see how that will work.

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Allan C
Sent: Wednesday, April 17, 2013 5:45 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Shure mike wiring

Forgot to add the link in first message here it is:
http://greenbulletmics.com/ <http://greenbulletmics.com/>

From Allan 73 & God Bless.
--- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> , "ke7kpb" wrote:
>
> I'm looking for a wiring diagram for the Shure microphone model#
CR20SLE. I want to wire it up for a TS 820. The mike is a low Z type.
> Robert.
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41756. TS-530s Plate Current

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-19 02:21:04 UTC
From: rkings1956
Topic: 41756 Message: 41756

Hi Group,

In tuning my just purchased TS-530s I'm not sure what the Plate Current should be. I know for my TS-520 is 225ma.

Thanks
Rob
kd6fsk

41757. Re: [TS-520_820_530_830] TS-530s Plate Current

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-19 03:33:10 UTC
From: Young Kim
Topic: 41756 Message: 41757

hi,
it is the same as ts-520,830,820.
goof luck.
de k6hm

From: rkings1956 <rkings1956@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, April 18, 2013 7:21 PM
Subject: [TS-520_820_530_830] TS-530s Plate Current

Hi Group,

In tuning my just purchased TS-530s I'm not sure what the Plate Current
should be. I know for my TS-520 is 225ma.

Thanks
Rob
kd6fsk

[Non-text portions of this message have been removed]

41758. Re: TS-530s Plate Current

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-19 11:06:47 UTC
From: Terry Wagoner
Topic: 41756 Message: 41758

Plate CURRENT IS NOT THE SAME and IT IS NOT 225 ma FOR A TS-520.

For GOSH SAKES we are ham operators. This is a technical hobby. Read your owners operator manuals and if still uncertain then come here and ask. It is all there in front of you. Your manuals should be dog eared.

TS-520, TS,520S, TS-520SE and TS-820 Transmitters are all rated at 160 Watts DC Input Power. You load these to.... "ABOUT 200 ma"

TS-530 and TS-830 Transmitters are rated at 180 Watts DC Input Power. You load these to.... " Reduce the Carrier Control setting if Ip is over 265 ma"

1. Where did 225 ma come from? Ken Kempski K4EAA in his FAQ section suggests that 800v X 225 ma = 180 watt dc input power and it is pointless to exceed this level as it wont make perceptable difference on the receive end of a transmission and loading to this level (assuming proper loading technique) can extend final tube life. Without saying it Ken was obviously speaking about TS-530 and TS-830 rigs as they are the only two models with 180 watts dc input ratings. He would not recommend loading to 180 watts dc input power on a radio designed for 160 watts dc input power.

2. Why are the early rigs rated at 160 watts dc input and later rigs at 180 watts dc input? I Do Not Know With 100% Certainty. What I Believe is that it is due to the switch from S2001A finals to 6146B finals. I Believe 6146B tubes have higher Plate dissipation ratings. I have never seen a S2001A Data Sheet and do not know there plate dissipation or any of there ICAS max ratings. If anyone has one please send to Gordon N6WK so he can post on his site.

3. Is there any difference in the HV power supply capacities? No apparent or published differences that I have seen. Maybe we can ask Bob Mansker to hack transformers out of these rigs and weigh them to see if difference in copper and iron? Transformer weight roughly corresponds to KVA capacity.

4. Sorry about my frustration. This is suppose to be a thinking mans hobby. You have to be able to read and read with comprehension. Lacking this ability you are in trouble. Very easy to just ask and expect an instant answer with out doing any modest amount of homework. Maybe it is a age and cultural thing? I prefer to help those who are willing to help themselves.

5. Lets stop putting wrong information out on this forum. Easy to just "Parrot" what you have heard. This is how tribal myths perpetuate. If you are going to respond do so as an "expert" or do so by qualifying your response. I will try to remember to preface my remarks by telling you what I "know" first and then what I "believe". Can be a big difference between those.

One of the worst things you can do is tell people what you know to be fact only to find out later you were wrong. Pity the poor Flat Earth folks!

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Young Kim <ykpwr45@...> wrote:
>
> hi,
> it is the same as ts-520,830,820.
> goof luck.
> de k6hm
>
>
> _____
> From: rkings1956 <rkings1956@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, April 18, 2013 7:21 PM
> Subject: [TS-520_820_530_830] TS-530s Plate Current
>
>
>
> Â
> Hi Group,
>
> In tuning my just purchased TS-530s I'm not sure what the Plate Current
> should be. I know for my TS-520 is 225ma.
>
> Thanks
> Rob
> kd6fsk
>
>
>
>
> [Non-text portions of this message have been removed]
>

41759. Kenwood TS900 external remote VFO Unit..

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-19 12:34:58 UTC
From: Behiels JeanPierre
Topic: 41759 Message: 41759

Hi Kenwood vintage users ;

Anybody who now if the external remote VFO of a old TS900 TRX is usable for spare parts for repair a old TS510 VFO.
Especially the dry shaft and wheels are they interchangeable ??
The bearing of the TS510 is totally shifted out (to mutch place between shaft and bearing).
I will use the wheels and shafts of a spare TS900 external remote VFO I have.
Maby someone has some experiences concerning this repair job and change of the mechanical drive shaft device of the VFO himself.

Regards Jean ON4AEF.

[Non-text portions of this message have been removed]

41760. RE: [TS-520_820_530_830] Re: TS-530s Plate Current

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-19 13:27:06 UTC
From: Andrew Page
Topic: 41756 Message: 41760

Hi Guys,

Just to add to Terry□s post.

We all have the best of intentions here to help everyone. It can be confronting sometimes to be told that you are wrong about something. We are all here to learn and help each other. We become better hams/people as a result.

Thanks for the info Terry. I have been a TS-520S fanatic for over 10 years and never knew that! So I will watch that plate current. My TS-520s (well both of them) still have the original S2001A finals from the 70s with 100watts on all bands. So I must be doing something right.

QUESTION:

If we replace the finals in a TS-520S with 6146B□s, is it ok to set to 225ma then?

Again thanks Terry. Learn something new everyday.

Andrew- VK2-XXL

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
Sent: Friday, April 19, 2013 9:07 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS-530s Plate Current

Plate CURRENT IS NOT THE SAME and IT IS NOT 225 ma FOR A TS-520.

For GOSH SAKES we are ham operators. This is a technical hobby. Read your owners operator manuals and if still uncertain then come here and ask. It is all there in front of you. Your manuals should be dog eared.

TS-520, TS,520S, TS-520SE and TS-820 Transmitters are all rated at 160 Watts DC Input Power. You load these to.... "ABOUT 200 ma"

TS-530 and TS-830 Transmitters are rated at 180 Watts DC Input Power. You load these to.... " Reduce the Carrier Control setting if Ip is over 265 ma"

1. Where did 225 ma come from? Ken Kempski K4EAA in his FAQ section suggests that 800v X 225 ma = 180 watt dc input power and it is pointless to exceed this level as it wont make perceptable difference on the receive end of a transmission and loading to this level (assuming proper loading technique) can extend final tube life. Without saying it Ken was obviously speaking about TS-530 and TS-830 rigs as they are the only two models with 180 watts dc input ratings. He would not recommend loading to 180 watts dc input power

on a radio designed for 160 watts dc input power.

2. Why are the early rigs rated at 160 watts dc input and later rigs at 180 watts dc input? I Do Not Know With 100% Certainty. What I Believe is that it is due to the switch from S2001A finals to 6146B finals. I Believe 6146B tubes have higher Plate dissipation ratings. I have never seen a S2001A Data Sheet and do not know there plate dissipation or any of there ICAS max ratings. If anyone has one please send to Gordon N6WK so he can post on his site.

3. Is there any difference in the HV power supply capacities? No apparent or published differences that I have seen. Maybe we can ask Bob Mansker to hack transformers out of these rigs and weigh them to see if difference in copper and iron? Transformer weight roughly corresponds to KVA capacity.

4. Sorry about my frustration. This is suppose to be a thinking mans hobby. You have to be able to read and read with comprehension. Lacking this ability you are in trouble. Very easy to just ask and expect an instant answer with out doing any modest amount of homework. Maybe it is a age and cultural thing? I prefer to help those who are willing to help themselves.

5. Lets stop putting wrong information out on this forum. Easy to just "Parrot" what you have heard. This is how tribal myths perpetuate. If you are going to respond do so as an "expert" or do so by qualifying your response. I will try to remember to preface my remarks by telling you what I "know" first and then what I "believe". Can be a big difference between those.

One of the worst things you can do is tell people what you know to be fact only to find out later you were wrong. Pity the poor Flat Earth folks!

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> , Young Kim <ykpwr45@...>
wrote:
>
> hi,
> it is the same as ts-520,830,820.
> goof luck.
> de k6hm
>
>
> _____
> From: rkings1956 <rkings1956@...>
> To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Thursday, April 18, 2013 7:21 PM
> Subject: [TS-520_820_530_830] TS-530s Plate Current
>
>
>

> Â
> Hi Group,
>
> In tuning my just purchased TS-530s I'm not sure what the Plate Current
> should be. I know for my TS-520 is 225ma.
>
> Thanks
> Rob
> kd6fsk
>
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

41761. Re: [TS-520_820_530_830] TS-530s Plate Current

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-19 13:48:21 UTC
From: John Davidson
Topic: 41756 Message: 41761

Go back to the seller and request he supply the operating manual/!

From: rkings1956 <rkings1956@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, April 18, 2013 10:21 PM
Subject: [TS-520_820_530_830] TS-530s Plate Current

Hi Group,

In tuning my just purchased TS-530s I'm not sure what the Plate Current
should be. I know for my TS-520 is 225ma.

Thanks
Rob
kd6fsk

[Non-text portions of this message have been removed]

41762. Re: [TS-520_820_530_830] TS-530s Plate Current

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-19 14:04:44 UTC
From: Mike
Topic: 41756 Message: 41762

Why waste time asking the seller for the manual when he can download the operator and service manuals, right now for FREE, at Grodon's website(see link below)??

www.n6wk.com/kenwood/

Mike

On 4/19/2013 8:48 AM, John Davidson wrote:
>
> Go back to the seller and request he supply the operating manual/!
>
> _____
> From: rkings1956 <rkings1956@... <mailto:rkings1956%40yahoo.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Thursday, April 18, 2013 10:21 PM
> Subject: [TS-520_820_530_830] TS-530s Plate Current
>
>
>
>
>
>
> Hi Group,
>
> In tuning my just purchased TS-530s I'm not sure what the Plate Current
> should be. I know for my TS-520 is 225ma.
>
> Thanks
> Rob
> kd6fsk
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

41763. Re: [TS-520_820_530_830] TS-530s Plate Current

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-19 14:24:12 UTC
From: Mike
Topic: 41756 Message: 41763

The 530 manuals, along with other Kenwood manuals, can also be found on
the Kenwood Yahoo Group website's "Files" section. The link below will
take you to the Files/manuals section but you have to log onto the
GroupFIRST.

The login information is the SAME information, username and password,
you use with your email client software to receive Group postings and
responses.

http://groups.yahoo.com/group/TS-520_820_530_830/files/MANUALS/

You cannot access the "Files" section using your emailclient, you MUST
use your webbrowser!

Mike
W5RKL

On 4/19/2013 9:04 AM, Mike wrote:
>
> Why waste time asking the seller for the manual when he can download the
> operator and service manuals, right now for FREE, at Grodon's
> website(see link below)??
>
> www.n6wk.com/kenwood/
>
> Mike
>
> On 4/19/2013 8:48 AM, John Davidson wrote:
> >
> > Go back to the seller and request he supply the operating manual/!
> >
> > _____
> > From: rkings1956 <rkings1956@...
> <mailto:rkings1956%40yahoo.com> <mailto:rkings1956%40yahoo.com>>
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Thursday, April 18, 2013 10:21 PM
> > Subject: [TS-520_820_530_830] TS-530s Plate Current
> >
> >
> >
> >
> >
> > Hi Group,
> >

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> > should be. I know for my TS-520 is 225ma.
> >
> > Thanks
> > Rob
> > kd6fsk
> >
> > [Non-text portions of this message have been removed]
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> >
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> [Non-text portions of this message have been removed]
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>

[Non-text portions of this message have been removed]

41764. Re: TS-530s Plate Current

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-19 14:36:55 UTC
From: Terry Wagoner
Topic: 41756 Message: 41764

Andrew:

A very good next logical question. I have had many 520s on my bench with a variety of final tubes including 6146Bs. I have one here now.

I cannot give you a 100% answer because I do not know the KVA rating of the power transformer and have not evaluated the ratings of the HV rectifier diodes. I believe the HV VO8J diodes are rated at 1000PIV at 1 amp, but have not seen a data sheet.

My educated guess is that with 6146B finals in your 520, 520S or 820S you can go to 225ma with no ill effects on the HV power supply. I know plenty of 520, 520S and 820S owners who do that and have experienced no HV power supply failures.

I suppose you could monitor transformer case temperature but that would be very subjective.

In short I would have no problem running 6146Bs in my 520 and loading to 225ma. IMO proper loading and operating technique such as short key down times and reduced current for high duty cycle modes like PSK will do more to extend your final life than whether you load to 200ma or 225ma.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Andrew Page" <apage2504@...> wrote:
>
> Hi Guys,
>
>
>
> Just to add to Terry's post.
>
>
>
> We all have the best of intentions here to help everyone. It can be
> confronting sometimes to be told that you are wrong about something. We are
> all here to learn and help each other. We become better hams/people as a
> result.
>
>
>
> Thanks for the info Terry. I have been a TS-520S fanatic for over 10 years
> and never knew that! So I will watch that plate current. My TS-520s (well
> both of them) still have the original S2001A finals from the 70s with
> 100watts on all bands. So I must be doing something right.
>
>
>
> QUESTION:

>
>
>
> If we replace the finals in a TS-520S with 6146B's, is it ok to set to 225ma
> then?
>
>
>
> Again thanks Terry. Learn something new everyday.
>
>
>
> Andrew- VK2-XXL
>
>
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
> Sent: Friday, April 19, 2013 9:07 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: TS-530s Plate Current
>
>
>
>
>
>
> Plate CURRENT IS NOT THE SAME and IT IS NOT 225 ma FOR A TS-520.
>
> For GOSH SAKES we are ham operators. This is a technical hobby. Read your
> owners operator manuals and if still uncertain then come here and ask. It is
> all there in front of you. Your manuals should be dog eared.
>
> TS-520, TS,520S, TS-520SE and TS-820 Transmitters are all rated at 160 Watts
> DC Input Power. You load these to.... "ABOUT 200 ma"
>
> TS-530 and TS-830 Transmitters are rated at 180 Watts DC Input Power. You
> load these to.... " Reduce the Carrier Control setting if Ip is over 265 ma"
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> 1. Where did 225 ma come from? Ken Kempski K4EAA in his FAQ section suggests
> that 800v X 225 ma = 180 watt dc input power and it is pointless to exceed
> this level as it wont make perceptable difference on the receive end of a
> transmission and loading to this level (assuming proper loading technique)
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> about TS-530 and TS-830 rigs as they are the only two models with 180 watts
> dc input ratings. He would not recommend loading to 180 watts dc input power
> on a radio designed for 160 watts dc input power.
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> 2. Why are the early rigs rated at 160 watts dc input and later rigs at 180
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> is due to the switch from S2001A finals to 6146B finals. I Believe 6146B

> tubes have higher Plate dissipation ratings. I have never seen a S2001A Data
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> 3. Is there any difference in the HV power supply capacities? No apparent or
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> 4. Sorry about my frustration. This is suppose to be a thinking mans hobby.
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> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Thursday, April 18, 2013 7:21 PM
> > Subject: [TS-520_820_530_830] TS-530s Plate Current
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> > Â
> > Hi Group,
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41765. RE: [TS-520_820_530_830] Re: TS-530s Plate Current

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-19 14:55:01 UTC
From: Andrew Page
Topic: 41756 Message: 41765

Terry,

You pretty much confirmed what I was thinking J

Of course, it would be silly to rip out a perfectly good set of S2001A□s and replace them with 6146B□s to get a few extra watts, but this pretty much is enough to convince me.

If anyone else knows about the ratings of the VO8J diodes and the power rating of the transformer, I would love to see that. But probably not really necessary.

I am determined to get as much life as possible out of my S2001A□s.

Andrew □ VK2XXL

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
Sent: Saturday, April 20, 2013 12:37 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS-530s Plate Current

Andrew:

A very good next logical question. I have had many 520s on my bench with a variety of final tubes including 6146Bs. I have one here now.

I cannot give you a 100% answer because I do not know the KVA rating of the power transformer and have not evaluated the ratings of the HV rectifier diodes. I believe the HV VO8J diodes are rated at 1000PIV at 1 amp, but have not seen a data sheet.

My educated guess is that with 6146B finals in your 520, 520S or 820S you can go to 225ma with no ill effects on the HV power supply. I know plenty of 520, 520S and 820S owners who do that and have experienced no HV power supply failures.

I suppose you could monitor transformer case temperature but that would be very subjective.

In short I would have no problem running 6146Bs in my 520 and loading to 225ma. IMO proper loading and operating technique such as short key down times and reduced current for high duty cycle modes like PSK will do more to extend your final life than whether you load to 200ma or 225ma.

Terry K9TW

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> and never knew that! So I will watch that plate current. My TS-520s (well
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> QUESTION:
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> then?
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> Andrew- VK2-XXL
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> > Sent: Thursday, April 18, 2013 7:21 PM
> > Subject: [TS-520_820_530_830] TS-530s Plate Current
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41766. Re: TS-530s Plate Current

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-19 15:11:52 UTC
From: Terry Wagoner
Topic: 41756 Message: 41766

Andrew:

I likewise would not pull the S2001As if have good RF output. I still see them from time to time on my bench. I would however buy couple of NOS 6146Bs or NOS 6146Ws from reputable supplier as spares. I like to rotate my spares in. Subject of much debate and no point wasting the space here. Just know that the day may come you will need to replace your original finals. Not very likely you will be able to find any S2001As and I am not ready to buy Chinese made 6146s at this time based on anecdotal I have seen.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Andrew Page" <apage2504@...> wrote:
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> Terry,
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> You pretty much confirmed what I was thinking J
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> Of course, it would be silly to rip out a perfectly good set of S2001A's and
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> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
> Sent: Saturday, April 20, 2013 12:37 AM
> To: TS-520_820_530_830@yahoogroups.com

> Subject: [TS-520_820_530_830] Re: TS-530s Plate Current
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41767. RE: [TS-520_820_530_830] Re: TS-530s Plate Current

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-19 15:17:27 UTC
From: Andrew Page
Topic: 41756 Message: 41767

Terry,

Yes I have heard nasty things about the Chinese 6146B□s. I would never trust them, unless another manufacturer came along and did a good job. I actually do have a spare set of 6146B□s here, but getting a NOS set would not be a bad idea. Even a couple, so you have given me some persuasion there.

Anyway, very late down under. I□m off to bed, but will reply to any-more posts if necessary tomorrow.

Great talking to you again Terry.

Andrew VK2XXL

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
Sent: Saturday, April 20, 2013 1:12 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS-530s Plate Current

Andrew:

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<mailto:TS-520_820_530_830%40yahoogroups.com>
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> > [mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Terry Wagoner
> > Sent: Friday, April 19, 2013 9:07 PM
> > To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Subject: [TS-520_820_530_830] Re: TS-530s Plate Current
> >
> >
> >
> >
> >
> > Plate CURRENT IS NOT THE SAME and IT IS NOT 225 ma FOR A TS-520.
> >
> > For GOSH SAKES we are ham operators. This is a technical hobby. Read
your
> > owners operator manuals and if still uncertain then come here and ask.
It
> is
> > all there in front of you. Your manuals should be dog eared.
> >
> > TS-520, TS,520S, TS-520SE and TS-820 Transmitters are all rated at 160
> Watts
> > DC Input Power. You load these to.... "ABOUT 200 ma"
> >
> > TS-530 and TS-830 Transmitters are rated at 180 Watts DC Input Power.
You
> > load these to.... " Reduce the Carrier Control setting if Ip is over 265
> ma"
> >
> > 1. Where did 225 ma come from? Ken Kempski K4EAA in his FAQ section
> suggests

> > that 800v X 225 ma = 180 watt dc input power and it is pointless to
exceed
> > this level as it wont make perceptable difference on the receive end of
a
> > transmission and loading to this level (assuming proper loading
technique)
> > can extend final tube life. Without saying it Ken was obviously speaking
> > about TS-530 and TS-830 rigs as they are the only two models with 180
> watts
> > dc input ratings. He would not recommend loading to 180 watts dc input
> power
> > on a radio designed for 160 watts dc input power.
> >
> > 2. Why are the early rigs rated at 160 watts dc input and later rigs at
> 180
> > watts dc input? I Do Not Know With 100% Certainty. What I Believe is
that
> it
> > is due to the switch from S2001A finals to 6146B finals. I Believe 6146B
> > tubes have higher Plate dissipation ratings. I have never seen a S2001A
> Data
> > Sheet and do not know there plate dissipation or any of there ICAS max
> > ratings. If anyone has one please send to Gordon N6WK so he can post on
> his
> > site.
> >
> > 3. Is there any difference in the HV power supply capacities? No
apparent
> or
> > published differences that I have seen. Maybe we can ask Bob Mansker to
> hack
> > transformers out of these rigs and weigh them to see if difference in
> copper
> > and iron? Transformer weight roughly corresponds to KVA capacity.
> >
> > 4. Sorry about my frustration. This is suppose to be a thinking mans
> hobby.
> > You have to be able to read and read with comprehension. Lacking this
> > ability you are in trouble. Very easy to just ask and expect an instant
> > answer with out doing any modest amount of homework. Maybe it is a age
and
> > cultural thing? I prefer to help those who are willing to help
themselves.
>
> >
> > 5. Lets stop putting wrong information out on this forum. Easy to just
> > "Parrot" what you have heard. This is how tribal myths perpetuate. If
you
> > are going to respond do so as an "expert" or do so by qualifying your

> > response. I will try to remember to preface my remarks by telling you
what
> I
> > "know" first and then what I "believe". Can be a big difference between
> > those.
> >
> > One of the worst things you can do is tell people what you know to be
fact
> > only to find out later you were wrong. Pity the poor Flat Earth folks!
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com> , Young Kim <ykpwr45@>
> > wrote:
> > >
> > > hi,
> > > it is the same as ts-520,830,820.
> > > goof luck.
> > > de k6hm
> > >
> > >
> > > _____
> > > From: rkings1956 <rkings1956@>
> > > To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Thursday, April 18, 2013 7:21 PM
> > > Subject: [TS-520_820_530_830] TS-530s Plate Current
> > >
> > >
> > >
> > > Â
> > > Hi Group,
> > >
> > > In tuning my just purchased TS-530s I'm not sure what the Plate
Current
> > > should be. I know for my TS-520 is 225ma.
> > >
> > > Thanks
> > > Rob
> > > kd6fsk
> > >
> > >
> > >
> > >

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41768. Re: Reduced HT voltage

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-19 17:38:15 UTC
From: dave
Topic: 41712 Message: 41768

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
>
>
>
> Decreasing Anode supply voltage is not the "easiest and simplest" method to reduce output power or have a load control.
>
> Two much easier ways:
>
> 1. Use the 9vdc battery and pot to provide negative control voltage to the ALC bus line. This controls TIF Amp rf output level.
>
> 2. Add a pot to control the screen grid voltage (210A) of the 12BY7A Driver tube. Can add a fixed resistor to lower the screen grid voltage (start with approx 33k ohm) or add a pot. HeathKit used a 25k ohm pot as a Load control by varying the screen grid voltage of the 5763 Driver Tube in its DX-100. This results in having a "load control" that adjusts the level of RF output from the Driver stage to the Finals.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "dave" <bigdave2uk@> wrote:
> >
> > Hi, I was recently thinking of reducing the output from either my 820 or 530 to a lower level, not quite QRP but around 10 to 25 watt level. It occurred to me that the easiest way to do this would be one of the following methods, one , move the HT tap on the transformer down to the 400v tag or ,two, remove the doubler and fit full wave IE 400-0-400 bridge rectifier. This will have some effect on the anode impedance but the tank circuit should easily be taken care of, what do you think and has anyone tried a similar thing. Moving the HT to the 400v tag is the easiest and simplicity itself to restore to original.
> >
>
Thanks Terry,
That's certainly food for thought, it just seems crazy to have 800+ volts on a pair of finals to produce less output than could be obtained from one. Reduced Ht would be easier on the associated components in the PSU as well. So far it's just an idea so I guess i'll kick it around for a while before deciding.
Dave

41769. RF board on 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-19 18:19:38 UTC
From: LYNCHJL
Topic: 41769 Message: 41769

I just got an 820,supposed to have just low xmit.The final were smoking when I cranked it up. There is no bias control.On the x44-1150-00 bd there are two 470ohm add-ons to the foil side.One,on the schmetic is labled R56 is grded on both ends.I assumed it was shorted, but lifted one end and R56 is good. Why would you add a resistor to both ends of a grounded foil? I can't determine were it might mistakenly be used. On a better schmatic I downloaded from Douglas's site,dosn't show any such resistors.This is my first query, but probably not my last!

41770. Re: [TS-520_820_530_830] RF board on 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-19 19:55:32 UTC
From: n6wk@...
Topic: 41769 Message: 41770

I just checked the original Service Manual and all the schematics I have here.
They all show (2) R56 resistors, one is labeled R56 and 47 ohms, the other is R56 and 470 ohms LOL
And I see the 470 ohm that is grounded on both ends as well. That doesn't make sense to me either.

73,
Gordon

On 4/19/2013 11:19 AM, LYNCHJL wrote:
>
> I just got an 820,supposed to have just low xmit.The final were
> smoking when I cranked it up. There is no bias control.On the
> x44-1150-00 bd there are two 470ohm add-ons to the foil side.One,on
> the schmetic is labled R56 is grded on both ends.I assumed it was
> shorted, but lifted one end and R56 is good. Why would you add a
> resistor to both ends of a grounded foil? I can't determine were it
> might mistakenly be used. On a better schmatic I downloaded from
> Douglas's site,dosn't show any such resistors.This is my first query,
> but probably not my last!
>
>

41771. Re: [TS-520_820_530_830] RF board on 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-19 20:17:53 UTC
From: n6wk@...
Topic: 41769 Message: 41771

I noticed that if you look at the Individual Board Schematic, neither of the R56 resistors are shown in that one.
http://www.n6wk.com/kenwood/820S-RF-IF-Circuits.pdf
73,
Gordon
N6WK

On 4/19/2013 11:19 AM, LYNCHJL wrote:
>
> I just got an 820,supposed to have just low xmit.The final were
> smoking when I cranked it up. There is no bias control.On the
> x44-1150-00 bd there are two 470ohm add-ons to the foil side.One,on
> the schmetic is labled R56 is grded on both ends.I assumed it was
> shorted, but lifted one end and R56 is good. Why would you add a
> resistor to both ends of a grounded foil? I can't determine were it
> might mistakenly be used. On a better schmatic I downloaded from
> Douglas's site,dosn't show any such resistors.This is my first query,
> but probably not my last!
>
>

41772. Re: TS-530s Plate Current

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-19 20:41:09 UTC
From: Bob
Topic: 41756 Message: 41772

Thought I would let the group know that I do have quite a few of the S2001A finals with good gains... :)
Bob
****

--- In TS-520_820_530_830@yahoogroups.com, "Andrew Page" <apage2504@...> wrote:
>
> Terry,
>
>
>
> Yes I have heard nasty things about the Chinese 6146B's. I would never trust
> them, unless another manufacturer came along and did a good job. I actually
> do have a spare set of 6146B's here, but getting a NOS set would not be a
> bad idea. Even a couple, so you have given me some persuasion there.
>
>
>
> Anyway, very late down under. I'm off to bed, but will reply to any-more
> posts if necessary tomorrow.
>
>
>
> Great talking to you again Terry.
>
>
>
> Andrew VK2XXL
>
>
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
> Sent: Saturday, April 20, 2013 1:12 AM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: TS-530s Plate Current
>
>
>
>
>
> Andrew:
>
> I likewise would not pull the S2001As if have good RF output. I still see

> them from time to time on my bench. I would however buy couple of NOS 6146Bs
> or NOS 6146Ws from reputable supplier as spares. I like to rotate my spares
> in. Subject of much debate and no point wasting the space here. Just know
> that the day may come you will need to replace your original finals. Not
> very likely you will be able to find any S2001As and I am not ready to buy
> Chinese made 6146s at this time based on anecdotal I have seen.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com> , "Andrew Page"
> <apage2504@> wrote:
> >
> > Terry,
> >
> >
> >
> > You pretty much confirmed what I was thinking J
> >
> >
> >
> > Of course, it would be silly to rip out a perfectly good set of S2001A's
> and
> > replace them with 6146B's to get a few extra watts, but this pretty much
> is
> > enough to convince me.
> >
> >
> >
> > If anyone else knows about the ratings of the VO8J diodes and the power
> > rating of the transformer, I would love to see that. But probably not
> really
> > necessary.
> >
> >
> >
> > I am determined to get as much life as possible out of my S2001A's.
> >
> >
> >
> > Andrew ☐ VK2XXL
> >
> >
> >
> > From: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > [mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Terry Wagoner
> > Sent: Saturday, April 20, 2013 12:37 AM

> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Subject: [TS-520_820_530_830] Re: TS-530s Plate Current
> >
> >
> >
> >
> >
> > Andrew:
> >
> > A very good next logical question. I have had many 520s on my bench with a
> > variety of final tubes including 6146Bs. I have one here now.
> >
> > I cannot give you a 100% answer because I do not know the KVA rating of
> the
> > power transformer and have not evaluated the ratings of the HV rectifier
> > diodes. I believe the HV VO8J diodes are rated at 1000PIV at 1 amp, but
> have
> > not seen a data sheet.
> >
> > My educated guess is that with 6146B finals in your 520, 520S or 820S you
> > can go to 225ma with no ill effects on the HV power supply. I know plenty
> of
> > 520, 520S and 820S owners who do that and have experienced no HV power
> > supply failures.
> >
> > I suppose you could monitor transformer case temperature but that would be
> > very subjective.
> >
> > In short I would have no problem running 6146Bs in my 520 and loading to
> > 225ma. IMO proper loading and operating technique such as short key down
> > times and reduced current for high duty cycle modes like PSK will do more
> to
> > extend your final life than whether you load to 200ma or 225ma.
> >
> > Terry K9TW
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com> , "Andrew Page"
> > <apage2504@> wrote:
> > >
> > > Hi Guys,
> > >
> > >
> > >
> > > Just to add to Terry's post.
> > >

> > >
> > >
> > > We all have the best of intentions here to help everyone. It can be
> > > confronting sometimes to be told that you are wrong about something. We
> > are
> > > all here to learn and help each other. We become better hams/people as a
> > > result.
> > >
> > >
> > >
> > > Thanks for the info Terry. I have been a TS-520S fanatic for over 10
> years
> > > and never knew that! So I will watch that plate current. My TS-520s
> (well
> > > both of them) still have the original S2001A finals from the 70s with
> > > 100watts on all bands. So I must be doing something right.
> > >
> > >
> > >
> > > QUESTION:
> > >
> > >
> > >
> > > If we replace the finals in a TS-520S with 6146B's, is it ok to set to
> > 225ma
> > > then?
> > >
> > >
> > >
> > > Again thanks Terry. Learn something new everyday.
> > >
> > >
> > >
> > > Andrew- VK2-XXL
> > >
> > >
> > >
> > > From: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
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> > > Sent: Friday, April 19, 2013 9:07 PM
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> <mailto:TS-520_820_530_830%40yahoogroups.com>
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> > > Subject: [TS-520_820_530_830] Re: TS-530s Plate Current
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> > > 1. Where did 225 ma come from? Ken Kempski K4EAA in his FAQ section
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> > > that 800v X 225 ma = 180 watt dc input power and it is pointless to
> exceed
> > > this level as it wont make perceptable difference on the receive end of
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> > > transmission and loading to this level (assuming proper loading
> technique)
> > > can extend final tube life. Without saying it Ken was obviously speaking
> > > about TS-530 and TS-830 rigs as they are the only two models with 180
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> > > on a radio designed for 160 watts dc input power.
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> > it
> > > is due to the switch from S2001A finals to 6146B finals. I Believe 6146B
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> > >
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> > > You have to be able to read and read with comprehension. Lacking this
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> > >
> > > One of the worst things you can do is tell people what you know to be
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> > > <mailto:TS-520_820_530_830%40yahoogroups.com> , Young Kim <ykpwr45@>
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> > > > it is the same as ts-520,830,820.
> > > > goof luck.
> > > > de k6hm
> > > >
> > > >
> > > > _____

> > > > From: rkings1956 <rkings1956@>
> > > > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > Sent: Thursday, April 18, 2013 7:21 PM
> > > > Subject: [TS-520_820_530_830] TS-530s Plate Current
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> > > > Hi Group,
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> > > > In tuning my just purchased TS-530s I'm not sure what the Plate
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> > > > Thanks
> > > > Rob
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41773. Re: [TS-520_820_530_830] RF board on 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-19 20:54:56 UTC
From: Dennis Windle
Topic: 41769 Message: 41773

I see no R56 in my schematic but I do see a R55 470K that I don't see on the N6WK schematic ?

Dennis
KD8OXQ

----- Original Message -----
From: <n6wk@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Friday, April 19, 2013 4:17 PM
Subject: Re: [TS-520_820_530_830] RF board on 820

> I noticed that if you look at the Individual Board Schematic, neither of
> the R56 resistors are shown in that one.
> http://www.n6wk.com/kenwood/820S-RF-IF-Circuits.pdf
> 73,
> Gordon
> N6WK
>
>
> On 4/19/2013 11:19 AM, LYNCHJL wrote:
> >
> > I just got an 820,supposed to have just low xmit.The final were
> > smoking when I cranked it up. There is no bias control.On the
> > x44-1150-00 bd there are two 470ohm add-ons to the foil side.One,on
> > the schmetic is labled R56 is grded on both ends.I assumed it was
> > shorted, but lifted one end and R56 is good. Why would you add a
> > resistor to both ends of a grounded foil? I can't determine were it
> > might mistakenly be used. On a better schmatic I downloaded from
> > Douglas's site,dosn't show any such resistors.This is my first query,
> > but probably not my last!

41774. Re: RF board on 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-19 21:42:09 UTC
From: Terry Wagoner
Topic: 41769 Message: 41774

The 820 documentation leaves a lot to be desired and the as-built configuration comes in a variety of forms. Ordinarily when you find a resistor between two pads like R56 on the RF board it would be in lieu of a wire jumper. They make R "0" ohm resistors that can be auto loaded via a machine on a assembly line for this purpose. Not typical to use a 470 ohm resistor to jumper two ground foils as you dont want any difference in potential on the ground plane.

Are you certain that C44 and T3 are both landed on the common and continuous ground plane foil and not one of them on an isolated ground "island"?

I would think C44 would be connected to the main ground plane. It and
R28 are the decoupling network for the AGC control voltage to Gate 2 of Q3. If anything it is possible that the cold end of the primary winding of T3 is not connected to the ground plane and is grounded thru the 470 ohm to C44 ground pad? This would provide two Source resistors in series with one being bypassed for the RF signal.

This would make more sense and would be called a "partially bypassed" source resistor. You do that to provide some level of degenerative feedback to control the gain of the mosfet amplifier. It may have been an after thought when it was found the stage had to much gain and/or distortion.

The foil view that I have in my service manual appears that T3 and C44 are both landed on common ground plane and no need for a jumper resistor.

I never noticed R56 before. Thanks for asking. Hopefully one of the 820 owners knows the answer.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Dennis Windle" <denniswindle@...> wrote:
>
> I see no R56 in my schematic but I do see a R55 470K that I don't see on the
> N6WK schematic ?
>
> Dennis
> KD8OXQ
>
> ----- Original Message -----
> From: <n6wk@...>
> To: <TS-520_820_530_830@yahoogroups.com>
> Sent: Friday, April 19, 2013 4:17 PM
> Subject: Re: [TS-520_820_530_830] RF board on 820
>
>
> > I noticed that if you look at the Individual Board Schematic, neither of
> > the R56 resistors are shown in that one.
> > http://www.n6wk.com/kenwood/820S-RF-IF-Circuits.pdf

> > 73,
> > Gordon
> > N6WK
> >
> >
> > On 4/19/2013 11:19 AM, LYNCHJL wrote:
> > >
> > > I just got an 820,supposed to have just low xmit.The final were
> > > smoking when I cranked it up. There is no bias control.On the
> > > x44-1150-00 bd there are two 470ohm add-ons to the foil side.One,on
> > > the schmetic is labled R56 is grded on both ends.I assumed it was
> > > shorted, but lifted one end and R56 is good. Why would you add a
> > > resistor to both ends of a grounded foil? I can't determine were it
> > > might mistakenly be used. On a better schmatic I downloaded from
> > > Douglas's site,dosn't show any such resistors.This is my first query,
> > > but probably not my last!
>

41775. Re: RF board on 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-20 00:39:18 UTC
From: Terry Wagoner
Topic: 41769 Message: 41775

Well I could not stand it any longer.

I removed the covers from my TS-820S and yes there are two 47 ohm (not 470 ohm)resistors on the foil side of the RF board and as reported the one associated with Q3 RF Buffer Amp does bridge ground to ground. It is also a little low in value to be an un-bypassed source resistor for Q3.

I cannot see any break in the PC foil trace under magnification, but I do note a pretty large amount of solder piled up near the ground plane end of this trace. It makes me wonder if the trace is cut under this mound of solder and the solder is bridging this cut. Why it would be cut and bridged with a 47 ohm resistor I do not know unless it was used to place a 47 ohm termination on Transformer T3?

As the original poster noted it makes no sense to bridge this ground foil trace with a resistor. Wouldnt it be nice to be able to speak to a Kenwood hybrid design engineer.

If I had a spare RF board I would remove the solder and examine the trace to see if it is continuous or has at one time been split. I have a good Hakko 808 de-soldering gun that would facilitate this inspection.

I will likely remove it and toss it. The schematic does not match the as-built config and no way to tell which is correct. Even if they did match it would not make sense electronically. It will be easy to measure receiver performance with it installed vs removed.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> The 820 documentation leaves a lot to be desired and the as-built configuration comes in a variety of forms. Ordinarily when you find a resistor between two pads like R56 on the RF board it would be in lieu of a wire jumper. They make R "0" ohm resistors that can be auto loaded via a machine on a assembly line for this purpose. Not typical to use a 470 ohm resistor to jumper two ground foils as you dont want any difference in potential on the ground plane.
>
> Are you certain that C44 and T3 are both landed on the common and continuous ground plane foil and not one of them on an isolated ground "island"?
>
> I would think C44 would be connected to the main ground plane. It and
> R28 are the decoupling network for the AGC control voltage to Gate 2 of Q3. If anything it is possible that the cold end of the primary winding of T3 is not connected to the ground plane and is grounded thru the 470 ohm to C44 ground pad? This would provide two Source resistors in series with one being bypassed for the RF signal.
>
> This would make more sense and would be called a "partially bypassed" source resistor. You do that to provide some level of degenerative feedback to control the gain of the

mosfet amplifier. It may have been an after thought when it was found the stage had to much gain and/or distortion.
>
> The foil view that I have in my service manual appears that T3 and C44 are both landed on common ground plane and no need for a jumper resistor.
>
> I never noticed R56 before. Thanks for asking. Hopefully one of the 820 owners knows the answer.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "Dennis Windle" <denniswindle@> wrote:
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> > To: <TS-520_820_530_830@yahoogroups.com>
> > Sent: Friday, April 19, 2013 4:17 PM
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> > > > Douglas's site,dosn't show any such resistors.This is my first query,
> > > > but probably not my last!
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>

41776. Re: [TS-520_820_530_830] Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-20 01:27:51 UTC
From: Tyler Frugia
Topic: 41132 Message: 41776

Roger, Mike, Alan, Terry, et all,

I went and picked up the replacement NTE part (I couldn't wait until next week for the parts to arrive, and found a place semi-local that had it). After carefully following the traces (using a flashlight on the backside of the board was an amazing help!), I got the new part soldered in. So far, it looks like this was indeed the source of my problem (Q4 on the FIX-AVR board)!

Hopefully I'm not jumping the gun, but I've used the radio and let it cool down several times and it has not gone deaf a single time! So far I'm a happy camper!

Thanks again to everyone for the patience, help, and sharing of knowledge. I enjoyed this small repair (albeit, you guys did all of the work), but it makes me want to get another one and try figuring these types of things out myself.

73!

-Tyler
K7FRU

On Wed, Apr 17, 2013 at 10:37 AM, Tyler Frugia <tfrugia@gmail.com> wrote:

> Thanks, Roger. That makes sense.
>
> And Mike, thanks very much for your detailed write up, I have read it
> several times and will follow it!
>
>
> I will update this once the part arrives. Scheduled for next week, but
> hoping it gets here on Saturday :)
>
>
> 73,
>
> -Tyler
> k7fru
>
>
>
> On Tue, Apr 16, 2013 at 6:44 PM, rc143dr <rc143dr@embarqmail.com> wrote:
>
>> **
>>
>>

>> Hello Tyler,
>>
>> Yes, R23 would be correct. When I looked closely at your board picture,
>> R21 is just an empty spot. You can see that the resistor you spoke of
>> connects to D8 so it must be R23 as you said.
>>
>> Hope all goes well and that replacing Q4 solves the issue.
>>
>> 73,
>>
>> Roger (AE3RT)
>>
>> --- In TS-520_820_530_830@yahoogroups.com, Tyler Frugia <tfrugia@...>
>> wrote:
>> >
>> > Hi Roger,
>> >
>> > Good point, unfortunately (again) I overlooked the ebc/ecb and already
>> > ordered 3 of them. I will try and make it work. The one currently on the
>> > board has insulators on each leg, I suppose in a worst case scenario I
>> can
>> > do the same if I have to swap the two legs.
>> >
>> > Parts should be here next week, I will let you know how it goes!
>> >
>> > I still cannot see R21 on the schematic. I see the -6 line with the
>> > resistor and zener diode, but it's labeled R23 on my schematic. Unless
>> I'm
>> > looking at it wrong, which is a possibility :)
>> >
>> >
>> > -Tyler
>> > K7FRU
>> >
>> >
>> >
>> > On Tue, Apr 16, 2013 at 9:48 AM, rc143dr <rc143dr@...> wrote:
>> >
>> > > **
>>
>> > >
>> > >
>> > > Hello Tyler,
>> > >
>> > > It looks like the NTE part has the ebc not ecb lead pattern like the
>> > > 2SA606. You might want to make sure you can swap leads without adding
>> lead
>> > > length. (Though it is being used for a pass transistor, it has a
>> pretty
>> > > high frequency bandwidth.) Couldn't find info on the L at the end of

>> the
>> > > part number. You may be able to find an actual 2SA606, if you have
>> to. Or
>> > > you can go the extra board route if that is simpler.
>> > >
>> > > On the TS-520SE the -6v is generated by a simple resistor/zener shown
>> on
>> > > the schematic lower left. That is labeled R21 on the schematic for the
>> > > 520SE. It is so basic it is easily overlooked on the schematic.
>> > >
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>> > > Roger (AE3RT)
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>> > > --- In TS-520_820_530_830@yahoogroups.com, Tyler Frugia <tfrugia@>
>> > > wrote:
>> > > >
>> > > > Excellent, thanks Roger. I don't see R21 on the schematic, but
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>> > > what it shows on the board.
>> > > >
>> > > > I will replace Q4. NTE129 appears to be the replacement. Does the
>> (l) at
>> > > the end of 2SA606 (l) designate a different model, or will the
>> standard
>> > > NTE129 work ok? I will pick up several.
>> > > >
>> > > > 73,
>> > > >
>> > > > -Tyler
>> > > > K7FRU
>> > > >
>> > > > Sent from my iPhone
>> > > >
>> > > > On Apr 15, 2013, at 7:40 PM, "rc143dr" <rc143dr@> wrote:
>> > > >
>> > > > >
>> > > > > Hello Tyler,
>> > > > >
>> > > > > Also, if I am looking at the correct resistor (R21) appears to be
>> part
>> > > of the -6v circuit not the 9v circuit. However, the board you have is
>> very
>> > > different from the board in my 520s...
>> > > > >
>> > > > > Looking at the 520se service manual shows that this -6 is
>> generated
>> > > off of the -C dc ("100"v DC) off the rectifier board in the 520se.
>> There is

>> > > quite a voltage drop and just a basic power calculation would seem to
>> > > indicate that this resistor would normally run pretty hot! This would
>> seem
>> > > to be normal.
>> > > > >
>> > > > > 73,
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>> > > > > Roger (AE3RT)
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>> >
>> > > wrote:
>> > > > > >
>> > > > > > Hi Guys,
>> > > > > >
>> > > > > > Thanks for the email Terry. You may be right. I'm not in a huge
>> rush
>> > > to
>> > > > > > get the radio fixed, and I'd definitely rather spend $4-5 on
>> parts
>> > > than
>> > > > > > $50+ on a new board if possible. If that's what is needed I'm
>> happy
>> > > to do
>> > > > > > it though (I understand my lack of experience with electronics
>> is
>> > > another
>> > > > > > factor here). I am enjoying the experience though, and learning
>> a lot
>> > > > > > looking through the schematics and with the help of Alan,
>> Roger, and
>> > > > > > others. I appreciate all of the help, and if a new board is the
>> best
>> > > > > > solution, that sounds good to me (this IS my first rodeo with
>> this
>> > > type of
>> > > > > > repair :)).
>> > > > > >
>> > > > > > I took measurements on the 3 legs of Q4 and Q5. You were right,
>> > > Roger, I
>> > > > > > was wrong on my CBE.
>> > > > > >
>> > > > > > Q5 reads the following, in BCE:
>> > > > > >
>> > > > > > Good: 5.94, 13.5, 5.33
>> > > > > > Bad : 4.64, 4.6, 3.96
>> > > > > >
>> > > > > > Since Q4 is circular, I wasn't sure how to read it. I will refer
>> > > back to
>> > > > > > the schematics to determine which is BCE, and will update this,

>> but
>> > > the
>> > > > > > readings were:
>> > > > > >
>> > > > > > Good: 9.00, 14.34, 13.65
>> > > > > > Bad : 6.18, 14.75, 3.96
>> > > > > >
>> > > > > > One more thing. Q4 DOES get hot while the radio is deaf. Q5 gets
>> > > warm,
>> > > > > > but not too hot. However, the large blue resistor on the top
>> right
>> > > of the
>> > > > > > board gets too hot to touch (here is a picture of it:
>> > > > > > http://screencast.com/t/CiEUSXSh4a2). I blew on that resistor
>> while
>> > > it was
>> > > > > > 'deaf' and it came back to working pretty quick, although that
>> may
>> > > have
>> > > > > > just been a coincidence.
>> > > > > >
>> > > > > > If this helps please let me know. If a new board is the best
>> > > solution,
>> > > > > > please let me know as well, but I'm willing to do/try whatever
>> is
>> > > best!
>> > > > > >
>> > > > > >
>> > > > > > 73,
>> > > > > >
>> > > > > > -Tyler
>> > > > > > k7fru
>> > > > > >
>> > > > > >
>> > > > > >
>> > > > > >
>> > > > > >
>> > > > > >
>> > > > > >
>> > > > > >
>> > > > > > On Mon, Apr 15, 2013 at 1:08 PM, Terry Wagoner <wagstw46@>
>> wrote:
>> > > > > >
>> > > > > > > **
>> > > > > >
>> > > > > > A suggested approach:
>> > > > > >
>> > > > > > If you want to get your rig back on the air buy a replacement
>> AVR

>> > > board
>> > > > > > > > from Bob Mansker. Easy to dummy load test the 9vdc regulated
>> and
>> > > 3.3 RF-1
>> > > > > > > > on your bench before you install the replacement board.
>> > > > > > > >
>> > > > > > > > Then you can spend your free time troubleshooting the old
>> board
>> > > out of the
>> > > > > > > > rig where you will have ready access to get CBE readings from
>> the
>> > > foil side
>> > > > > > > > of the board. You already know someone before you has worked
>> on
>> > > the board
>> > > > > > > > and you replaced the reference zener based on someones good
>> > > intentions.
>> > > > > > > > There are couple of folks here who appear to understand
>> transistor
>> > > testing
>> > > > > > > > and linear regulators. Make it easy on yourself by gaining
>> ready
>> > > access to
>> > > > > > > > foil side of board and learn in the process.
>> > > > > > > >
>> > > > > > > > This is a pretty old and simple series pass regulator. Once
>> you
>> > > can easily
>> > > > > > > > access the transistor leads you can take CBE readings and can
>> test
>> > > > > > > > transistors by doing forward bias turn on and turn off
>> testing.
>> > > > > > > >
>> > > > > > > > I can help you with dummy load sizing for bench testing.
>> > > > > > > >
>> > > > > > > > Ordinarily I would not recommend replacing active devices that
>> > > have not
>> > > > > > > > failed but Q4 pass transistor runs pretty hot in this
>> regulator.
>> > > If you
>> > > > > > > > take board out you may want to consider replacing it. I think
>> > > there are
>> > > > > > > > couple of fellows on here who have supply of original devices.
>> > > > > > > >
>> > > > > > > > Just a suggestion to get you back on air quickly. If in no
>> rush to
>> > > get rig
>> > > > > > > > back on the air proceed as you are. Just be very careful not
>> to
>> > > drop any

>> > > > > > > solder or wire clippings into rig when repairing board in
>> place.
>> > > > > > >
>> > > > > > > I will let the fellows helping you proceed with how to
>> > > troubleshoot this
>> > > > > > > circuit.
>> > > > > > >
>> > > > > > > Terry K9TW
>> > > > > > >
>> > > > > > >
>> > > > > > >
>> > > > > >
>> > > > > >
>> > > > > > [Non-text portions of this message have been removed]
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[Non-text portions of this message have been removed]

41777. Re: [TS-520_820_530_830] Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-20 01:44:33 UTC
From: Mike
Topic: 41132 Message: 41777

Congratulations Tyler on affecting the repair.

73
Mike
W5RKL

On 4/19/2013 8:27 PM, Tyler Frugia wrote:
> Roger, Mike, Alan, Terry, et all,
>
> I went and picked up the replacement NTE part (I couldn't wait until next
> week for the parts to arrive, and found a place semi-local that had it).
> After carefully following the traces (using a flashlight on the backside
> of the board was an amazing help!), I got the new part soldered in. So
> far, it looks like this was indeed the source of my problem (Q4 on the
> FIX-AVR board)!
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> Hopefully I'm not jumping the gun, but I've used the radio and let it
> cool down several times and it has not gone deaf a single time! So far I'm
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> Thanks again to everyone for the patience, help, and sharing of
> knowledge. I enjoyed this small repair (albeit, you guys did all of the
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> -Tyler
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>>> Hello Tyler,
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41778. Re: [TS-520_820_530_830] Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-20 02:16:00 UTC
From: Alan Riley
Topic: 41132 Message: 41778

That's great news, Tyler! Congratulations!

73,
Alan, KD5R

-----Original Message-----
From: Tyler Frugia
Sent: Friday, April 19, 2013 8:27 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: ts520se sidetone question

Roger, Mike, Alan, Terry, et all,

I went and picked up the replacement NTE part (I couldn't wait until next week for the parts to arrive, and found a place semi-local that had it). After carefully following the traces (using a flashlight on the backside of the board was an amazing help!), I got the new part soldered in. So far, it looks like this was indeed the source of my problem (Q4 on the FIX-AVR board)!

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Thanks again to everyone for the patience, help, and sharing of knowledge. I enjoyed this small repair (albeit, you guys did all of the work), but it makes me want to get another one and try figuring these types of things out myself.

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Yahoo! Groups Links

41779. Need (X44-1360-00) RF board with band-switch for TS-830S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-20 02:34:29 UTC
From: Bob - K2KI
Topic: 41779 Message: 41779

Hi all,

I recently acquired a TS-830S which is pretty ok cosmetically. It seems to have had the HV caps and screen resistors changed. The only problem is that the RF board with band-switch is MIA. Does anyone have one they would be willing to sell?

Please drop me a note if you can help...
73...
Bob de k2ki

41780. Re: [TS-520_820_530_830] Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-20 02:52:55 UTC
From: Joseph Stiles
Topic: 41132 Message: 41780

nice job Tyler

73 Joe
WB7UQU

From: Tyler Frugia <tfrugia@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Friday, April 19, 2013 6:27 PM
Subject: Re: [TS-520_820_530_830] Re: ts520se sidetone question

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>> > > > > > > circuit.
>> > > > > > >
>> > > > > > > Terry K9TW
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Yahoo! Groups Links

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41781. Re: ts520se sidetone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-20 02:59:22 UTC
From: rc143dr
Topic: 41132 Message: 41781

Good job, Tyler.

Glad you have your radio working again!

73,

Roger (AE3RT)

--- In TS-520_820_530_830@yahoogroups.com, Tyler Frugia <tfrugia@...> wrote:
>
> Roger, Mike, Alan, Terry, et all,
>
> I went and picked up the replacement NTE part (I couldn't wait until next
> week for the parts to arrive, and found a place semi-local that had it).
> After carefully following the traces (using a flashlight on the backside
> of the board was an amazing help!), I got the new part soldered in. So
> far, it looks like this was indeed the source of my problem (Q4 on the
> FIX-AVR board)!
>
> Hopefully I'm not jumping the gun, but I've used the radio and let it
> cool down several times and it has not gone deaf a single time! So far I'm
> a happy camper!
>
> Thanks again to everyone for the patience, help, and sharing of
> knowledge. I enjoyed this small repair (albeit, you guys did all of the
> work), but it makes me want to get another one and try figuring these types
> of things out myself.
>
>
>
> 73!
>
> -Tyler
> K7FRU
>
>
>
> On Wed, Apr 17, 2013 at 10:37 AM, Tyler Frugia <tfrugia@...> wrote:
>
> > Thanks, Roger. That makes sense.
> >
> > And Mike, thanks very much for your detailed write up, I have read it
> > several times and will follow it!
> >
> >
> > I will update this once the part arrives. Scheduled for next week, but

> > hoping it gets here on Saturday :)
> >
> >
> > 73,
> >
> > -Tyler
> > k7fru
> >
> >
> >
> > On Tue, Apr 16, 2013 at 6:44 PM, rc143dr <rc143dr@...> wrote:
> >
> >> **
> >>
> >>
> >> Hello Tyler,
> >>
> >> Yes, R23 would be correct. When I looked closely at your board picture,
> >> R21 is just an empty spot. You can see that the resistor you spoke of
> >> connects to D8 so it must be R23 as you said.
> >>
> >> Hope all goes well and that replacing Q4 solves the issue.
> >>
> >> 73,
> >>
> >> Roger (AE3RT)
> >>
> >> --- In TS-520_820_530_830@yahoogroups.com, Tyler Frugia <tfrugia@>
> >> wrote:
> >> >
> >> > Hi Roger,
> >> >
> >> > Good point, unfortunately (again) I overlooked the ebc/ecb and already
> >> > ordered 3 of them. I will try and make it work. The one currently on the
> >> > board has insulators on each leg, I suppose in a worst case scenario I
> >> can
> >> > do the same if I have to swap the two legs.
> >> >
> >> > Parts should be here next week, I will let you know how it goes!
> >> >
> >> > I still cannot see R21 on the schematic. I see the -6 line with the
> >> > resistor and zener diode, but it's labeled R23 on my schematic. Unless
> >> I'm
> >> > looking at it wrong, which is a possibility :)
> >> >
> >> >
> >> > -Tyler
> >> > K7FRU
> >> >
> >> >

> >> >
> >> > On Tue, Apr 16, 2013 at 9:48 AM, rc143dr <rc143dr@> wrote:
> >> >
> >> > > **
> >>
> >> > >
> >> > >
> >> > > Hello Tyler,
> >> > >
> >> > > It looks like the NTE part has the ebc not ecb lead pattern like the
> >> > > 2SA606. You might want to make sure you can swap leads without adding
> >> lead
> >> > > length. (Though it is being used for a pass transistor, it has a
> >> pretty
> >> > > high frequency bandwidth.) Couldn't find info on the L at the end of
> >> the
> >> > > part number. You may be able to find an actual 2SA606, if you have
> >> to. Or
> >> > > you can go the extra board route if that is simpler.
> >> > >
> >> > > On the TS-520SE the -6v is generated by a simple resistor/zener shown
> >> on
> >> > > the schematic lower left. That is labeled R21 on the schematic for the
> >> > > 520SE. It is so basic it is easily overlooked on the schematic.
> >> > >
> >> > >
> >> > > 73,
> >> > >
> >> > > Roger (AE3RT)
> >> > >
> >> > > --- In TS-520_820_530_830@yahoogroups.com, Tyler Frugia <tfrugia@>
> >> > > wrote:
> >> > > >
> >> > > > Excellent, thanks Roger. I don't see R21 on the schematic, but
> >> that's
> >> > > what it shows on the board.
> >> > > >
> >> > > > I will replace Q4. NTE129 appears to be the replacement. Does the
> >> (l) at
> >> > > the end of 2SA606 (l) designate a different model, or will the
> >> standard
> >> > > NTE129 work ok? I will pick up several.
> >> > > >
> >> > > > 73,
> >> > > >
> >> > > > -Tyler
> >> > > > K7FRU
> >> > > >
> >> > > > Sent from my iPhone
> >> > > >

> >> > > > On Apr 15, 2013, at 7:40 PM, "rc143dr" <rc143dr@> wrote:
> >> > > >
> >> > > > >
> >> > > > > Hello Tyler,
> >> > > > >
> >> > > > > Also, if I am looking at the correct resistor (R21) appears to be
> >> part
> >> > > of the -6v circuit not the 9v circuit. However, the board you have is
> >> very
> >> > > different from the board in my 520s...
> >> > > > >
> >> > > > > Looking at the 520se service manual shows that this -6 is
> >> generated
> >> > > off of the -C dc ("100"v DC) off the rectifier board in the 520se.
> >> There is
> >> > > quite a voltage drop and just a basic power calculation would seem to
> >> > > indicate that this resistor would normally run pretty hot! This would
> >> seem
> >> > > to be normal.
> >> > > > >
> >> > > > > 73,
> >> > > > >
> >> > > > > Roger (AE3RT)
> >> > > > >
> >> > > > > --- In TS-520_820_530_830@yahoogroups.com, Tyler Frugia <tfrugia@
> >> >
> >> > > wrote:
> >> > > > > >
> >> > > > > > Hi Guys,
> >> > > > > >
> >> > > > > > Thanks for the email Terry. You may be right. I'm not in a huge
> >> rush
> >> > > to
> >> > > > > > get the radio fixed, and I'd definitely rather spend $4-5 on
> >> parts
> >> > > than
> >> > > > > > $50+ on a new board if possible. If that's what is needed I'm
> >> happy
> >> > > to do
> >> > > > > > it though (I understand my lack of experience with electronics
> >> is
> >> > > another
> >> > > > > > factor here). I am enjoying the experience though, and learning
> >> a lot
> >> > > > > > looking through the schematics and with the help of Alan,
> >> Roger, and
> >> > > > > > others. I appreciate all of the help, and if a new board is the
> >> best
> >> > > > > > solution, that sounds good to me (this IS my first rodeo with
> >> this

> >> > > type of
> >> > > > > > repair :)).
> >> > > > > > >
> >> > > > > > > I took measurements on the 3 legs of Q4 and Q5. You were right,
> >> > > Roger, I
> >> > > > > > > was wrong on my CBE.
> >> > > > > > >
> >> > > > > > > Q5 reads the following, in BCE:
> >> > > > > > >
> >> > > > > > > Good: 5.94, 13.5, 5.33
> >> > > > > > > Bad : 4.64, 4.6, 3.96
> >> > > > > > >
> >> > > > > > > Since Q4 is circular, I wasn't sure how to read it. I will refer
> >> > > back to
> >> > > > > > > the schematics to determine which is BCE, and will update this,
> >> but
> >> > > the
> >> > > > > > > readings were:
> >> > > > > > >
> >> > > > > > > Good: 9.00, 14.34, 13.65
> >> > > > > > > Bad : 6.18, 14.75, 3.96
> >> > > > > > >
> >> > > > > > > One more thing. Q4 DOES get hot while the radio is deaf. Q5 gets
> >> > > warm,
> >> > > > > > > but not too hot. However, the large blue resistor on the top
> >> right
> >> > > of the
> >> > > > > > > board gets too hot to touch (here is a picture of it:
> >> > > > > > > http://screencast.com/t/CiEUSXSh4a2). I blew on that resistor
> >> while
> >> > > it was
> >> > > > > > > 'deaf' and it came back to working pretty quick, although that
> >> may
> >> > > have
> >> > > > > > > just been a coincidence.
> >> > > > > > >
> >> > > > > > > If this helps please let me know. If a new board is the best
> >> > > solution,
> >> > > > > > > please let me know as well, but I'm willing to do/try whatever
> >> is
> >> > > best!
> >> > > > > > >
> >> > > > > > >
> >> > > > > > > 73,
> >> > > > > > >
> >> > > > > > > -Tyler
> >> > > > > > > k7fru
> >> > > > > > >
> >> > > > > > >
> >> > > > > > >

> >> > > > > >
> >> > > > > >
> >> > > > > >
> >> > > > > >
> >> > > > > >
> >> > > > > > On Mon, Apr 15, 2013 at 1:08 PM, Terry Wagoner <wagstw46@>
> >> wrote:
> >> > > > > >
> >> > > > > > > **
> >> > > > > > >
> >> > > > > > >
> >> > > > > > > A suggested approach:
> >> > > > > > >
> >> > > > > > > If you want to get your rig back on the air buy a replacement
> >> AVR
> >> > > board
> >> > > > > > > from Bob Mansker. Easy to dummy load test the 9vdc regulated
> >> and
> >> > > 3.3 RF-1
> >> > > > > > > on your bench before you install the replacement board.
> >> > > > > > >
> >> > > > > > > Then you can spend your free time troubleshooting the old
> >> board
> >> > > out of the
> >> > > > > > > rig where you will have ready access to get CBE readings from
> >> the
> >> > > foil side
> >> > > > > > > of the board. You already know someone before you has worked
> >> on
> >> > > the board
> >> > > > > > > and you replaced the reference zener based on someones good
> >> > > intentions.
> >> > > > > > > There are couple of folks here who appear to understand
> >> transistor
> >> > > testing
> >> > > > > > > and linear regulators. Make it easy on yourself by gaining
> >> ready
> >> > > access to
> >> > > > > > > foil side of board and learn in the process.
> >> > > > > > >
> >> > > > > > > This is a pretty old and simple series pass regulator. Once
> >> you
> >> > > can easily
> >> > > > > > > access the transistor leads you can take CBE readings and can
> >> test
> >> > > transistors by doing forward bias turn on and turn off
> >> testing.
> >> > > > > > >
> >> > > > > > > I can help you with dummy load sizing for bench testing.
> >> > > > > > >

> >> > > > > > > Ordinarily I would not recommend replacing active devices that
> >> > > have not
> >> > > > > > > failed but Q4 pass transistor runs pretty hot in this
> >> regulator.
> >> > > If you
> >> > > > > > > take board out you may want to consider replacing it. I think
> >> > > there are
> >> > > > > > > couple of fellows on here who have supply of original devices.
> >> > > > > > >
> >> > > > > > > Just a suggestion to get you back on air quickly. If in no
> >> rush to
> >> > > get rig
> >> > > > > > > back on the air proceed as you are. Just be very careful not
> >> to
> >> > > drop any
> >> > > > > > > solder or wire clippings into rig when repairing board in
> >> place.
> >> > > > > > >
> >> > > > > > > I will let the fellows helping you proceed with how to
> >> > > troubleshoot this
> >> > > > > > > circuit.
> >> > > > > > >
> >> > > > > > > Terry K9TW
> >> > > > > > >
> >> > > > > > >
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41782. The reason we are in this group

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-20 07:33:06 UTC
From: Avguy
Topic: 41782 Message: 41782

Just a reminder, not everyone has as much expertise in some areas as some folks. Some things are not obvious to everyone. The reason we joined this group is to learn and share. When I taught middle school kids, I always encouraged them to ask questions. There are no stupid questions except the ones that didn't get asked. New members need encouragement and direction to find all the resources that are available here, not criticism! Just my 2 cents worth.

Ken
AE7PX

41783. TS 830s no output

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-20 14:55:14 UTC
From: Gary Yancey
Topic: 41783 Message: 41783

During tune up I am able to dip the plate and load it to 225ma when I switch to rf to adjust to max power out the radio meter pegs and there is no output indicated on the wattmeter. I loaded up into a dummy load and I replaced the jumper to be sure that was not an issue. I also loaded into the antenna all with the same results. I was told this may be the antenna relay. I found a relay on the bottom side next to the finals but not sure if this is the correct one. I thought there was a switching relay and a seperate antenna relay. The schematics are not very specific regarding the antenna out. Just wanted to see if anyone else has had this problem. A point of interest, the radio tuned fine a couple of weeks agao.

Gary

41784. Re: The reason we are in this group

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-20 16:36:42 UTC
From: Terry Wagoner
Topic: 41782 Message: 41784

Ken: That old adage is baloney. There are plenty of "Stupid" questions.

1. When you ask without making any effort it is a Stupid question.
2. When you ask without cracking a book it is a Stupid question.
3. When you ask and just want the answer and dont care about the basis, derivation, and/or the why behind the answer it is a Stupid question.

Teachers and parents face all of the above daily.

I raised 5 children and it was not acceptable to ask what the answer was on the homework questions and admit you had not read the chapter. Books were not left in school lockers at my home. They thank me today.

I was not criticizing the question and hopefully no one is scarred for life. I was criticizing not doing your homework. Not reading the operating manual tuning/loading instructions, not reading the service manual circuit descriptions, not studying the block diagrams and schematics, not searching the forum archives. If you own a hybrid and expect to operate and MAINTAIN it then getting your hands on all the available reference documents and devouring them should have been your first step. All readily available and free. Was no forum when I started and no Kenwood Elmers. Thank god for ARRL Handbook.

I was also criticizing Parroting answers and shooting from the hip without thinking.

Our Education system today must not have very high expectations for our kids. I guess it is just too damn hard or teachers are too busy teaching the tests and not fundamental skills like reading, writing, public speaking, computer literacy, diagnostic/analytical skills, and critical thinking. I am afraid I would be hurting little Jimmies feelings just about daily.

Here is how to ask a question:

My operating manual for my TS-520 says to load to about 200ma. I notice on this forum people advise to load to 225ma. Why is it OK to exceed what my manual states? Also, what is the basis for either one of these two limits? What happens if I exceed these limits? (or something similar)

For the most part members here are adults and should be motivated to learn for very different reasons than kids and should have much better learning habits. I acknowledge that not everyone learns the same way. Tell-Show-Practice-Feedback is a nice model for knowledge and skill items. Unfortunately this forum doesnt support the complete model.

I meant no personal attack on anyone. In fact I looked at the QRZ bio page of the individual that responded that all had same plate current and found that he had made his own "luck" in life and can be proud of his accomplishments. I do not know him but admire him. I think he just pulled the trigger too quick or perhaps he actually thought that and had never researched it.

This is why so important to tell what you know and not what you think, feel, or believe. Can be hard for the learner to sort the facts from the BS.

Since I am a curmudgeon I apologize for this lament. The dumbing down of America is driving me nuts. This is no place to rant about it.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Avguy" <ae7px@...> wrote:
>
> Just a reminder, not everyone has as much expertise in some areas as some folks. Some things are not obvious to everyone. The reason we joined this group is to learn and share. When I taught middle school kids, I always encouraged them to ask questions. There are no stupid questions except the ones that didn't get asked. New members need encouragement and direction to find all the resources that are available here, not criticism! Just my 2 cents worth.
>
> Ken
> AE7PX
>

41785. Re: The reason we are in this group

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-20 16:47:44 UTC
From: n3kvl
Topic: 41782 Message: 41785

Hello All,

I'm not bothering to read the entire thread here, :-) but I sense that its just a very common phenomena on message boards. Someone always is "flamed" for being a little less diligent with their own research. I'm guilty. Also what seems common is banging the heads of folks who don't read the manual.

Thankfully, these dust-ups only happen on message boards and not on the air, right? (that's a joke).

I appreciate the list, and those who moderate it.

Thanks,
Archie

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Ken: That old adage is baloney. There are plenty of "Stupid" questions.
>
> 1. When you ask without making any effort it is a Stupid question.
> 2. When you ask without cracking a book it is a Stupid question.
> 3. When you ask and just want the answer and dont care about the basis, derivation, and/or the why behind the answer it is a Stupid question.
>
> Teachers and parents face all of the above daily.
>
> I raised 5 children and it was not acceptable to ask what the answer was on the homework questions and admit you had not read the chapter. Books were not left in school lockers at my home. They thank me today.
>
> I was not criticizing the question and hopefully no one is scarred for life. I was criticizing not doing your homework. Not reading the operating manual tuning/loading instructions, not reading the service manual circuit descriptions, not studying the block diagrams and schematics, not searching the forum archives. If you own a hybrid and expect to operate and MAINTAIN it then getting your hands on all the available reference documents and devouring them should have been your first step. All readily available and free. Was no forum when I started and no Kenwood Elmers. Thank god for ARRL Handbook.
>
> I was also criticizing Parroting answers and shooting from the hip without thinking.
>
> Our Education system today must not have very high expectations for our kids. I guess it is just too damn hard or teachers are too busy teaching the tests and not fundamental skills like reading, writing, public speaking, computer literacy, diagnostic/analytical skills, and critical thinking. I am afraid I would be hurting little Jimmies feelings just about daily.
>

> Here is how to ask a question:
>
> My operating manual for my TS-520 says to load to about 200ma. I notice on this forum people advise to load to 225ma. Why is it OK to exceed what my manual states? Also, what is the basis for either one of these two limits? What happens if I exceed these limits? (or something similar)
>
> For the most part members here are adults and should be motivated to learn for very different reasons than kids and should have much better learning habits. I acknowledge that not everyone learns the same way. Tell-Show-Practice-Feedback is a nice model for knowledge and skill items. Unfortunately this forum doesnt support the complete model.
>
> I meant no personal attack on anyone. In fact I looked at the QRZ bio page of the individual that responded that all had same plate current and found that he had made his own "luck" in life and can be proud of his accomplishments. I do not know him but admire him. I think he just pulled the trigger too quick or perhaps he actually thought that and had never researched it.
>
> This is why so important to tell what you know and not what you think, feel, or believe. Can be hard for the learner to sort the facts from the BS.
>
> Since I am a curmudgeon I apologize for this lament. The dumbing down of America is driving me nuts. This is no place to rant about it.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "Avguy" <ae7px@> wrote:
> >
> > Just a reminder, not everyone has as much expertise in some areas as some folks. Some things are not obvious to everyone. The reason we joined this group is to learn and share. When I taught middle school kids, I always encouraged them to ask questions. There are no stupid questions except the ones that didn't get asked. New members need encouragement and direction to find all the resources that are available here, not criticism! Just my 2 cents worth.
> >
> > Ken
> > AE7PX
> >
>

41786. RE: [TS-520_820_530_830] Re: The reason we are in this group

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-20 16:54:23 UTC
From: Andrew Page
Topic: 41782 Message: 41786

I don't feel as though anyone here has done anything wrong.

Terry was just very concerned and wanted to help. I could see that.

I think we all can get a little grumpy every now and then over certain
things but as long as no personal threats or insults are made, I'm all cool.

If I talk about something and it's wrong, I would hope that Terry or someone
else would pull me up right away!

Love this group.

Andrew

VK2XXL

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of n3kvl
Sent: Sunday, April 21, 2013 2:48 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: The reason we are in this group

Hello All,

I'm not bothering to read the entire thread here, :-) but I sense that its
just a very common phenomena on message boards. Someone always is "flamed"
for being a little less diligent with their own research. I'm guilty. Also
what seems common is banging the heads of folks who don't read the manual.

Thankfully, these dust-ups only happen on message boards and not on the air,
right? (that's a joke).

I appreciate the list, and those who moderate it.

Thanks,
Archie

--- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> , "Terry Wagoner"
<wagstw46@...> wrote:
>
> Ken: That old adage is baloney. There are plenty of "Stupid" questions.
>
> 1. When you ask without making any effort it is a Stupid question.
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> Here is how to ask a question:
>
> My operating manual for my TS-520 says to load to about 200ma. I notice on this forum people advise to load to 225ma. Why is it OK to exceed what my manual states? Also, what is the basis for either one of these two limits? What happens if I exceed these limits? (or something similar)
>
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>
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>
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America is driving me nuts. This is no place to rant about it.
>
> Terry K9TW
>
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<mailto:TS-520_820_530_830%40yahoogroups.com> , "Avguy" <ae7px@> wrote:
> >
> > Just a reminder, not everyone has as much expertise in some areas as
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find all the resources that are available here, not criticism! Just my 2
cents worth.
> >
> > Ken
> > AE7PX
> >
>

[Non-text portions of this message have been removed]

41787. Re: [TS-520_820_530_830] Re: The reason we are in this group

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-20 17:05:37 UTC
From: Mike
Topic: 41782 Message: 41787

I agree 100% with what Terry said!!!! No one will learn a darn thing if
they rely solely on someone else giving them all the answers!

73Mike

On 4/20/2013 11:36 AM, Terry Wagoner wrote:
>
> Ken: That old adage is baloney. There are plenty of "Stupid" questions.
>
> 1. When you ask without making any effort it is a Stupid question.
> 2. When you ask without cracking a book it is a Stupid question.
> 3. When you ask and just want the answer and dont care about the
> basis, derivation, and/or the why behind the answer it is a Stupid
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> I was not criticizing the question and hopefully no one is scarred for
> life. I was criticizing not doing your homework. Not reading the
> operating manual tuning/loading instructions, not reading the service
> manual circuit descriptions, not studying the block diagrams and
> schematics, not searching the forum archives. If you own a hybrid and
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> feelings just about daily.
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> Since I am a curmudgeon I apologize for this lament. The dumbing down
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> Terry K9TW
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41788. Re: [TS-520_820_530_830] Re: The reason we are in this group

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-20 17:34:16 UTC
From: John Donnelly
Topic: 41782 Message: 41788

I think there's a happy medium between asking for an answer without doing any research or testing/inspection and expecting
everyone to re-invent the wheel. I've got many years in the home entertainment repair business and it was very common for
the various repair shops to call one another and ask for some direction when they had expertise on one brand over another.
We specialized in RCA and Zenith while other shops sold and serviced Magnavox, Sylvania or other brands. It's the same
with radio equipment. Each brand has it's idiosyncrasies and shortcuts for troubleshooting. I don't think it's productive to rant
on anyone. There are better ways to get a point across. At 70 years old, I have a major problem reading the crappy Kenwood
schematics in the available downloadable manuals and our brains don't work as well as they used to so lighten up.

My two cents worth.

Jack Donnelly   KV4JX
Ball Ground Video Productions
308 Calusa Place

Ball Ground, GA 30107
Phone 678-592-9974www.ballgroundvideo.com

From: Mike <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, April 20, 2013 1:05 PM
Subject: Re: [TS-520_820_530_830] Re: The reason we are in this group

I agree 100% with what Terry said!!!! No one will learn a darn thing if
they rely solely on someone else giving them all the answers!

73Mike

On 4/20/2013 11:36 AM, Terry Wagoner wrote:
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[Non-text portions of this message have been removed]

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41789. Re: [TS-520_820_530_830] Re: The reason we are in this group

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-20 17:49:43 UTC
From: n6wk@...
Topic: 41782 Message: 41789

I also agree. We need to know the WHY and How as well as the answer.
Otherwise, nothing or very little learned!

BTW, Welcome back Terry

73,
Gordon

On 4/20/2013 10:05 AM, Mike wrote:
>
> I agree 100% with what Terry said!!!! No one will learn a darn thing if
> they rely solely on someone else giving them all the answers!
>
> 73Mike
>

41790. Kenwood R-599A

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-20 17:57:35 UTC
From: k7mks@...
Topic: 41790 Message: 41790

Would appreciate your thoughts on a fair price to ask for an excellent R-599A Kenwood receiver that is excess to my needs.

Joe k7mks

[Non-text portions of this message have been removed]

41791. Re: [TS-520_820_530_830] Re: The reason we are in this group

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-21 01:07:05 UTC
From: Jeff Blaine
Topic: 41782 Message: 41791

Excellent, Terry.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: Mike
Sent: Saturday, April 20, 2013 12:05 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: The reason we are in this group

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> manual circuit descriptions, not studying the block diagrams and
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[Non-text portions of this message have been removed]

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41792. Re: [TS-520_820_530_830] Kenwood R-599A

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-21 02:45:29 UTC
From: Mike
Topic: 41790 Message: 41792

Joe,

Are the 6 and 2 meter converters included and installed? That makes a difference in the price for the receiver.

I bought and still have aKenwood R599A receiver with both 6 and 2 meter converters installed for $185. The only problem it has is it "warbles" when tapping lightly on the desk and/or operating desk it sits on. I haven't gotten around to fixing the warble problem but I will this summer. It's a great receiver, excellent noise limiter, and it's very sensitiveon all bands.

73
Mike
W5RKL

On 4/20/2013 12:57 PM, k7mks@... wrote:
>
>
>
> Would appreciate your thoughts on a fair price to ask for an excellent
> R-599A Kenwood receiver that is excess to my needs.
>
> Joe k7mks
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

41793. Hello Everyone TS-820S band switch knob wanted.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-21 03:58:06 UTC
From: groups
Topic: 41793 Message: 41793

Glad to be here with you all. Today at the Belton Texas ham radio fest I picked up a very clean 820S. I do need a band switch knob, so if anyone has one laying around and would like to sell it please let me know.

Frank N6AQ

--
Cheapest Ham Gear Auction Fee's on the Internet!

http://hambidz.com

41794. Re: [TS-520_820_530_830] Kenwood R-599A

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-21 04:30:17 UTC
From: k7mks@...
Topic: 41790 Message: 41794

Mike: This one also had a warble when table tapping and tuning. Remove the top of the VFO and then unscrew and lift up the printed circuit board. This will allow you to peek in and see the front variable cap bearings and also the area at the rear with the shaft grounding connection. A diabetes syringe with a drop of two of DeOxite cleaned the grounding connection and a little sewing maching oil on the front bearings made the VFO as smooth as a babys fanny!

  Also set the radio on its back with the VFO shaft pointed up. One drop of machine oil around the concentric shaft and let the oil flow down.

Hope this helps out.

73 joe k7mks

----- Original Message -----

From: "Mike" <w5rkl@...>
To: "TS-520 820 530 830" <TS-520_820_530_830@yahoogroups.com>
Sent: Saturday, April 20, 2013 7:45:29 PM
Subject: Re: [TS-520_820_530_830] Kenwood R-599A

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difference in the price for the receiver.

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On 4/20/2013 12:57 PM, k7mks@comcast.net wrote:
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> Would appreciate your thoughts on a fair price to ask for an excellent
> R-599A Kenwood receiver that is excess to my needs.
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> Joe k7mks
>
> [Non-text portions of this message have been removed]

>
>

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41795. RE: [TS-520_820_530_830] Hello Everyone TS-820S band switch knob wanted.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-21 04:11:05 UTC
From: R Oler
Topic: 41793 Message: 41795

Frank....curious what you paid for it reply privately if that helps

orbitjet(at)hotmaildotcom thank you Robert WB5MZO

To: TS-520_820_530_830@yahoogroups.com
From: groups@...
Date: Sat, 20 Apr 2013 22:58:06 -0500
Subject: [TS-520_820_530_830] Hello Everyone TS-820S band switch knob wanted.

Glad to be here with you all. Today at the Belton Texas ham radio fest I

picked up a very clean 820S. I do need a band switch knob, so if anyone

has one laying around and would like to sell it please let me know.

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http://hambidz.com

[Non-text portions of this message have been removed]

41796. RE: [TS-520_820_530_830] Hello Everyone TS-820S band switch knob wanted.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-21 06:14:00 UTC
From: W LEWIS
Topic: 41793 Message: 41796

Hi Frank,
Butch Lewis (KØPSA) here. Check out item #230966521795 on ebay. Complete set of TS-820S knobs. Auction ends April 26th.
73s,
Butch

--- On Sat, 4/20/13, R Oler <orbitjet@...> wrote:

From: R Oler <orbitjet@...>
Subject: RE: [TS-520_820_530_830] Hello Everyone TS-820S band switch knob wanted.
To: "TS-520_820_530_830@yahoogroups.com" <ts-520_820_530_830@yahoogroups.com>
Date: Saturday, April 20, 2013, 11:11 PM

Frank....curious what you paid for it reply privately if that helps

orbitjet(at)hotmaildotcom thank you Robert WB5MZO

To: TS-520_820_530_830@yahoogroups.com
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[Non-text portions of this message have been removed]

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41797. Re: [TS-520_820_530_830] Re: The reason we are in this group

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-21 10:55:49 UTC
From: dennis hatch
Topic: 41782 Message: 41797

Ken is a "modern day" teacher..... H.I.

--- On Sat, 4/20/13, Terry Wagoner <wagstw46@...> wrote:

From: Terry Wagoner <wagstw46@...>
Subject: [TS-520_820_530_830] Re: The reason we are in this group
To: TS-520_820_530_830@yahoogroups.com
Date: Saturday, April 20, 2013, 11:36 AM

Ken: That old adage is baloney. There are plenty of "Stupid" questions.

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This is why so important to tell what you know and not what you think, feel, or believe. Can be hard for the learner to sort the facts from the BS.

Since I am a curmudgeon I apologize for this lament. The dumbing down of America is driving me nuts. This is no place to rant about it.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Avguy" <ae7px@...> wrote:
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> Ken
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>

Yahoo! Groups Links

[Non-text portions of this message have been removed]

41798. Re: The reason we are in this group

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-21 11:41:31 UTC
From: Brian Allen
Topic: 41782 Message: 41798

Terry is spot on with his response. His knowledge and many others up here is a gold mine. We are very lucky they take their time to convey their knowledge in long emails. It takes much of their time to read and respond to these questions.

One should take time to try to understand the information on hand and then ask questions. They don't have time to answer questions about stuff in the manual we should have read.

I have a great interest in learning to tinker on hollow state radios and the test equipment. My situation is that there is no one within 200 miles that is versed in this technology.

I have learned to appreciate the knowledge Terry, Mike, and many others provide.....

Brian

[Non-text portions of this message have been removed]

41799. Re: [TS-520_820_530_830] Kenwood R-599A

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-21 12:25:36 UTC
From: Mike
Topic: 41790 Message: 41799

Hi Joe,

Thanks for the tips. The VFO warble is not caused by dirty VFO variable capacitor shaft to frame connection or the shaft bearings but rather physical mounting of a component or two inside the VFO.Physical stability of components in the VFO is very important so environmental vibrations don't affect the VFO. I suspect a previous owner may have performed some work in the VFO which may have caused this problem. I'll start work on the VFO later this spring when I finish a few other projects I'm working on.

73
Mike
W5RKL

On 4/20/2013 11:30 PM, k7mks@... wrote:
>
>
>
> Mike: This one also had a warble when table tapping and tuning.
> Remove the top of the VFO and then unscrew and lift up the printed
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> Also set the radio on its back with the VFO shaft pointed up. One
> drop of machine oil around the concentric shaft and let the oil flow
> down.
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>
>
> Hope this helps out.
>
>
>
> 73 joe k7mks
>
>
>
> ----- Original Message -----
>
> From: "Mike" <w5rkl@... <mailto:w5rkl%40yahoo.com>>

> To: "TS-520 820 530 830" <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>>
> Sent: Saturday, April 20, 2013 7:45:29 PM
> Subject: Re: [TS-520_820_530_830] Kenwood R-599A
>
>
>
> Joe,
>
> Are the 6 and 2 meter converters included and installed? That makes a
> difference in the price for the receiver.
>
> I bought and still have aKenwood R599A receiver with both 6 and 2 meter
> converters installed for $185. The only problem it has is it "warbles"
> when tapping lightly on the desk and/or operating desk it sits on. I
> haven't gotten around to fixing the warble problem but I will this
> summer. It's a great receiver, excellent noise limiter, and it's very
> sensitiveon all bands.
>
> 73
> Mike
> W5RKL
>
> On 4/20/2013 12:57 PM, k7mks@comcast.net <mailto:k7mks%40comcast.net>
> wrote:
> >
> >
> >
> > Would appreciate your thoughts on a fair price to ask for an excellent
> > R-599A Kenwood receiver that is excess to my needs.
> >
> > Joe k7mks
> >
> > [Non-text portions of this message have been removed]
> >
> >
>
> [Non-text portions of this message have been removed]
>
> [Non-text portions of this message have been removed]
>
>

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41800. Re: Hello Everyone TS-820S band switch knob wanted.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-21 14:09:28 UTC
From: Bob
Topic: 41793 Message: 41800

I have a nice Band Switch Knob for the 820S...
Sell it for $5.00 & $3.00 to mail...
Bob
******

--- In TS-520_820_530_830@yahoogroups.com, groups <groups@...> wrote:
>
> Glad to be here with you all. Today at the Belton Texas ham radio fest I
> picked up a very clean 820S. I do need a band switch knob, so if anyone
> has one laying around and would like to sell it please let me know.
>
> Frank N6AQ
>
> --
> Cheapest Ham Gear Auction Fee's on the Internet!
>
> http://hambidz.com
>

41801. G3OBU Pirate

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-21 09:59:25 UTC
From: martin
Topic: 39914 Message: 41801

For information G3OBU call sign belongs to a former ex british serviceman who has been a SK since 1960, John the current user of the call sign is a PIRATE STATION and has no right using this call, he has been removed from qrz and other databases for this reason.
He is a member of this group
SO BEWARE

Thanks

--- In TS-520_820_530_830@yahoogroups.com, "Music Maker" <jhaddleton@...> wrote:
>
> .
>
>
> Are there any Hybrid users on this Group from UK who would like to join our small band of Hybrid users ?
>
> We call ourselves the VeeHUG ....(Vintage Hybrid Users Group), and have a regular (Daily) net on 40 Meters, and a regular Newsletter.
>
> Much information and help is available on an almost instant basis, and members seem to make nice friendships.
>
> Further info from me at the eMail address on my QRZ Page (G3OBU)
>
> 73 and Kind thoughts to all..
>
> John G3OBU
>

41802. G3OBU Pirate

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-21 10:00:31 UTC
From: martin
Topic: 39914 Message: 41802

For information G3OBU call sign belongs to a former ex british serviceman who has been a SK since 1960, John the current user of the call sign is a PIRATE STATION and has no right using this call, he has been removed from qrz and other databases for this reason.
He is a member of this group
SO BEWARE

Thanks

--- In TS-520_820_530_830@yahoogroups.com, "Music Maker" <jhaddleton@...> wrote:
>
> .
>
>
> Are there any Hybrid users on this Group from UK who would like to join our small band of Hybrid users ?
>
> We call ourselves the VeeHUG ....(Vintage Hybrid Users Group), and have a regular (Daily) net on 40 Meters, and a regular Newsletter.
>
> Much information and help is available on an almost instant basis, and members seem to make nice friendships.
>
> Further info from me at the eMail address on my QRZ Page (G3OBU)
>
> 73 and Kind thoughts to all..
>
> John G3OBU
>

41803. G3OBU Pirate

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-21 10:01:35 UTC
From: martin
Topic: 39914 Message: 41803

For information G3OBU call sign belongs to a former ex british serviceman who has been a SK since 1960, John the current user of the call sign is a PIRATE STATION and has no right using this call, he has been removed from qrz and other databases for this reason.

SO BEWARE

Thanks

41804. Re: [TS-520_820_530_830] Hello Everyone TS-820S band switch knob wanted.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-21 13:22:12 UTC
From: groups
Topic: 41793 Message: 41804

Hello Robert, I got it for $300 and seems to work well no drifting. I used it for over an hour on 40 meters.

Frank N6AQ
On 4/20/2013 11:11 PM, R Oler wrote:
>
> Frank....curious what you paid for it reply privately if that helps
>
> orbitjet(at)hotmaildotcom thank you Robert WB5MZO
>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> From: groups@... <mailto:groups%40essoperations.com>
> Date: Sat, 20 Apr 2013 22:58:06 -0500
> Subject: [TS-520_820_530_830] Hello Everyone TS-820S band switch knob
> wanted.
>
> Glad to be here with you all. Today at the Belton Texas ham radio fest I
>
> picked up a very clean 820S. I do need a band switch knob, so if anyone
>
> has one laying around and would like to sell it please let me know.
>
> Frank N6AQ
>
> --
>
> Cheapest Ham Gear Auction Fee's on the Internet!
>
> http://hambidz.com
>
>
>
> [Non-text portions of this message have been removed]
>
>

--
Cheapest Ham Gear Auction Fee's on the Internet!

http://hambidz.com

[Non-text portions of this message have been removed]

41805. Re: [TS-520_820_530_830] Hello Everyone TS-820S band switch knob wanted.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-21 13:25:06 UTC
From: groups
Topic: 41793 Message: 41805

Thanks Butch, Bid was placed.

Frank N6AQ
On 4/21/2013 1:14 AM, W LEWIS wrote:
>
> Hi Frank,
> Butch Lewis (KØPSA) here. Check out item #230966521795 on ebay.
> Complete set of TS-820S knobs. Auction ends April 26th.
> 73s,
> Butch
>
> --- On Sat, 4/20/13, R Oler <orbitjet@...
> <mailto:orbitjet%40hotmail.com>> wrote:
>
> From: R Oler <orbitjet@...m <mailto:orbitjet%40hotmail.com>>
> Subject: RE: [TS-520_820_530_830] Hello Everyone TS-820S band switch
> knob wanted.
> To: "TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>"
> <ts-520_820_530_830@yahoogroups.com
> <mailto:ts-520_820_530_830%40yahoogroups.com>>
> Date: Saturday, April 20, 2013, 11:11 PM
>
>
>
> Frank....curious what you paid for it reply privately if that helps
>
> orbitjet(at)hotmaildotcom thank you Robert WB5MZO
>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> From: groups@... <mailto:groups%40essoperations.com>
> Date: Sat, 20 Apr 2013 22:58:06 -0500
> Subject: [TS-520_820_530_830] Hello Everyone TS-820S band switch knob
> wanted.
>
> Glad to be here with you all. Today at the Belton Texas ham radio fest I
>
> picked up a very clean 820S. I do need a band switch knob, so if anyone
>
> has one laying around and would like to sell it please let me know.
>
> Frank N6AQ
>

> --
>
> Cheapest Ham Gear Auction Fee's on the Internet!
>
> http://hambidz.com
>
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> [Non-text portions of this message have been removed]
>
>

--
Cheapest Ham Gear Auction Fee's on the Internet!

http://hambidz.com

[Non-text portions of this message have been removed]

41806. RE: [TS-520_820_530_830] Hello Everyone TS-820S band switch knob wanted.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-21 16:43:26 UTC
From: R Oler
Topic: 41793 Message: 41806

Thank you very kind of you. I think you got a good deal. At some point I am going to get one, it is the one (two counting the 830) lacking in my Kenwood collection RGO WB5MZO

To: TS-520_820_530_830@yahoogroups.com
From: groups@...
Date: Sun, 21 Apr 2013 08:22:12 -0500
Subject: Re: [TS-520_820_530_830] Hello Everyone TS-820S band switch knob wanted.

Hello Robert, I got it for $300 and seems to work well no drifting. I

used it for over an hour on 40 meters.

Frank N6AQ

On 4/20/2013 11:11 PM, R Oler wrote:

>

> Frank....curious what you paid for it reply privately if that helps

>

> orbitjet(at)hotmaildotcom thank you Robert WB5MZO

>

> To: TS-520_820_530_830@yahoogroups.com

> <mailto:TS-520_820_530_830%40yahoogroups.com>

> From: groups@essoperations.com <mailto:groups%40essoperations.com>

> Date: Sat, 20 Apr 2013 22:58:06 -0500

> Subject: [TS-520_820_530_830] Hello Everyone TS-820S band switch knob

> wanted.

>

> Glad to be here with you all. Today at the Belton Texas ham radio fest I

>

> picked up a very clean 820S. I do need a band switch knob, so if anyone

>

> has one laying around and would like to sell it please let me know.

>

> Frank N6AQ

>

> --

>

> Cheapest Ham Gear Auction Fee's on the Internet!

>

> http://hambidz.com

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> [Non-text portions of this message have been removed]

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Cheapest Ham Gear Auction Fee's on the Internet!

http://hambidz.com

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[Non-text portions of this message have been removed]

41807. KENWOOD HYBRID USER NET (April 21st, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-21 18:44:03 UTC
From: mvgilger
Topic: 41807 Message: 41807

The Saturday's net on 40 meter we had 19 stations checking with good band conditions. There were 5 new stations checking in, W3OKC, KC8YY, KD2DIG, KF4WGR, and KE2MA. Out of the stations checking in, there was:

7 running TS-520(x)
0 running TS-530(x)
2 running TS-820(x)
4 running TS-830S

I was running my TS-940s. The rest were running non hybrids of one model or another.

The Sunday's net on 20 meter we had 10 stations checking in under very poor band conditions. We had 2 new check-in, WZ7E and VE4AMN.

Out of those, there was:

5 running TS-520(x)
0 running TS-530(x)
1 running TS-820(x)
2 running TS-830S

I was running my TS-940s. The rest were running non hybrids of one model or another.

We have been having several people checking in regularly with their TS-430, TS-440, and TS-940's, which of course is not a hybrid, although over 30+ years old. Everyone is welcome as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a net control station, please send me an email. Currently it's just myself, WB2KNR and WB0SGA. I would like to get several more. If we do, we can alternate so everyone might be on a 3-4 week rotation. It's a lot of fun and a good way to make sure you station is optimized.

For anyone that has not heard, we have a new web site that WB4HFN is hosting. He currently has a very nice site for Drake, Collins and Heathkit and now Kenwood Hybrids. Good quality manuals plus sale flyers and brochures will be found here, along with user supplied information for all Hybrids.

His URL is:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754 check-ins, Sunday total 563 check-ins

November 2012, Saturday's, net total = 47, Sundays total = 20
December 2012, Saturday's, net total = 74, Sunday's total = 70
January 2013, Saturday's, net total = 93, Sunday's total = 87
February 2013, Saturday's net total = 103, Sundays total = 87

March 2013, Saturday's, net total = 112, Sunday's total =39
April 2013, Saturday's net total = 52, Sunday's total = 29 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

41808. Re: [TS-520_820_530_830] G3OBU Pirate

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-21 19:16:53 UTC
From: 3-Cpo
Topic: 39914 Message: 41808

Wow, what a jerk! It's too bad the authorities can't seem to catch these guys. There's a bunch of clowns on 14.313, and some foul-mouthed old men up around 3.92 and some others around the bands who give HAM radio a bad name. But pirating a SK serviceman's call sign? That's really low (seriously)

w3cpo

-----Original Message-----
From: martin <g7jwr@...>
To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com>
Sent: Sun, Apr 21, 2013 11:25 am
Subject: [TS-520_820_530_830] G3OBU Pirate

For information G3OBU call sign belongs to a former ex british serviceman who has been a SK since 1960, John the current user of the call sign is a PIRATE STATION and has no right using this call, he has been removed from qrz and other databases for this reason.
He is a member of this group
SO BEWARE

Thanks

--- In TS-520_820_530_830@yahoogroups.com, "Music Maker" <jhaddleton@...> wrote:
>
> .
>
>
> Are there any Hybrid users on this Group from UK who would like to join our small band of Hybrid users ?
>
> We call ourselves the VeeHUG ....(Vintage Hybrid Users Group), and have a regular (Daily) net on 40 Meters, and a regular Newsletter.
>
> Much information and help is available on an almost instant basis, and members seem to make nice friendships.
>
> Further info from me at the eMail address on my QRZ Page (G3OBU)
>
> 73 and Kind thoughts to all..
>
> John G3OBU
>

[Non-text portions of this message have been removed]

41809. TS-830S for Parts

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-21 20:16:36 UTC
From: Stephen - AE2S
Topic: 41809 Message: 41809

Hey Everyone,
I'm going to part out one of my TS-830S's.

Everything works good EXCEPT for the IF Board.
As of today the radio is complete, powers up and all the good stuff.

I swapped out the IF Board to test and the rig worked as it should.

If you're interested in any parts please send email to "my call at arrl.net" or "stephen at mycall.net". I never check my ymail account as it has become a big spam folder.

I do take PayPal and Postal MO only. My QRZ address is good.

Thanks,
Steve - AE2S

41811. Re: [TS-520_820_530_830] G3OBU Pirate

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-22 01:11:42 UTC
From: Jude Domanski
Topic: 39914 Message: 41811

Pathetic. I don't know about the UK, but it seems as if the FCC doesn't care about enforcement anymore.

--- On Sun, 4/21/13, 3-Cpo <w3cpo@aol.com> wrote:

From: 3-Cpo <w3cpo@...>
Subject: Re: [TS-520_820_530_830] G3OBU Pirate
To: TS-520_820_530_830@yahoogroups.com
Date: Sunday, April 21, 2013, 2:16 PM

Wow, what a jerk! It's too bad the authorities can't seem to catch these guys. There's a bunch of clowns on 14.313, and some foul-mouthed old men up around 3.92 and some others around the bands who give HAM radio a bad name. But pirating a SK serviceman's call sign? That's really low (seriously)

w3cpo

-----Original Message-----

From: martin <g7jwr@...>

To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com>

Sent: Sun, Apr 21, 2013 11:25 am

Subject: [TS-520_820_530_830] G3OBU Pirate

For information G3OBU call sign belongs to a former ex british serviceman who has been a SK since 1960, John the current user of the call sign is a PIRATE STATION and has no right using this call, he has been removed from qrz and other databases for this reason.

He is a member of this group

SO BEWARE

Thanks

--- In TS-520_820_530_830@yahoogroups.com, "Music Maker" <jhaddleton@...> wrote:

>

> .

>

>

> Are there any Hybrid users on this Group from UK who would like to join our small band of Hybrid users ?

>

> We call ourselves the VeeHUG ....(Vintage Hybrid Users Group), and have a regular (Daily) net on 40 Meters, and a regular Newsletter.

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> Much information and help is available on an almost instant basis, and members seem to make nice friendships.

>

> Further info from me at the eMail address on my QRZ Page (G3OBU)

>

> 73 and Kind thoughts to all..

>

> John G3OBU

>

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[Non-text portions of this message have been removed]

41812. RE: [TS-520_820_530_830] G3OBU Pirate

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-22 01:20:30 UTC
From: Robert Port
Topic: 39914 Message: 41812

Our famous fiend from Canada on 20 meters ahs moved from 14.275 to 14.313 . He loves to pull in the Americans into his little web. I am really surprised Canada won’t do anything about him.

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Jude Domanski
Sent: Sunday, April 21, 2013 7:12 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] G3OBU Pirate

Pathetic. I don't know about the UK, but it seems as if the FCC doesn't care about enforcement anymore.

--- On Sun, 4/21/13, 3-Cpo <w3cpo@... <mailto:w3cpo%40aol.com> > wrote:

From: 3-Cpo <w3cpo@... <mailto:w3cpo%40aol.com> >
Subject: Re: [TS-520_820_530_830] G3OBU Pirate
To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>
Date: Sunday, April 21, 2013, 2:16 PM

Wow, what a jerk! It's too bad the authorities can't seem to catch these guys. There's a bunch of clowns on 14.313, and some foul-mouthed old men up around 3.92 and some others around the bands who give HAM radio a bad name. But pirating a SK serviceman's call sign? That's really low (seriously)

w3cpo

-----Original Message-----

From: martin <g7jwr@... <mailto:g7jwr%40yahoo.com> >

To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> >

Sent: Sun, Apr 21, 2013 11:25 am

Subject: [TS-520_820_530_830] G3OBU Pirate

For information G3OBU call sign belongs to a former ex british serviceman who has been a SK since 1960, John the current user of the call sign is a PIRATE STATION and has no right using this call, he has been removed from qrz and other databases for this reason.

He is a member of this group

SO BEWARE

Thanks

--- In TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> , "Music Maker" <jhaddleton@...> wrote:

>

> .

>

>

> Are there any Hybrid users on this Group from UK who would like to join our small band of Hybrid users ?

>

> We call ourselves the VeeHUG ....(Vintage Hybrid Users Group), and have a regular (Daily) net on 40 Meters, and a regular Newsletter.

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> Much information and help is available on an almost instant basis, and members seem to make nice friendships.

>

> Further info from me at the eMail address on my QRZ Page (G3OBU)

>

> 73 and Kind thoughts to all..

>

> John G3OBU

>

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41813. Re: [TS-520_820_530_830] G3OBU Pirate

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-22 03:33:53 UTC
From: w3cpo@...
Topic: 39914 Message: 41813

At one point the Canadian jerk was flaming on about overthrowing the US
and bombing people, so I recorded some of his rant in the hopes that I could
get Canada's equivalent of Homeland Security to hunt him down and kick in
his door. I even reported some of the stuff to the ARRL. But nothing ever
happened.

BUT, if one of US ever slipped and dropped the "F-Bomb" you can bet we'd
get called on the carpet.

w3cpo

In a message dated 4/21/2013 9:25:56 P.M. Eastern Daylight Time,
gunslingerbob@... writes:

Our famous fiend from Canada on 20 meters ahs moved from 14.275 to 14.313 .
He loves to pull in the Americans into his little web. I am really
surprised Canada won’t do anything about him.

From: _TS-520_820_530_830@yahoogroups.com_
(mailto:TS-520_820_530_830@...m) [mailto:_TS-520_820_530_830@yahoogroups.com_
(mailto:TS-520_820_530_830@yahoogroups.com)] On Behalf Of Jude Domanski
Sent: Sunday, April 21, 2013 7:12 PM
To: _TS-520_820_530_830@yahoogroups.com_ (ma
ilto:TS-520_820_530_830@yahoogroups.com)
Subject: Re: [TS-520_820_530_830] G3OBU Pirate

Pathetic. I don't know about the UK, but it seems as if the FCC doesn't
care about enforcement anymore.

--- On Sun, 4/21/13, 3-Cpo <_w3cpo@..._ (mailto:w3cpo@...)
<mailto:w3cpo%40aol.com> > wrote:

From: 3-Cpo <_w3cpo@..._ (mailto:w3cpo@...)
<mailto:w3cpo%40aol.com> >
Subject: Re: [TS-520_820_530_830] G3OBU Pirate
To: _TS-520_820_530_830@yahoogroups.com_
(mailto:TS-520_820_530_830@yahoogroups.com) <mailto:TS-520_820_530_830%40yahoogroups.com>
Date: Sunday, April 21, 2013, 2:16 PM

Wow, what a jerk! It's too bad the authorities can't seem to catch these
guys. There's a bunch of clowns on 14.313, and some foul-mouthed old men up
around 3.92 and some others around the bands who give HAM radio a bad name.
But pirating a SK serviceman's call sign? That's really low (seriously)

w3cpo

-----Original Message-----

From: martin <_g7jwr@..._ (mailto:g7jwr@...)
<mailto:g7jwr%40yahoo.com> >

To: TS-520_820_530_830 <_TS-520_820_530_830@yahoogroups.com_
(mailto:TS-520_820_530_830@yahoogroups.com)
<mailto:TS-520_820_530_830%40yahoogroups.com> >

Sent: Sun, Apr 21, 2013 11:25 am

Subject: [TS-520_820_530_830] G3OBU Pirate

For information G3OBU call sign belongs to a former ex british serviceman
who has been a SK since 1960, John the current user of the call sign is a
PIRATE STATION and has no right using this call, he has been removed from
qrz and other databases for this reason.

He is a member of this group

SO BEWARE

Thanks

--- In _TS-520_820_530_830@yahoogroups.com_
(mailto:TS-520_820_530_830@yahoogroups.com) <mailto:TS-520_820_530_830%40yahoogroups.com>
, "Music Maker"
<jhaddleton@...> wrote:

>

> .

>

>

> Are there any Hybrid users on this Group from UK who would like to join
our small band of Hybrid users ?

>

> We call ourselves the VeeHUG ....(Vintage Hybrid Users Group), and have
a regular (Daily) net on 40 Meters, and a regular Newsletter.

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> Much information and help is available on an almost instant basis, and
members seem to make nice friendships.

>

> Further info from me at the eMail address on my QRZ Page (G3OBU)

>

> 73 and Kind thoughts to all..

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> John G3OBU

>

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[Non-text portions of this message have been removed]

41814. Re: [TS-520_820_530_830] G3OBU Pirate

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-22 12:01:17 UTC
From: Joe
Topic: 39914 Message: 41814

Report what you heard, especially the bomb threat, to:

http://www.dhs.gov/if-you-see-something-say-something-campaign

It probably will do nothing to get him off the air, but it will put him
on the list of threats. It will put him in the radar of the US
government and maybe cause him a little grief an unwanted publicity.

Joe

On 4/21/2013 11:33 PM, w3cpo@... wrote:
> At one point the Canadian jerk was flaming on about overthrowing the US
> and bombing people, so I recorded some of his rant in the hopes that I could
> get Canada's equivalent of Homeland Security to hunt him down and kick in
> his door. I even reported some of the stuff to the ARRL. But nothing ever
> happened.
>
> BUT, if one of US ever slipped and dropped the "F-Bomb" you can bet we'd
> get called on the carpet.
>
> w3cpo
>

41815. Kenwood TS-530s Recommended Microphones

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-22 16:58:58 UTC
From: ThomasA
Topic: 41815 Message: 41815

Hello All,

My nu-2-me TS-530s is on its way and I am researching microphones that would be a good match.

I was thinking about the relatively new Heil HM-12, but I might need a higher impedance mic, I believe that the HM-12 is for lower impedance applications.

Of the vintage microphones, or the newer ones, does anyone have a suggestion for one that works exceptionally well with the 530s?

Any input would be appreciated!

I am excited to be a part of this group, and to get started with what appears to be a great rig.

Thank You!!

Tom

41816. Re: [TS-520_820_530_830] Kenwood TS-530s Recommended Microphones

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-22 17:55:13 UTC
From: John Schroeder
Topic: 41815 Message: 41816

I understand that a Shure 444 works great with these radios... John...

From: ThomasA <tsnarcher@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, April 22, 2013 11:58 AM
Subject: [TS-520_820_530_830] Kenwood TS-530s Recommended Microphones

Hello All,

My nu-2-me TS-530s is on its way and I am researching microphones that would be a good match.

I was thinking about the relatively new Heil HM-12, but I might need a higher impedance mic, I believe that the HM-12 is for lower impedance applications.

Of the vintage microphones, or the newer ones, does anyone have a suggestion for one that works exceptionally well with the 530s?

Any input would be appreciated!

I am excited to be a part of this group, and to get started with what appears to be a great rig.

Thank You!!

Tom

[Non-text portions of this message have been removed]

41817. Re: [TS-520_820_530_830] Kenwood TS-530s Recommended Microphones

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-22 18:14:23 UTC
From: Mark A Currens
Topic: 41815 Message: 41817

I have a GE EM28A (Shure) microphone that works rather well with my TS-830S Kenwood in which I have received many complements on the audio. The only fault that this mic has is the ding that is on the grille. Recently,I purchased a very nice MC-60 mic that really matches the color scheme of my radio more so than the GE(Shure) microphone does. At this point,I am using the MC-60 on my rig. 73 DE KI4OJG.

Sent from my iPhone

41818. Re: [TS-520_820_530_830] Kenwood TS-530s Recommended Microphones

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-22 18:47:15 UTC
From: Mike
Topic: 41815 Message: 41818

Tom,

The TS-530's operator's manual can be found and downloaded, free, at the following link:

www.n6wk.com/kenwood/

Go to page "3" in the 530's operator's manual.

The Heil HM-12 specification sheet is found at the following link:

http://www.heilsound.com/amateur/products/hm12/productsheet.pdf

Go to page 2 of the specification sheet.

You will notice the Heil HM-12 impedance (1000 ohms) falls within the TS-530's 500 to 50,000 ohm range so it will work fine with the 530. I don't know why you would think/assume the 530's microphone impedance is high but if you were told by someone it was then you were told wrong.

73
Mike
W5RKL

On 4/22/2013 11:58 AM, ThomasA wrote:
>
>
> Hello All,
>
> My nu-2-me TS-530s is on its way and I am researching microphones that
> would be a good match.
>
> I was thinking about the relatively new Heil HM-12, but I might need a
> higher impedance mic, I believe that the HM-12 is for lower impedance
> applications.
>
> Of the vintage microphones, or the newer ones, does anyone have a
> suggestion for one that works exceptionally well with the 530s?
>
> Any input would be appreciated!
>
> I am excited to be a part of this group, and to get started with what
> appears to be a great rig.
>
> Thank You!!
>

> Tom
>
>

[Non-text portions of this message have been removed]

41819. Re: [TS-520_820_530_830] Kenwood TS-530s Recommended Microphones

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-22 19:09:08 UTC
From: Mike
Topic: 41815 Message: 41819

The Shure 444 data sheet is found at

http://www.foxtango.kc9foz.com/FT101/Shure%20444.pdf

Note on page 2 Shure states the 444 to be a "high impedance" microphone
which clearly indicates it will work with ANY of the Kenwood hybrids
without any impedance changes/mods to either microphone and/or transceiver.

The Shure 444D is a dual impedance microphone and the data sheet is
found at:

http://www.radiomanual.info/schemi/ACC_microphone/Shure_444D_user_IZ3EOU.pdf

If the Shure 444D impedance setting is set to "high impedance" then it
will work with any of the Kenwood hybrids without any impedance
changes/mods to either microphone and/or transceiver.

73
Mike
W5RKL

On 4/22/2013 12:55 PM, John Schroeder wrote:
>
> I understand that a Shure 444 works great with these radios... John...
>
> _____
> From: ThomasA <tsnarcher@... <mailto:tsnarcher%40att.net>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Monday, April 22, 2013 11:58 AM
> Subject: [TS-520_820_530_830] Kenwood TS-530s Recommended Microphones
>
>
>
>
>
>
>
> Hello All,
>
> My nu-2-me TS-530s is on its way and I am researching microphones that
> would be a good match.
>
> I was thinking about the relatively new Heil HM-12, but I might need a
> higher impedance mic, I believe that the HM-12 is for lower impedance
> applications.

>
> Of the vintage microphones, or the newer ones, does anyone have a
> suggestion for one that works exceptionally well with the 530s?
>
> Any input would be appreciated!
>
> I am excited to be a part of this group, and to get started with what
> appears to be a great rig.
>
> Thank You!!
>
> Tom
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

41820. Re: Kenwood TS-530s Recommended Microphones

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-22 18:59:49 UTC
From: ThomasA
Topic: 41815 Message: 41820

Actually I was told that the 530s' impedance was high, so I really appreciate you r
information, and the info to back it up.

Tom
--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> Tom,
>
> The TS-530's operator's manual can be found and downloaded, free, at the
> following link:
>
> www.n6wk.com/kenwood/
>
> Go to page "3" in the 530's operator's manual.
>
>
> The Heil HM-12 specification sheet is found at the following link:
>
> http://www.heilsound.com/amateur/products/hm12/productsheet.pdf
>
> Go to page 2 of the specification sheet.
>
> You will notice the Heil HM-12 impedance (1000 ohms) falls within the
> TS-530's 500 to 50,000 ohm range so it will work fine with the 530. I
> don't know why you would think/assume the 530's microphone impedance is
> high but if you were told by someone it was then you were told wrong.
>
> 73
> Mike
> W5RKL
>
>
>
>
>
> On 4/22/2013 11:58 AM, ThomasA wrote:
> >
> >
> > Hello All,
> >
> > My nu-2-me TS-530s is on its way and I am researching microphones that
> > would be a good match.
> >
> > I was thinking about the relatively new Heil HM-12, but I might need a
> > higher impedance mic, I believe that the HM-12 is for lower impedance

> > applications.
> >
> > Of the vintage microphones, or the newer ones, does anyone have a
> > suggestion for one that works exceptionally well with the 530s?
> >
> > Any input would be appreciated!
> >
> > I am excited to be a part of this group, and to get started with what
> > appears to be a great rig.
> >
> > Thank You!!
> >
> > Tom
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

41821. Re: [TS-520_820_530_830] Re: Kenwood TS-530s Recommended Microphones

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-22 19:30:58 UTC
From: Bob Macklin
Topic: 41815 Message: 41821

Why not just get a Kenwood MC-50?

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: ThomasA
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, April 22, 2013 11:59 AM
Subject: [TS-520_820_530_830] Re: Kenwood TS-530s Recommended Microphones

Actually I was told that the 530s' impedance was high, so I really appreciate you r
information, and the info to back it up.

Tom
--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> Tom,
>
> The TS-530's operator's manual can be found and downloaded, free, at the
> following link:
>
> www.n6wk.com/kenwood/
>
> Go to page "3" in the 530's operator's manual.
>
>
> The Heil HM-12 specification sheet is found at the following link:
>
> http://www.heilsound.com/amateur/products/hm12/productsheet.pdf
>
> Go to page 2 of the specification sheet.
>
> You will notice the Heil HM-12 impedance (1000 ohms) falls within the
> TS-530's 500 to 50,000 ohm range so it will work fine with the 530. I
> don't know why you would think/assume the 530's microphone impedance is
> high but if you were told by someone it was then you were told wrong.
>
> 73
> Mike
> W5RKL
>
>

>
>
>
> On 4/22/2013 11:58 AM, ThomasA wrote:
> >
> >
> > Hello All,
> >
> > My nu-2-me TS-530s is on its way and I am researching microphones that
> > would be a good match.
> >
> > I was thinking about the relatively new Heil HM-12, but I might need a
> > higher impedance mic, I believe that the HM-12 is for lower impedance
> > applications.
> >
> > Of the vintage microphones, or the newer ones, does anyone have a
> > suggestion for one that works exceptionally well with the 530s?
> >
> > Any input would be appreciated!
> >
> > I am excited to be a part of this group, and to get started with what
> > appears to be a great rig.
> >
> > Thank You!!
> >
> > Tom
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

41822. Re: [TS-520_820_530_830] Re: Kenwood TS-530s Recommended Microphones

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-22 19:37:11 UTC
From: Mike
Topic: 41815 Message: 41822

Unfortunately Tom, who ever told you the TS-530 had high impedance microphone specs, obviously did not take the time to verify their information which ended up misleading you.

73
Mike
W5RKL

On 4/22/2013 1:59 PM, ThomasA wrote:
>
>
> Actually I was told that the 530s' impedance was high, so I really
> appreciate you r information, and the info to back it up.
>
> Tom
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@...> wrote:
> >
> > Tom,
> >
> > The TS-530's operator's manual can be found and downloaded, free, at
> the
> > following link:
> >
> > www.n6wk.com/kenwood/
> >
> > Go to page "3" in the 530's operator's manual.
> >
> >
> > The Heil HM-12 specification sheet is found at the following link:
> >
> > http://www.heilsound.com/amateur/products/hm12/productsheet.pdf
> >
> > Go to page 2 of the specification sheet.
> >
> > You will notice the Heil HM-12 impedance (1000 ohms) falls within the
> > TS-530's 500 to 50,000 ohm range so it will work fine with the 530. I
> > don't know why you would think/assume the 530's microphone impedance is
> > high but if you were told by someone it was then you were told wrong.
> >
> > 73
> > Mike
> > W5RKL
> >

> >
> >
> >
> >
> > On 4/22/2013 11:58 AM, ThomasA wrote:
> > >
> > >
> > > Hello All,
> > >
> > > My nu-2-me TS-530s is on its way and I am researching microphones that
> > > would be a good match.
> > >
> > > I was thinking about the relatively new Heil HM-12, but I might need a
> > > higher impedance mic, I believe that the HM-12 is for lower impedance
> > > applications.
> > >
> > > Of the vintage microphones, or the newer ones, does anyone have a
> > > suggestion for one that works exceptionally well with the 530s?
> > >
> > > Any input would be appreciated!
> > >
> > > I am excited to be a part of this group, and to get started with what
> > > appears to be a great rig.
> > >
> > > Thank You!!
> > >
> > > Tom
> > >
> > >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
>

[Non-text portions of this message have been removed]

41823. Re: [TS-520_820_530_830] Re: Kenwood TS-530s Recommended Microphones

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-22 19:42:08 UTC
From: Michael George
Topic: 41815 Message: 41823

Agreed. Just get a Kenwood MC-50. I use two MC-50s on two Kenwood TS830s with excellent reports on audio quality. They can be gotten off Ebay or at local hamfests.

Just line up the red dots on the connector side of the cable and you should be in business. Works for me.

Enjoy the hobby as I do,

73,

de Mike/K3MG

[Non-text portions of this message have been removed]

41824. Re: [TS-520_820_530_830] Re: Kenwood TS-530s Recommended Microphones

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-22 19:54:55 UTC
From: Mark L. Hammond
Topic: 41815 Message: 41824

I'll second the MC-50 suggestion/recommendation! Classy microphone now and in its day..nothing but good reports with it. Set to HIGH impedance, it will work with any of the Kenwood hybrids. With which, by the way--I've become a little obsessed. My collection now includes a TS-520, a TS-820S, a TS-530SP, and a TS-830S. :)

(I have little issues with 2 of the radios (TS-820S and TS-530SP) that I'll ask for help or opinions in different/new threads.)

73,

Mark N8MH

On Mon, Apr 22, 2013 at 3:42 PM, Michael George <hpdd709@...> wrote:

> **
>
>
> Agreed. Just get a Kenwood MC-50. I use two MC-50s on two Kenwood TS830s
> with excellent reports on audio quality. They can be gotten off Ebay or at
> local hamfests.
>
> Just line up the red dots on the connector side of the cable and you should
> be in business. Works for me.
>
> Enjoy the hobby as I do,
>
> 73,
>
> de Mike/K3MG
>
>

[Non-text portions of this message have been removed]

41825. TS-820S "Send" button question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-22 20:04:54 UTC
From: Mark L. Hammond
Topic: 41825 Message: 41825

Hello all,

A few weeks ago I bought an amazingly clean TS-820S. The knobs and front panel were so clean I didn't even have to clean them, and the inside was equally clean. Score!

Now, the non-technical question of the day :)

The only thing I can find wrong with it is the "Send" button is "loose." It's like the plastic toggle cover is no longer seating on the actual switch--but I can't say for sure whether it's just the plastic toggle/cover, or if the actual switch underneath is actually bad.

I can press it "in" and it works better, and wiggles less, but it's clearly not right. The switch functions, which leads me to believe it's just the press on plastic cover...

Does anybody have any "tricks" in figuring out if I need to replace just the cover or the cover+switch? Of course, removing the front panel is the obvious way--but I'd like to have the actual replacement part(s) on hand before taking it apart...

Neither part is what I could consider to be "cheap" and I don't have any spare covers or switches!

Thanks,

--
Mark L. Hammond [N8MH]

[Non-text portions of this message have been removed]

41826. Re: Welcome new members!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-22 22:37:08 UTC
From: bartbrummans
Topic: 1 Message: 41826

--- In TS-520_820_530_830@yahoogroups.com, "coorsbill" <coorsbill@...> wrote:
>
> WELCOME to TheFred and KU4A!
>
> Why not hit the "reply" button (hey with the new format, YAHOO
> switched them around so be careful you don't delete me, har...) and
> tell us about yourselves and your stations guys.
>
> 73!
>
> Bill K0ZL
>
Welcome Bill,
Enjoy the community, it's a great source for info.

73
Bart
KB8BAB

41827. Re: [TS-520_820_530_830] TS-820S "Send" button question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-22 22:44:37 UTC
From: Joseph Stiles
Topic: 41825 Message: 41827

Mark,

  Welcome to another common problem of the KW hybrids. The "paddles" have two long fingers on them that go into the front of the switch.
When one gets broken, for what ever reason...the "paddle" will do just what you describe.
There is a guy who is selling replacements on ebay.
They are not exact copies of the originals...but very close and very functional replacements., or Bob Mankser...ke5ftf..may have some
                    It is possible to remove the "paddle" from the front by grasping with padded pliers and pulling straight out. I doubt the the switch is "loose" inside...but by removing the "paddle" from the front...you can check the switch without going through the whole front panel removal

73 Joe
WB7UQU

From: Mark L. Hammond <marklhammond@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, April 22, 2013 1:04 PM
Subject: [TS-520_820_530_830] TS-820S "Send" button question

Hello all,

A few weeks ago I bought an amazingly clean TS-820S. The knobs and front panel were so clean I didn't even have to clean them, and the inside was equally clean. Score!

Now, the non-technical question of the day :)

The only thing I can find wrong with it is the "Send" button is "loose." It's like the plastic toggle cover is no longer seating on the actual switch--but I can't say for sure whether it's just the plastic toggle/cover, or if the actual switch underneath is actually bad.

I can press it "in" and it works better, and wiggles less, but it's clearly not right. The switch functions, which leads me to believe it's just the press on plastic cover...

Does anybody have any "tricks" in figuring out if I need to replace just the cover or the cover+switch? Of course, removing the front panel is the obvious way--but I'd like to have the actual replacement part(s) on hand before taking it apart...

Neither part is what I could consider to be "cheap" and I don't have any spare covers or switches!

Thanks,

--
Mark L. Hammond [N8MH]

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41828. Need some help with an RF board from TS-830.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-22 22:53:40 UTC
From: bartbrummans
Topic: 41828 Message: 41828

First off...
I'm not an electronics engineer by any means, my education on that was two years of schooling, learning on my own, and poking and prodding.
But I enjoy it, and it keeps me busy.

So..
I've gotten myself into a TS-830, but it had a weak (deaf) receive.
Got the diagram and researched the net for possible causes.

From what I've found, it could be L41, D2, Q1.
D2 checks fine (with multimeter)..
Q1 was replaced...

I have some receive now, but only very strong signals move the S-meter.
Compared to my other radio, this TS-830 is still "deaf" to speak of.

Now here is some "backwoods" diagnostics...
If I touch the tabs of VC-2, the noise level increases drastically and the S-meter will start to jump up.

This leads me to believe that the problem lies somewhere between L13 and the Ant input (TP1). Any input?

Could L41 be "bad" but still let strong signals through?.
What is the best way to test L41? (What readings should I see?)

73
Bart

41829. Re: Kenwood TS-530s Recommended Microphones

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-22 23:54:26 UTC
From: larry shorthill
Topic: 41815 Message: 41829

Mike, Terry, and other gurus on this group site who are continually tasked with answering the same questions over and over, I would make it mandatory for joining the group that one must read the files section of the group site for this information before they are approved.

Not meaning ill will on anyone, but this topic has come up about every 2 or 3 months it seems. Perhaps a simple FAQ section would be easier to go through than the entire files section, but a listing of acceptable microphones in a FAQ answer, a tune up link and or quick description in a FAQ answer, a paint answer in a FAQ answer, a knob or VFO removal, a cathode resistor check/replacement, or .... in a FAQ answer. I do believe it is the responsibility of someone participating in a technical avocation to take it upon him or herself to know how to do basic research on this. If nothing else a google search should provide dozens of answers if one only took the time to look it up.

Off my high horse now. This is too good a resource and the best of the guys on this site that work with repairing and aligning and rebuilding the Kenwood hybrids don't need to answer the same question time and time again. I would rather keep these guys on tap for when things get really sticky.

73
Larry
KS7J

[Non-text portions of this message have been removed]

41830. Re: Need some help with an RF board from TS-830.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-22 23:57:12 UTC
From: Bob
Topic: 41828 Message: 41830

L41 is inline with the antenna input...
I can't count how many have emailed me wanting the L41.. :(
I believe that someone on the forum has rewound L41...
I am sure they will respond to you...
Bob
****

--- In TS-520_820_530_830@yahoogroups.com, "bartbrummans" <cocobean64@...> wrote:
>
> First off...
> I'm not an electronics engineer by any means, my education on that was two years of schooling, learning on my own, and poking and prodding.
> But I enjoy it, and it keeps me busy.
>
> So..
> I've gotten myself into a TS-830, but it had a weak (deaf) receive.
> Got the diagram and researched the net for possible causes.
>
> From what I've found, it could be L41, D2, Q1.
> D2 checks fine (with multimeter)..
> Q1 was replaced...
>
> I have some receive now, but only very strong signals move the S-meter.
> Compared to my other radio, this TS-830 is still "deaf" to speak of.
>
> Now here is some "backwoods" diagnostics...
> If I touch the tabs of VC-2, the noise level increases drastically and the S-meter will start to jump up.
>
> This leads me to believe that the problem lies somewhere between L13 and the Ant input (TP1). Any input?
>
> Could L41 be "bad" but still let strong signals through?.
> What is the best way to test L41? (What readings should I see?)
>
> 73
> Bart
>

41831. Re: TS-820S "Send" button question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 00:11:30 UTC
From: Bob
Topic: 41825 Message: 41831

The paddle has the 2 long fingers but seldom break...
The paddle also has two small keeper tabs inside that tend to break off or crack, thus a loose paddle...
If you can remove with padded pliers then gently touch the small keeper tabs, they should be stiff... If one side moves then put a dab of JB-Weld Quick from the small tab to the button body...
I sell the paddles for $6.00 each plus my cost to mail ($2.00)...
Hope this helps...
Bob
****

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Mark,
>
> Â Welcome to another common problem of the KW hybrids. The "paddles" have two long fingers on them that go into the front of the switch.
> When one gets broken, for what ever reason...the "paddle" will do just what you describe. There is a guy who is selling replacements on ebay.
> They are not exact copies of the originals...but very close and very functional replacements., or Bob Mankser...ke5ftf..may have some Â Â Â

> panel were so clean I didn't even have to clean them, and the inside was
> equally clean. Score!
>
> Now, the non-technical question of the day :)
>
> The only thing I can find wrong with it is the "Send" button is "loose."
> It's like the plastic toggle cover is no longer seating on the actual
> switch--but I can't say for sure whether it's just the plastic
> toggle/cover, or if the actual switch underneath is actually bad.
>
> I can press it "in" and it works better, and wiggles less, but it's clearly
> not right. The switch functions, which leads me to believe it's just the
> press on plastic cover...
>
> Does anybody have any "tricks" in figuring out if I need to replace just
> the cover or the cover+switch? Of course, removing the front panel is the
> obvious way--but I'd like to have the actual replacement part(s) on hand
> before taking it apart...
>
> Neither part is what I could consider to be "cheap" and I don't have any
> spare covers or switches!
>
> Thanks,
>
> --
> Mark L. Hammond [N8MH]
>
> [Non-text portions of this message have been removed]
>
>
>
>
> [Non-text portions of this message have been removed]
>

41832. Re: [TS-520_820_530_830] Re: TS-820S "Send" button question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 01:03:39 UTC
From: Mark L. Hammond
Topic: 41825 Message: 41832

Thanks Bob and Joe.

Joe, confirming that I could pull it off was a great tip. I was SOOo tempted, but resisted until I asked here :) I hated to break something.

I did pull the paddle off, and it has only 1 of the long tabs. I actually swapped with the NB paddle, since the SEND button gets used a whole lot more. They come off easier than they go back on (with front panel in place), that's for sure!

Thanks, Bob, for stocking such parts. I'll contact you off list sometime soon and order a few...

73,

Mark N8MH

At 12:11 AM 4/23/2013 +0000, you wrote:
>
>
>The paddle has the 2 long fingers but seldom break...
>The paddle also has two small keeper tabs inside that tend to break off or crack, thus a loose paddle...
>If you can remove with padded pliers then gently touch the small keeper tabs, they should be stiff... If one side moves then put a dab of JB-Weld Quick from the small tab to the button body...
>I sell the paddles for $6.00 each plus my cost to mail ($2.00)...
>Hope this helps...
>Bob
>********
>
>--- In <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>>
>> Mark,
>>
>> Â Welcome to another common problem of the KW hybrids. The "paddles" have two long fingers on them that go into the front of the switch.
>> When one gets broken, for what ever reason...the "paddle" will do just what you describe. There is a guy who is selling replacements on ebay.
>> They are not exact copies of the originals...but very close and very functional replacements., or Bob Mankser...ke5ftf..may have some Â Â Â

>>
>> Â
>> 73Â Joe
>> WB7UQU
>>
>>
>>
>> _____
>> From: Mark L. Hammond <marklhammond@...>
>> To: <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>> Sent: Monday, April 22, 2013 1:04 PM
>> Subject: [TS-520_820_530_830] TS-820S "Send" button question
>>
>>
>>
>> Â
>> Hello all,
>>
>> A few weeks ago I bought an amazingly clean TS-820S. The knobs and front
>> panel were so clean I didn't even have to clean them, and the inside was
>> equally clean. Score!
>>
>> Now, the non-technical question of the day :)
>>
>> The only thing I can find wrong with it is the "Send" button is "loose."
>> It's like the plastic toggle cover is no longer seating on the actual
>> switch--but I can't say for sure whether it's just the plastic
>> toggle/cover, or if the actual switch underneath is actually bad.
>>
>> I can press it "in" and it works better, and wiggles less, but it's clearly
>> not right. The switch functions, which leads me to believe it's just the
>> press on plastic cover...
>>
>> Does anybody have any "tricks" in figuring out if I need to replace just
>> the cover or the cover+switch? Of course, removing the front panel is the
>> obvious way--but I'd like to have the actual replacement part(s) on hand
>> before taking it apart...
>>
>> Neither part is what I could consider to be "cheap" and I don't have any
>> spare covers or switches!
>>
>> Thanks,
>>
>> --
>> Mark L. Hammond [N8MH]
>>
>> [Non-text portions of this message have been removed]
>>
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>>

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>> [Non-text portions of this message have been removed]
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[Non-text portions of this message have been removed]

41833. Re: Need some help with an RF board from TS-830.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 01:31:22 UTC
From: bartbrummans
Topic: 41828 Message: 41833

Well, with nothing to lose, I pulled out L41 and it is shorted across all pins...

Where can I get the wire that is needed to rewind it?
Also was there not a fix from KW to guard against transients?...

73
Bart

--- In TS-520_820_530_830@yahoogroups.com, "Bob" <ke5ftf@...> wrote:
>
> L41 is inline with the antenna input...
> I can't count how many have emailed me wanting the L41.. :(
> I believe that someone on the forum has rewound L41...
> I am sure they will respond to you...
> Bob
> **********
>
> --- In TS-520_820_530_830@yahoogroups.com, "bartbrummans" <cocobean64@> wrote:
> >
> > First off...
> > I'm not an electronics engineer by any means, my education on that was two years of schooling, learning on my own, and poking and prodding.
> > But I enjoy it, and it keeps me busy.
> >
> > So..
> > I've gotten myself into a TS-830, but it had a weak (deaf) receive.
> > Got the diagram and researched the net for possible causes.
> >
> > From what I've found, it could be L41, D2, Q1.
> > D2 checks fine (with multimeter)..
> > Q1 was replaced...
> >
> > I have some receive now, but only very strong signals move the S-meter.
> > Compared to my other radio, this TS-830 is still "deaf" to speak of.
> >
> > Now here is some "backwoods" diagnostics...
> > If I touch the tabs of VC-2, the noise level increases drastically and the S-meter will start to jump up.
> >
> > This leads me to believe that the problem lies somewhere between L13 and the Ant input (TP1). Any input?
> >
> > Could L41 be "bad" but still let strong signals through?.
> > What is the best way to test L41? (What readings should I see?)
> >
> > 73

> > Bart
> >
>

41834. Re: Need some help with an RF board from TS-830.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 02:40:37 UTC
From: wn5y
Topic: 41828 Message: 41834

I am having the same problem but with a slight variation. The L41 will slightly tune but not peak the 160 adjustment for which it is intended. And I have low receive on 160, 80, and 40.

I have studied all the posts for L41 and found one person who noted the slight tuning of L41, but I don't think he got a reply. L41 looks perfect (I have had it out a couple of times to inspect it) so didn't rewind it. I did make some measurements on it and it still seemed fine, but I don't have them available.

I am also interested in the readings it is supposed to have. L41 one looks perfect with bright copper wire with no shorts between the primary and secondary.

I went over the RF board in this area of interest and resoldered everything I could think it needed but had no success solving the problem.

Q1 is good, signals are good if I bypass L41 as per troubleshooting instructions.

73,

David

> Compared to my other radio, this TS-830 is still "deaf" to speak of.
>
> Now here is some "backwoods" diagnostics...
> If I touch the tabs of VC-2, the noise level increases drastically and the S-meter will start to jump up.
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> This leads me to believe that the problem lies somewhere between L13 and the Ant input (TP1). Any input?
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> Could L41 be "bad" but still let strong signals through?.
> What is the best way to test L41? (What readings should I see?)
>
> 73
> Bart
>

41835. Re: [TS-520_820_530_830] Re: TS-820S "Send" button question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 03:38:37 UTC
From: Joseph Stiles
Topic: 41825 Message: 41835

Mark, glad I could help

73 Joe
WB7UQU

From: Mark L. Hammond <marklhammond@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, April 22, 2013 6:03 PM
Subject: Re: [TS-520_820_530_830] Re: TS-820S "Send" button question

Thanks Bob and Joe.

Joe, confirming that I could pull it off was a great tip. I was SOOo tempted, but resisted until I asked here :) I hated to break something.

I did pull the paddle off, and it has only 1 of the long tabs. I actually swapped with the NB paddle, since the SEND button gets used a whole lot more. They come off easier than they go back on (with front panel in place), that's for sure!

Thanks, Bob, for stocking such parts. I'll contact you off list sometime soon and order a few...

73,

Mark N8MH

At 12:11 AM 4/23/2013 +0000, you wrote:
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>The paddle has the 2 long fingers but seldom break...
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>I sell the paddles for $6.00 each plus my cost to mail ($2.00)...
>Hope this helps...
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>********
>
>--- In <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>>
>> Mark,
>>
>> Â Welcome to another common problem of the KW hybrids. The "paddles" have two long

fingers on them that go into the front of the switch.
>> When one gets broken, for what ever reason...the "paddle" will do just what you describe. There is a guy who is selling replacements on ebay.
>> They are not exact copies of the originals...but very close and very functional replacements., or Bob Mankser...ke5ftf..may have some Â Â Â

>> Thanks,
>>
>> --
>> Mark L. Hammond [N8MH]
>>
>> [Non-text portions of this message have been removed]
>>
>>
>>
>>
>> [Non-text portions of this message have been removed]
>>
>
>

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[Non-text portions of this message have been removed]

41836. Re: [TS-520_820_530_830] Re: Need some help with an RF board from TS-830.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 03:48:22 UTC
From: Joseph Stiles
Topic: 41828 Message: 41836

Bart,

Gordon...n6wk...of this board has rewound a few....I have done one...the wire is #42 enameled copper...real fine stuff...you will need
lots of magnification and bright light..and STEADY hand! Go SLOW and take close-up digital pics or make good notes.
Go to: k4eaa.com and scroll through the FAQ section until you find the section on L41.

This web site belongs to Ken Kemski...a wealth of knowledge on KW hybrids

73 Joe
WB7UQU

From: Bob <ke5ftf@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, April 22, 2013 4:57 PM
Subject: [TS-520_820_530_830] Re: Need some help with an RF board from TS-830.

L41 is inline with the antenna input...
I can't count how many have emailed me wanting the L41.. :(
I believe that someone on the forum has rewound L41...
I am sure they will respond to you...
Bob
****

--- In TS-520_820_530_830@yahoogroups.com, "bartbrummans" <cocobean64@...> wrote:
>
> First off...
> I'm not an electronics engineer by any means, my education on that was two years of schooling, learning on my own, and poking and prodding.
> But I enjoy it, and it keeps me busy.
>
> So..
> I've gotten myself into a TS-830, but it had a weak (deaf) receive.
> Got the diagram and researched the net for possible causes.
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> From what I've found, it could be L41, D2, Q1.
> D2 checks fine (with multimeter)..
> Q1 was replaced...
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> Now here is some "backwoods" diagnostics...
> If I touch the tabs of VC-2, the noise level increases drastically and the S-meter will start to jump up.
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> Could L41 be "bad" but still let strong signals through?.
> What is the best way to test L41? (What readings should I see?)
>
> 73
> Bart
>

[Non-text portions of this message have been removed]

41837. RE: [TS-520_820_530_830] Re: Need some help with an RF board from TS-830.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 06:16:47 UTC
From: fpath fpath
Topic: 41828 Message: 41837

Have a look in the file section if you have to go through the horrible task of rewinding L41, make sure you have plenty of time and patience! Have a look at all the fingers on the wafer switch on the RF board and turn through its range, making sure all fingers touch lands. One thing I have found in the past is the SO239 on rear panel may have broken wire connecting as these panel mounts work loose. Remove and reattach all molex connectors on RF board, use a little deoxit to ensure they are clean and have good electrical connection. If you have to remove board have a look at the foil side where molex connectors connect to board, this is a typical area of issue as the pins dont always have good electrical connection and have a tendency to be cold joint, if there is a cold joint remove old solder pull pin out give sand and then resolder using good tin\lead solder, be careful as these board have a tendency to lift pads and tracjs when heated. turn radio over and with radio turned on in receive , next to the final board there is a tin shield that has the antenna relay, remove the shield and give relay a tap, if there is any significant difference in receive maybe the antenna relay. Whilst your at it maybe remove all moelx connectors on AF, IF and PLL boards, becareful when removing these molex connectors, try not to wabble them as this can crack solder. These are the basic steps to try before removing L41, Q1 etc. the 3SK73gr dualgate FET is still available new.

Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: ke5ftf@mail.com
Date: Mon, 22 Apr 2013 23:57:12 +0000
Subject: [TS-520_820_530_830] Re: Need some help with an RF board from TS-830.

L41 is inline with the antenna input...
I can't count how many have emailed me wanting the L41.. :(
I believe that someone on the forum has rewound L41...
I am sure they will respond to you...
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> So..
> I've gotten myself into a TS-830, but it had a weak (deaf) receive.
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> D2 checks fine (with multimeter)..
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> What is the best way to test L41? (What readings should I see?)
>
> 73
> Bart
>

[Non-text portions of this message have been removed]

41838. Re: Need some help with an RF board from TS-830.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 09:04:31 UTC
From: larry shorthill
Topic: 41828 Message: 41838

Has anyone found a good substitute for L41? That is, has someone measured inductance and range on the coil so that an acceptable part could be more easily fabricated than rewinding the original part with extremely fine wire, etc. Magnetic materials have progressed a lot since the early 80s such that a 160M coil of yore could be very different if done today. Just a thought but if a simple substitute that is easy to manufacture in the hundreds or even by the operator hand winding one, a solution for a shorted or open L41 could be a lifesaver and much less frustrating than using ultra fine magnet wire.

Does anyone know the specs on the coil? I know a lot of magnetics companies who would be happy to provide me core samples.

Cheers
Larry
KS7J

[Non-text portions of this message have been removed]

41839. Kenwood TS510

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 09:52:56 UTC
From: Behiels JeanPierre
Topic: 41839 Message: 41839

Members;

I have obtained a old TS510 transceiver without the external VFO-5D.
I will make a try with this TRX without the use of this external VFO.
Did I also have to put a bridge between pins 8 and 9 of the 9 pin remote VFO connector on the back of the transceiver ??
In the user manual of the later TS515 model there is some attention to the 9 pins connector on the banck,but in the manual of the earlyer TS510 I could not find any information on this subject .. ??
I could do the same has on a TS515 but I am a little bit scared to burn this nice set..
I look forward if someone has some details about this use.

Regards Jean ON4AEF.

[Non-text portions of this message have been removed]

41840. Re: Need some help with an RF board from TS-830.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 11:08:10 UTC
From: Terry Wagoner
Topic: 41828 Message: 41840

Not enough to check for shorts from Primary to Secondary. One shorted adjacent turn on Primary or Secondary will significantly alter the inductive reactance of the winding. DC ohmic resistance wont show a turn to turn short.

If you have the transformer out couple of ways to test it. One is measure the inductance with LCR bridge and/or excite it with calibrated sig gen and confirm the voltage step-up ratio.

Here are the values from my notes. Suggest you check with Gordon to see if he has recorded values as well.
1. Primary 6 turns #42, 0.30 ohms, 0.850uhy
2. Secondary 26 turns #42, 1.00 ohms, 15.41uhy

Inductance was measured with the slug tuned core approx 1 turn from top of former.

I have looked at Toko IF transformer catalog and havent found any sub. Did not do exhaustive search.

Terry k9TW

--- In TS-520_820_530_830@yahoogroups.com, "wn5y" <wn5y@...> wrote:
>
> I am having the same problem but with a slight variation. The L41 will slightly tune but not peak the 160 adjustment for which it is intended. And I have low receive on 160, 80, and 40.
>
> I have studied all the posts for L41 and found one person who noted the slight tuning of L41, but I don't think he got a reply. L41 looks perfect (I have had it out a couple of times to inspect it) so didn't rewind it. I did make some measurements on it and it still seemed fine, but I don't have them available.
>
> I am also interested in the readings it is supposed to have. L41 one looks perfect with bright copper wire with no shorts between the primary and secondary.
>
> I went over the RF board in this area of interest and resoldered everything I could think it needed but had no success solving the problem.
>
> Q1 is good, signals are good if I bypass L41 as per troubleshooting instructions.
>
> 73,
>
> David
>
>
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> > 73
> > Bart
> >
>

41841. Re: Need some help with an RF board from TS-830.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 11:37:23 UTC
From: Terry Wagoner
Topic: 41828 Message: 41841

In addition to losing L41 and Q1 I have seen shorted L1 2.7uhy choke in the TS-830 BCB filter. If this choke shorts or inductance varies it will shunt signal to ground. I have not seen bad L3/L4 8.830 traps.

Transients generally caused from two sources.
1. ESD (near by lighting)
2. Inadvertant transmit RF

Can use an external Front End Saver. People who work multi-transmitter contest stations use these devices. Also those who use separate receive antennas (like a Beverage on 160M) use front end savers. These devices use high speed reed relays to disconnect the antenna and ground the receiver in TX mode. Commercial units are available or can home brew.

See KD9SV and OK1RR for examples.

There is not much room inside the rigs to install passive devices like series lamp bulbs and back to back switching diodes. This method was used in 60s and 70s rigs like the Drake receivers. Not sure how well they actually worked. Have seen the series lamp bulbs burned out.

Also there are more modern devices like TVS Diodes(see Little Fuse catalog), PIN Diode Limiters (see AVAGO catalog)and Gas Discharge Tubes (see Mouser 652-2027-09-BLF). Again problem is room on RX side of TR relay to install these.

You can place a Static Bleed on the rig buy placing a Coax Tee on the rig S)-239 and at the open end of the Tee solder two 1meg ohm 1/2watt resistors in parallel. Wont affect TX or RX operation. Wont help with inadvertant TX RF. Some recommend using a RF choke in lieu of the resistors but I would not as all chokes have series resonances that may fall in ham bands and transmit RF can burn up the choke.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "bartbrummans" <cocobean64@...> wrote:
>
> Well, with nothing to lose, I pulled out L41 and it is shorted across all pins...
>
> Where can I get the wire that is needed to rewind it?
> Also was there not a fix from KW to guard against transients?...
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> 73
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> --- In TS-520_820_530_830@yahoogroups.com, "Bob" <ke5ftf@> wrote:
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> > I can't count how many have emailed me wanting the L41.. :(
> > I believe that someone on the forum has rewound L41...

> > I am sure they will respond to you...
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41842. Re: Need some help with an RF board from TS-830.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 11:52:17 UTC
From: Terry Wagoner
Topic: 41828 Message: 41842

Sorry Typo 5.41 uhy

. Secondary 26 turns #42, 1.00 ohms, 15.41uhy
>
> >
>

41843. TS-820s...No display lit

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 12:52:38 UTC
From: wintertree
Topic: 41843 Message: 41843

Greeting all....I need a pep talk ! I have a couple of 820's on the bench with the same problem....No digital displays operating ...nothing ....Went throught the service manual and saw at the DG-1 trouble shooting page....to check voltage at the "cof" terminal....stated that if 1.2v shows there...a defect in the PLL circuit is the cause....that is the case with both radio's...both show 1.2v.....spent the last few days with schematics....tracing circuits and testing voltages and have not found a resolution....When the "cof" wire is pulled out of circuit...the displays lite up properly....the service manual states that this means the counters work normally....I have limited experience with trouble shooting....I have some equipment here VTVM...scope ...signal Gen....and use it poorly....but can use it....Can someone steer me in the direction to start checking further....?I really enjoy being self reliant but realize when I need a little push from those with more experience......Thanks all..

Regards...Wes....VA6DWH

41844. Kenwood Front End Protection

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 13:20:14 UTC
From: Terry Wagoner
Topic: 41844 Message: 41844

I forgot to mention about commercial units like Polyphaser, ICE, and Alpha-delta. I have these in all my coax lines at my antenna entrance panel. So far no lightning induced damage in my TS-830s. I also use Alpha-Delta antenna switches at the operating position. These are pricey but have internal GDT and a ground position. Of course, can also leave coax disconnected off rig when not in use.

Some folks home brew their own version of the ICE unit. Here is a website that shows the schematic for the internals of the ICE unit.

http://www.iceradioproducts.com/33.htm

Can build in diecast box with SO-239 on each end. Here are the values.
1. Shunt resistor is 1 meg ohm
2. DC blocking cap is .01 uf
3. Gas discharge tube can be purchased from Digi-Key, Mouser. Digi-key has a good primer to help you size the GDT.
4. RF choke is 100uhy.

Terry K9TW

41845. Re: Need some help with an RF board from TS-830.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 14:50:53 UTC
From: bartbrummans
Topic: 41828 Message: 41845

L41 must be a 'special" or custom wind.....

Well, I've found some #42 enameled wire...

I'm presuming that the 6 turn side is the Primary ultimately connected towards the Ant, the 26 turn secondary towards Q1.

When winding the transformer:
- Primary first or secondary?
- Any particular direction that the windings have to go?

I did find some Toko replacements on ebay, wrong turns but I need a case and slug...

What about L13? How "compatible" is this? (just curious....)

Bart

--- In TS-520_820_530_830@...m, "Terry Wagoner" <wagstw46@...> wrote:
>
> Sorry Typo 5.41 uhy
>
> . Secondary 26 turns #42, 1.00 ohms, 15.41uhy
> >
> > >
> >
>

41846. Re: Kenwood TS-530s Recommended Microphones

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 15:12:55 UTC
From: bartbrummans
Topic: 41815 Message: 41846

Tom

I've had very good results / reports with the Kenwood MC-60 Mic...
New these are $150 or so (Mic and base) at R&L, or flea-bay...

Normal configuration is for an 8-pin radio, but with another cord, or plug, or adapter they easily work with the 4-pin rigs..

Right now I have a 530, 820, 830, 940 all using this mic..

An MC-50 will play nice as well, and it's a direct plug-in.

It all depends on your budget. Everyone (including myself) will have an opinion on what may be best....

BTW...the 530 is an awesome solid performer...don't know if this is your first run with ham (amateur) radio, make sure your antenna set-up is good. Great radios on poor antennas won't perform.

Good luck..
73
Bart
KB8BAB

--- In TS-520_820_530_830@yahoogroups.com, "ThomasA" <tsnarcher@...> wrote:
>
>
> Hello All,
>
> My nu-2-me TS-530s is on its way and I am researching microphones that
> would be a good match.
>
> I was thinking about the relatively new Heil HM-12, but I might need a
> higher impedance mic, I believe that the HM-12 is for lower impedance
> applications.
>
> Of the vintage microphones, or the newer ones, does anyone have a
> suggestion for one that works exceptionally well with the 530s?
>
> Any input would be appreciated!
>
> I am excited to be a part of this group, and to get started with what
> appears to be a great rig.
>
> Thank You!!
>
>

>
> Tom
>

41847. Re: [TS-520_820_530_830] Re: Kenwood TS-530s Recommended Microphones

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 15:29:07 UTC
From: Bob Macklin
Topic: 41815 Message: 41847

The MC-60 is the same as the MC-50 but the MC-60 has additional controls on the stand that are not useable with the hybrids.

MC-50s are a common item on eBay.

I have both.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: bartbrummans
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, April 23, 2013 8:12 AM
Subject: [TS-520_820_530_830] Re: Kenwood TS-530s Recommended Microphones

Tom

I've had very good results / reports with the Kenwood MC-60 Mic...
New these are $150 or so (Mic and base) at R&L, or flea-bay...

Normal configuration is for an 8-pin radio, but with another cord, or plug, or adapter they easily work with the 4-pin rigs..

Right now I have a 530, 820, 830, 940 all using this mic..

An MC-50 will play nice as well, and it's a direct plug-in.

It all depends on your budget. Everyone (including myself) will have an opinion on what may be best....

BTW...the 530 is an awesome solid performer...don't know if this is your first run with ham (amateur) radio, make sure your antenna set-up is good. Great radios on poor antennas won't perform.

Good luck..
73
Bart
KB8BAB

--- In TS-520_820_530_830@yahoogroups.com, "ThomasA" <tsnarcher@...> wrote:
>
>
> Hello All,
>

> My nu-2-me TS-530s is on its way and I am researching microphones that
> would be a good match.
>
> I was thinking about the relatively new Heil HM-12, but I might need a
> higher impedance mic, I believe that the HM-12 is for lower impedance
> applications.
>
> Of the vintage microphones, or the newer ones, does anyone have a
> suggestion for one that works exceptionally well with the 530s?
>
> Any input would be appreciated!
>
> I am excited to be a part of this group, and to get started with what
> appears to be a great rig.
>
> Thank You!!
>
>
>
> Tom
>

[Non-text portions of this message have been removed]

41848. Re: Kenwood TS-530s Recommended Microphones

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 15:32:23 UTC
From: rkersey tds.net
Topic: 41815 Message: 41848

Beginners may not realize that their answer is in the manual or in the
files section.
All that is necessary is to write: "Your answer will be found in the files
section at
such and such place."

If you keep answering the repetitive questions, you will just encourage
people to
ask them again and again. This is the expert's call.

73,
Roy Kersey
KI4HAG

[Non-text portions of this message have been removed]

41849. Re: Need some help with an RF board from TS-830.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 15:45:40 UTC
From: Terry Wagoner
Topic: 41828 Message: 41849

Bart:

I have only rewound two of these. Gordon is the expert. Check with him before proceeding.

From my memory you wind the 6 turn primary on the bottom of the spindle and the 26 turn secondary on the top. Try not to scramble wind. There will be some overlap. The end windings will cross over to make the connections. I dont see in my notes if I wound CCW or CW direction, but I think CCW?

I try to use solderable magnet wire if I can get it. If not I melt a pool of solder on pine board and wire end thru it with light pressure from the soldering iron tip and it does a good job of removing the insulation and tinning the lead.

Just need a magnifier and steady hand (no coffee!).

This transformer is approx 4:1 step up ratio so yes 6 turns is primary winding that cold leg is grounded. The middle pin of the three has no internal connection.

If possible measure the inductance of each winding and/or excite with your sig gen and look at output level with RF millivolt meter or O-scope before installing back in the rig. Not fun to have to pull board again if it doesnt work.

I have never removed and tested L13.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "bartbrummans" <cocobean64@...> wrote:
>
> L41 must be a 'special" or custom wind.....
>
> Well, I've found some #42 enameled wire...
>
> I'm presuming that the 6 turn side is the Primary ultimately connected towards the Ant, the 26 turn secondary towards Q1.
>
> When winding the transformer:
> - Primary first or secondary?
> - Any particular direction that the windings have to go?
>
> I did find some Toko replacements on ebay, wrong turns but I need a case and slug...
>
> What about L13? How "compatible" is this? (just curious....)
>
> Bart
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:

> >
> > Sorry Typo 5.41 uhy
> >
> > . Secondary 26 turns #42, 1.00 ohms, 15.41uhy
> > >
> > > >
> > >
> >
>

41850. Driver screen grid voltage

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 11:20:59 UTC
From: gerry germany
Topic: 41850 Message: 41850

Input voltage is 261 vdc pin 7 174 vdc voltage divider is good and bypass cap. I pulled the board and tested with just 210a connected and all is well. Acts like its keyed or something?

41851. Stuck Transmit Coil

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 12:34:43 UTC
From: paul.nussbaum
Topic: 41851 Message: 41851

With the help and advice from a previous thread, I was able to fashion one of my adjustment tools to turn all of the ANT and MIX coils fine (and perform the adjustment procedure for those).

I used a hard plastic chop stick and sand paper to fashion an adjustment tool for the larger slots in the transmit coils that works for all of them except 3.5MHz, which won't turn. I did the adjustment for all the others including T1 on RF and T10 on IF in conjunction with the 1.8MHz TX coil adjustment.

I dabbed that 3.5 TX coil top with a q-tip of WD-40 and let it sit for a day, still wouldn't turn, gave it another dab and another day... still won't turn.

It is not cracked or broken, just tight... tight enough that the very tip of the chop stick came off and is now resting in the little slot; I'll fish it out shortly...

I think it does need adjustment because 3.5MHz tunes up "differently" than all the other bands - LOAD control goes full clockwise without reaching RF peak. All the other bands peak LOAD in the center range.

Here is a tuneup snapshot of the bands to provide some data.
All /x figures are 12 hour clock face knob positions except Plate.

29.5MHZ 95W @ 210ma Load/11 Plate/28 Drive/2 Car/11:30
29MHz 105W @ 210ma Load/11 Plate/28 Drive/12 Car/1
28.5MHz 80W @ 210ma Load/11 Plate/28 Drive/11 Car/11
28MHz 80W @ 210ma Load/11 Plate/28 Drive/10 Car/11
21MHz 80W @ 210ma Load/12 Plate/21 Drive/12 Car/9:30
14MHz 80W @ 225ma Load/12 Plate/14 Drive/11 Car/10:30
7MHz 75W @ 225ma Load/11 Plate/(3.5!) Drive/10 Car/9
3.5MHz 65W @250ma Load/CW Plate/3.5 Drive/11 Car/10:30
1.8MHz 65W @250ma Load/1 Plate/18 Drive/11 Car/10

Is this stuck coil causing low power output on the lower bands around 3.5, as well?

Any ideas on how to free up this coil?
Something other than WD-40?
Application of heat?
Or spray it with cold?

Thanks,
Paul
AD5FT

41852. Re: Kenwood TS-530s Recommended Microphones

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 13:56:39 UTC
From: Thomas Archer
Topic: 41815 Message: 41852

Ouch....

[Non-text portions of this message have been removed]

41853. Re: [TS-520_820_530_830] Re: Kenwood TS-530s Recommended Microphones

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 15:28:23 UTC
From: Thomas Archer
Topic: 41815 Message: 41853

Thank You Bart,

This is not my first ham rig , but my first with the Kenwood hybrids.

I'm pretty excited.

Tom

From: bartbrummans <cocobean64@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, April 23, 2013 10:12 AM
Subject: [TS-520_820_530_830] Re: Kenwood TS-530s Recommended Microphones

Tom

I've had very good results / reports with the Kenwood MC-60 Mic...
New these are $150 or so (Mic and base) at R&L, or flea-bay...

Normal configuration is for an 8-pin radio, but with another cord, or plug, or adapter they easily work with the 4-pin rigs..

Right now I have a 530, 820, 830, 940 all using this mic..

An MC-50 will play nice as well, and it's a direct plug-in.

It all depends on your budget. Everyone (including myself) will have an opinion on what may be best....

BTW...the 530 is an awesome solid performer...don't know if this is your first run with ham (amateur) radio, make sure your antenna set-up is good. Great radios on poor antennas won't perform.

Good luck..
73
Bart
KB8BAB

--- In mailto:TS-520_820_530_830%40yahoogroups.com, "ThomasA" <tsnarcher@...> wrote:
>
>
> Hello All,
>
> My nu-2-me TS-530s is on its way and I am researching microphones that
> would be a good match.
>
> I was thinking about the relatively new Heil HM-12, but I might need a

> higher impedance mic, I believe that the HM-12 is for lower impedance
> applications.
>
> Of the vintage microphones, or the newer ones, does anyone have a
> suggestion for one that works exceptionally well with the 530s?
>
> Any input would be appreciated!
>
> I am excited to be a part of this group, and to get started with what
> appears to be a great rig.
>
> Thank You!!
>
>
>
> Tom
>

[Non-text portions of this message have been removed]

41854. Re: [TS-520_820_530_830] Re: Need some help with an RF board from TS-830.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 16:04:12 UTC
From: n6wk@...
Topic: 41828 Message: 41854

Primary first. starting at the bottom.
Wound counterclockwise.

Gordon

On 4/23/2013 7:50 AM, bartbrummans wrote:
>
> L41 must be a 'special" or custom wind.....
>
> Well, I've found some #42 enameled wire...
>
> I'm presuming that the 6 turn side is the Primary ultimately connected
> towards the Ant, the 26 turn secondary towards Q1.
>
> When winding the transformer:
> - Primary first or secondary?
> - Any particular direction that the windings have to go?
>
> I did find some Toko replacements on ebay, wrong turns but I need a
> case and slug...
>
> What about L13? How "compatible" is this? (just curious....)
>
> Bart
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Terry Wagoner"
> <wagstw46@...> wrote:
> >
> > Sorry Typo 5.41 uhy
> >
> > . Secondary 26 turns #42, 1.00 ohms, 15.41uhy
> > >
> > > > >
> > > >
> > >
> >
>
>

41855. New file uploaded to TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 16:06:58 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 262 Message: 41855

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the TS-520_820_530_830
group.

File : /L-41 Rewinding/L41-Rewinding.jpg
Uploaded by : n6wk_skcc3 <n6wk@...>
Description : How to wind L-41

You can access this file at the URL:
http://groups.yahoo.com/group/TS-520_820_530_830/files/L-41%20Rewinding/L41-Rewinding.jpg

To learn more about file sharing for your group, please visit:
http://help.yahoo.com/l/us/yahoo/groups/original/members/web/index.html
Regards,

n6wk_skcc3 <n6wk@...>

41856. Re: New file uploaded to TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 16:37:40 UTC
From: Terry Wagoner
Topic: 262 Message: 41856

Gordon: NICE JOB! Is that Tiny Cad or ??? Terry

--- In TS-520_820_530_830@yahoogroups.com, TS-520_820_530_830@yahoogroups.com wrote:
>
>
> Hello,
>
> This email message is a notification to let you know that
> a file has been uploaded to the Files area of the TS-520_820_530_830
> group.
>
> File : /L-41 Rewinding/L41-Rewinding.jpg
> Uploaded by : n6wk_skcc3 <n6wk@...>
> Description : How to wind L-41
>
> You can access this file at the URL:
>
http://groups.yahoo.com/group/TS-520_820_530_830/files/L-41%20Rewinding/L41-Rewinding.jpg
>
> To learn more about file sharing for your group, please visit:
> http://help.yahoo.com/l/us/yahoo/groups/original/members/web/index.html
> Regards,
>
> n6wk_skcc3 <n6wk@...>
>

41857. Re: [TS-520_820_530_830] Re: New file uploaded to TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 16:56:18 UTC
From: n6wk@...
Topic: 262 Message: 41857

Terry,
I didn't make it. Another guy made it for me and I can't remember who it was. :-(
Yes, he did a nice Job.
I did make some videos, but never posted them as I didn't like the sound of my voice....LOL

73,
Gordon
N6WK

On 4/23/2013 9:37 AM, Terry Wagoner wrote:
>
> Gordon: NICE JOB! Is that Tiny Cad or ??? Terry
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>,
> TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com> wrote:
> >
> >
> > Hello,
> >
> > This email message is a notification to let you know that
> > a file has been uploaded to the Files area of the TS-520_820_530_830
> > group.
> >
> > File : /L-41 Rewinding/L41-Rewinding.jpg
> > Uploaded by : n6wk_skcc3 <n6wk@...>
> > Description : How to wind L-41
> >
> > You can access this file at the URL:
> >
>
http://groups.yahoo.com/group/TS-520_820_530_830/files/L-41%20Rewinding/L41-Rewinding.jpg
>
> >
> > To learn more about file sharing for your group, please visit:
> > http://help.yahoo.com/l/us/yahoo/groups/original/members/web/index.html
> > Regards,
> >
> > n6wk_skcc3 <n6wk@...>
> >
>

>

41858. Re: New file uploaded to TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 17:01:44 UTC
From: n6wk_skcc3
Topic: 262 Message: 41858

I went back through my Emails. The Drawing was done and shared with me by Joe WW8X back in 2011.

Thanks Joe !

73,
Gordon
N6WK

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Terry,
> I didn't make it. Another guy made it for me and I can't remember who it
> was. :-(
> Yes, he did a nice Job.
> I did make some videos, but never posted them as I didn't like the sound
> of my voice....LOL
>
> 73,
> Gordon
> N6WK
>
>
> On 4/23/2013 9:37 AM, Terry Wagoner wrote:
> >
> > Gordon: NICE JOB! Is that Tiny Cad or ??? Terry
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>,
> > TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com> wrote:
> > >
> > >
> > > Hello,
> > >
> > > This email message is a notification to let you know that
> > > a file has been uploaded to the Files area of the TS-520_820_530_830
> > > group.
> > >
> > > File : /L-41 Rewinding/L41-Rewinding.jpg
> > > Uploaded by : n6wk_skcc3 <n6wk@>
> > > Description : How to wind L-41
> > >
> > > You can access this file at the URL:
> > >
> >

http://groups.yahoo.com/group/TS-520_820_530_830/files/L-41%20Rewinding/L41-Rewinding.jpg
> >
> > >
> > > To learn more about file sharing for your group, please visit:
> > > http://help.yahoo.com/l/us/yahoo/groups/original/members/web/index.html
> > > Regards,
> > >
> > > n6wk_skcc3 <n6wk@>
> > >
> >
> >
>

41859. Re: Need some help with an RF board from TS-830.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 17:35:01 UTC
From: bartbrummans
Topic: 41828 Message: 41859

Thank you..thank you...

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Primary first. starting at the bottom.
> Wound counterclockwise.
>
> Gordon
>
>
> On 4/23/2013 7:50 AM, bartbrummans wrote:
> >
> > L41 must be a 'special" or custom wind.....
> >
> > Well, I've found some #42 enameled wire...
> >
> > I'm presuming that the 6 turn side is the Primary ultimately connected
> > towards the Ant, the 26 turn secondary towards Q1.
> >
> > When winding the transformer:
> > - Primary first or secondary?
> > - Any particular direction that the windings have to go?
> >
> > I did find some Toko replacements on ebay, wrong turns but I need a
> > case and slug...
> >
> > What about L13? How "compatible" is this? (just curious....)
> >
> > Bart
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Terry Wagoner"
> > <wagstw46@> wrote:
> > >
> > > Sorry Typo 5.41 uhy
> > >
> > > . Secondary 26 turns #42, 1.00 ohms, 15.41uhy
> > > >
> > > > > >
> > > > > >
> > > > >
> > >
> > >
>

41860. Re: Need some help with an RF board from TS-830.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 17:45:19 UTC
From: bartbrummans
Topic: 41828 Message: 41860

Nice jpg in the file section on this..Thanks Gordon!

--- In TS-520_820_530_830@yahoogroups.com, "bartbrummans" <cocobean64@...> wrote:
>
> Thank you..thank you...
>
> --- In TS-520_820_530_830@yahoogroups.com, n6wk@ wrote:
> >
> > Primary first. starting at the bottom.
> > Wound counterclockwise.
> >
> > Gordon
> >
> >
> > On 4/23/2013 7:50 AM, bartbrummans wrote:
> > >
> > > L41 must be a 'special" or custom wind.....
> > >
> > > Well, I've found some #42 enameled wire...
> > >
> > > I'm presuming that the 6 turn side is the Primary ultimately connected
> > > towards the Ant, the 26 turn secondary towards Q1.
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> > > I did find some Toko replacements on ebay, wrong turns but I need a
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> > >
> > > What about L13? How "compatible" is this? (just curious....)
> > >
> > > Bart
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Terry Wagoner"
> > > <wagstw46@> wrote:
> > > >
> > > > Sorry Typo 5.41 uhy
> > > >
> > > > . Secondary 26 turns #42, 1.00 ohms, 15.41uhy
> > > > >
> > > > > >
> > > > > >
> > > > >
> > > >

> > >
> > >
> >
>

41861. Re: New file uploaded to TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 17:56:05 UTC
From: Terry Wagoner
Topic: 262 Message: 41861

Oh Yes Joe Lovarti. I have worked with him and his son. Good guys. I think Joe Sr was graphic designer so he has the tools and the skill. Terry

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Terry,
> I didn't make it. Another guy made it for me and I can't remember who it
> was. :-(
> Yes, he did a nice Job.
> I did make some videos, but never posted them as I didn't like the sound
> of my voice....LOL
>
> 73,
> Gordon
> N6WK
>
>
> On 4/23/2013 9:37 AM, Terry Wagoner wrote:
> >
> > Gordon: NICE JOB! Is that Tiny Cad or ??? Terry
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>,
> > TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com> wrote:
> > >
> > >
> > > Hello,
> > >
> > > This email message is a notification to let you know that
> > > a file has been uploaded to the Files area of the TS-520_820_530_830
> > > group.
> > >
> > > File : /L-41 Rewinding/L41-Rewinding.jpg
> > > Uploaded by : n6wk_skcc3 <n6wk@>
> > > Description : How to wind L-41
> > >
> > > You can access this file at the URL:
> > >
> >
http://groups.yahoo.com/group/TS-520_820_530_830/files/L-41%20Rewinding/L41-Rewinding.jpg
> > >
> > >
> > > To learn more about file sharing for your group, please visit:
> > > http://help.yahoo.com/l/us/yahoo/groups/original/members/web/index.html

> > > Regards,
> > >
> > > n6wk_skcc3 <n6wk@>
> > >
> >
> >
>

41862. Re: [TS-520_820_530_830] TS-820s...No display lit

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 19:37:45 UTC
From: Mike
Topic: 41843 Message: 41862

The TS-820 and the TS-820S can both operate without the digital display working.

Did you check the rear 9 pin remote VFO socket for either the factory jumper plug or a jumper wired between pins 8 and 9 before you started taking voltage measurements?I didn't see any indication that you did this check in your initial posting. If you have not then that should be the first place you start before venturing into taking voltage measurements.

If the factory jumper plug is not plugged into the rear remote VFO socket OR if the plug is not available, a wire jumper connected between pins 8 and 9 on the rear remote VFO socket, the VFO output will be "zero", the PLL Unit will switch to an "Unlock" state, the digital display will be dark/blank, and the 820 will NOT receiver and transmit.

73
Mike
W5RKL

On 4/23/2013 7:52 AM, wintertree wrote:
>
> Greeting all....I need a pep talk ! I have a couple of 820's on the
> bench with the same problem....No digital displays operating
> ...nothing ....Went throught the service manual and saw at the DG-1
> trouble shooting page....to check voltage at the "cof"
> terminal....stated that if 1.2v shows there...a defect in the PLL
> circuit is the cause....that is the case with both radio's...both show
> 1.2v.....spent the last few days with schematics....tracing circuits
> and testing voltages and have not found a resolution....When the "cof"
> wire is pulled out of circuit...the displays lite up properly....the
> service manual states that this means the counters work normally....I
> have limited experience with trouble shooting....I have some equipment
> here VTVM...scope ...signal Gen....and use it poorly....but can use
> it....Can someone steer me in the direction to start checking
> further....?I really enjoy being self reliant but realize when I need
> a little push from those with more experience......Thanks all..
>
> Regards...Wes....VA6DWH
>
>

[Non-text portions of this message have been removed]

41863. Re: [TS-520_820_530_830] TS-820s...No display lit

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 19:49:32 UTC
From: Denise Hargreaves
Topic: 41843 Message: 41863

Thanks for the reply Mike....both units have the The jumper plug installed...

Wes...VA6DWH

On 2013-04-23, at 1:37 PM, Mike wrote:

> The TS-820 and the TS-820S can both operate without the digital display
> working.
>
> Did you check the rear 9 pin remote VFO socket for either the factory
> jumper plug or a jumper wired between pins 8 and 9 before you started
> taking voltage measurements?I didn't see any indication that you did
> this check in your initial posting. If you have not then that should be
> the first place you start before venturing into taking voltage measurements.
>
> If the factory jumper plug is not plugged into the rear remote VFO
> socket OR if the plug is not available, a wire jumper connected between
> pins 8 and 9 on the rear remote VFO socket, the VFO output will be
> "zero", the PLL Unit will switch to an "Unlock" state, the digital
> display will be dark/blank, and the 820 will NOT receiver and transmit.
>
> 73
> Mike
> W5RKL
>
> On 4/23/2013 7:52 AM, wintertree wrote:
> >
> > Greeting all....I need a pep talk ! I have a couple of 820's on the
> > bench with the same problem....No digital displays operating
> > ...nothing ....Went throught the service manual and saw at the DG-1
> > trouble shooting page....to check voltage at the "cof"
> > terminal....stated that if 1.2v shows there...a defect in the PLL
> > circuit is the cause....that is the case with both radio's...both show
> > 1.2v.....spent the last few days with schematics....tracing circuits
> > and testing voltages and have not found a resolution....When the "cof"
> > wire is pulled out of circuit...the displays lite up properly....the
> > service manual states that this means the counters work normally....I
> > have limited experience with trouble shooting....I have some equipment
> > here VTVM...scope ...signal Gen....and use it poorly....but can use
> > it....Can someone steer me in the direction to start checking
> > further....?I really enjoy being self reliant but realize when I need
> > a little push from those with more experience......Thanks all..
> >
> > Regards...Wes....VA6DWH
> >
> >

>
> [Non-text portions of this message have been removed]
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>

[Non-text portions of this message have been removed]

41864. TV502/506 cables

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 20:31:10 UTC
From: Rick
Topic: 41864 Message: 41864

I have a TV-502 and a TV-506 I am hooking up to my TS-520. I have one cable with a plug on one end only. I have four (4) plugs ordered and on the way, but I am not sure of the wire I should use to make the jumpers. The cable I have (with the one plug on it) has a couple of small diameter coax cables in it along with different gauges of wire all inside the outer insulation of the cable. The manuals for both the TV-502 and TV-506 do not address the construction of this cable. My main concern is, do I need a special piece of 12 conductor cable using small diameter coax for a couple of the wires or can I simply use any 12 conductor cable? I assume #22 stranded wires within the cable would be sufficient in this case.

Thanks for any assistance,

Rick/K5IAR

[Non-text portions of this message have been removed]

41865. Re: TS-820s...No display lit

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 20:56:47 UTC
From: w5rkl
Topic: 41843 Message: 41865

Have you verified all the required oscillator frequencies are present at the PLL Unit?

Have you verified the VFO output frequency present at the PLL Unit? You can sample the VFO output frequency on the PLL unit board at PLL-1 pin 2 and ground on PLL-1 pin 1.

Have you also verified the CAR Unit signal is present at the PLL Unit? You can sample the CAR Unit signal at the PLL Unit plug PLL-1 Pin 6 and ground on pin 5.

All it takes is one missing signal or the signal is at a level that's unusable by the PLL Unit to cause the PLL to switch to a Unlock state.

73
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Denise Hargreaves <pioneer6@...> wrote:
>
> Thanks for the reply Mike....both units have the The jumper plug installed...
>
> Wes...VA6DWH
>
>
>
>
> On 2013-04-23, at 1:37 PM, Mike wrote:
>
> > The TS-820 and the TS-820S can both operate without the digital display
> > working.
> >
> > Did you check the rear 9 pin remote VFO socket for either the factory
> > jumper plug or a jumper wired between pins 8 and 9 before you started
> > taking voltage measurements?I didn't see any indication that you did
> > this check in your initial posting. If you have not then that should be
> > the first place you start before venturing into taking voltage measurements.
> >
> > If the factory jumper plug is not plugged into the rear remote VFO
> > socket OR if the plug is not available, a wire jumper connected between
> > pins 8 and 9 on the rear remote VFO socket, the VFO output will be
> > "zero", the PLL Unit will switch to an "Unlock" state, the digital
> > display will be dark/blank, and the 820 will NOT receiver and transmit.
> >
> > 73
> > Mike
> > W5RKL
> >
> > On 4/23/2013 7:52 AM, wintertree wrote:

> > >
> > > Greeting all....I need a pep talk ! I have a couple of 820's on the
> > > bench with the same problem....No digital displays operating
> > > ...nothing ....Went throught the service manual and saw at the DG-1
> > > trouble shooting page....to check voltage at the "cof"
> > > terminal....stated that if 1.2v shows there...a defect in the PLL
> > > circuit is the cause....that is the case with both radio's...both show
> > > 1.2v.....spent the last few days with schematics....tracing circuits
> > > and testing voltages and have not found a resolution....When the "cof"
> > > wire is pulled out of circuit...the displays lite up properly....the
> > > service manual states that this means the counters work normally....I
> > > have limited experience with trouble shooting....I have some equipment
> > > here VTVM...scope ...signal Gen....and use it poorly....but can use
> > > it....Can someone steer me in the direction to start checking
> > > further....?I really enjoy being self reliant but realize when I need
> > > a little push from those with more experience......Thanks all..
> > >
> > > Regards...Wes....VA6DWH
> > >
> > >
> >
> > [Non-text portions of this message have been removed]
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>
> [Non-text portions of this message have been removed]
>

41866. Re: TS-820s...No display lit

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 21:11:19 UTC
From: wintertree
Topic: 41843 Message: 41866

Ok Mike....I will check those points....when I get a little down time....thankyou for direction..
Regards...Wes...VA6DWH

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Have you verified all the required oscillator frequencies are present at the PLL Unit?
>
> Have you verified the VFO output frequency present at the PLL Unit? You can sample the VFO output frequency on the PLL unit board at PLL-1 pin 2 and ground on PLL-1 pin 1.
>
> Have you also verified the CAR Unit signal is present at the PLL Unit? You can sample the CAR Unit signal at the PLL Unit plug PLL-1 Pin 6 and ground on pin 5.
>
> All it takes is one missing signal or the signal is at a level that's unusable by the PLL Unit to cause the PLL to switch to a Unlock state.
>
> 73
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Denise Hargreaves <pioneer6@> wrote:
> >
> > Thanks for the reply Mike....both units have the The jumper plug installed...
> >
> > Wes...VA6DWH
> >
> >
> >
> >
> > On 2013-04-23, at 1:37 PM, Mike wrote:
> >
> > > The TS-820 and the TS-820S can both operate without the digital display
> > > working.
> > >
> > > Did you check the rear 9 pin remote VFO socket for either the factory
> > > jumper plug or a jumper wired between pins 8 and 9 before you started
> > > taking voltage measurements?I didn't see any indication that you did
> > > this check in your initial posting. If you have not then that should be
> > > the first place you start before venturing into taking voltage measurements.
> > >
> > > If the factory jumper plug is not plugged into the rear remote VFO
> > > socket OR if the plug is not available, a wire jumper connected between
> > > pins 8 and 9 on the rear remote VFO socket, the VFO output will be

> > > "zero", the PLL Unit will switch to an "Unlock" state, the digital
> > > display will be dark/blank, and the 820 will NOT receiver and transmit.
> > >
> > > 73
> > > Mike
> > > W5RKL
> > >
> > > On 4/23/2013 7:52 AM, wintertree wrote:
> > > >
> > > > Greeting all....I need a pep talk ! I have a couple of 820's on the
> > > > bench with the same problem....No digital displays operating
> > > > ...nothing ....Went throught the service manual and saw at the DG-1
> > > > trouble shooting page....to check voltage at the "cof"
> > > > terminal....stated that if 1.2v shows there...a defect in the PLL
> > > > circuit is the cause....that is the case with both radio's...both show
> > > > 1.2v.....spent the last few days with schematics....tracing circuits
> > > > and testing voltages and have not found a resolution....When the "cof"
> > > > wire is pulled out of circuit...the displays lite up properly....the
> > > > service manual states that this means the counters work normally....I
> > > > have limited experience with trouble shooting....I have some equipment
> > > > here VTVM...scope ...signal Gen....and use it poorly....but can use
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> > > > a little push from those with more experience......Thanks all..
> > > >
> > > > Regards...Wes....VA6DWH
> > > >
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> > >
> > > [Non-text portions of this message have been removed]
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> >
> > [Non-text portions of this message have been removed]
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>

41867. Antenna relay for 530 / 830 source...

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-23 23:05:40 UTC
From: bartbrummans
Topic: 41867 Message: 41867

Info...

Hybrid-Restore has these on their website, as well as on e-bay.
Mine came from there and is working well..

Alternative source is:
http://www.electronicsurplus.com/item/135797/
However there is a min order of $14 and ~S10 shipping.

73
Bart

41868. RE: [TS-520_820_530_830] Stuck Transmit Coil

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-24 00:16:27 UTC
From: fpath fpath
Topic: 41851 Message: 41868

Paul,

I have previously had similar issue with different slugs, I clean tip of soldering iron and then place on slug and gently heat up and turn immediately whilst still hot, works everytime so far!

73's
Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: paul.nussbaum@...
Date: Tue, 23 Apr 2013 12:34:43 +0000
Subject: [TS-520_820_530_830] Stuck Transmit Coil

With the help and advice from a previous thread, I was able to fashion one of my adjustment tools to turn all of the ANT and MIX coils fine (and perform the adjustment procedure for those).

I used a hard plastic chop stick and sand paper to fashion an adjustment tool for the larger slots in the transmit coils that works for all of them except 3.5MHz, which won't turn. I did the adjustment for all the others including T1 on RF and T10 on IF in conjunction with the 1.8MHz TX coil adjustment.

I dabbed that 3.5 TX coil top with a q-tip of WD-40 and let it sit for a day, still wouldn't turn, gave it another dab and another day... still won't turn.

It is not cracked or broken, just tight... tight enough that the very tip of the chop stick came off and is now resting in the little slot; I'll fish it out shortly...

I think it does need adjustment because 3.5MHz tunes up "differently" than all the other bands - LOAD control goes full clockwise without reaching RF peak. All the other bands peak LOAD in the center range.

Here is a tuneup snapshot of the bands to provide some data.
All /x figures are 12 hour clock face knob positions except Plate.

29.5MHZ 95W @ 210ma Load/11 Plate/28 Drive/2 Car/11:30
29MHz 105W @ 210ma Load/11 Plate/28 Drive/12 Car/1
28.5MHz 80W @ 210ma Load/11 Plate/28 Drive/11 Car/11
28MHz 80W @ 210ma Load/11 Plate/28 Drive/10 Car/11
21MHz 80W @ 210ma Load/12 Plate/21 Drive/12 Car/9:30
14MHz 80W @ 225ma Load/12 Plate/14 Drive/11 Car/10:30
7MHz 75W @ 225ma Load/11 Plate/(3.5!) Drive/10 Car/9
3.5MHz 65W @250ma Load/CW Plate/3.5 Drive/11 Car/10:30
1.8MHz 65W @250ma Load/1 Plate/18 Drive/11 Car/10

Is this stuck coil causing low power output on the lower bands around 3.5, as well?

Any ideas on how to free up this coil?
Something other than WD-40?
Application of heat?
Or spray it with cold?

Thanks,
Paul
AD5FT

[Non-text portions of this message have been removed]

41869. Re: TS-820s...No display lit

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-24 01:10:44 UTC
From: wintertree
Topic: 41843 Message: 41869

Mike....Not sure how to check for oscillator freq'ys in the PLL unit....did manage to find and test vfo output and Car signals....not finding any action....did spend some more time going over things in regards to PLL operation and such....I have come a long way understanding these rigs......but alas still just an infant ....Thankyou for your input....

Wes...VA6DWH

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Have you verified all the required oscillator frequencies are present at the PLL Unit?
>
> Have you verified the VFO output frequency present at the PLL Unit? You can sample the VFO output frequency on the PLL unit board at PLL-1 pin 2 and ground on PLL-1 pin 1.
>
> Have you also verified the CAR Unit signal is present at the PLL Unit? You can sample the CAR Unit signal at the PLL Unit plug PLL-1 Pin 6 and ground on pin 5.
>
> All it takes is one missing signal or the signal is at a level that's unusable by the PLL Unit to cause the PLL to switch to a Unlock state.
>
> 73
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Denise Hargreaves <pioneer6@> wrote:
> >
> > Thanks for the reply Mike....both units have the The jumper plug installed...
> >
> > Wes...VA6DWH
> >
> >
> >
> >
> > On 2013-04-23, at 1:37 PM, Mike wrote:
> >
> > > The TS-820 and the TS-820S can both operate without the digital display
> > > working.
> > >
> > > Did you check the rear 9 pin remote VFO socket for either the factory
> > > jumper plug or a jumper wired between pins 8 and 9 before you started
> > > taking voltage measurements?I didn't see any indication that you did
> > > this check in your initial posting. If you have not then that should be
> > > the first place you start before venturing into taking voltage measurements.

> > >
> > > If the factory jumper plug is not plugged into the rear remote VFO
> > > socket OR if the plug is not available, a wire jumper connected between
> > > pins 8 and 9 on the rear remote VFO socket, the VFO output will be
> > > "zero", the PLL Unit will switch to an "Unlock" state, the digital
> > > display will be dark/blank, and the 820 will NOT receiver and transmit.
> > >
> > > 73
> > > Mike
> > > W5RKL
> > >
> > > On 4/23/2013 7:52 AM, wintertree wrote:
> > > >
> > > > Greeting all....I need a pep talk ! I have a couple of 820's on the
> > > > bench with the same problem....No digital displays operating
> > > > ...nothing ....Went throught the service manual and saw at the DG-1
> > > > trouble shooting page....to check voltage at the "cof"
> > > > terminal....stated that if 1.2v shows there...a defect in the PLL
> > > > circuit is the cause....that is the case with both radio's...both show
> > > > 1.2v.....spent the last few days with schematics....tracing circuits
> > > > and testing voltages and have not found a resolution....When the "cof"
> > > > wire is pulled out of circuit...the displays lite up properly....the
> > > > service manual states that this means the counters work normally....I
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> > > > here VTVM...scope ...signal Gen....and use it poorly....but can use
> > > > it....Can someone steer me in the direction to start checking
> > > > further....?I really enjoy being self reliant but realize when I need
> > > > a little push from those with more experience......Thanks all..
> > > >
> > > > Regards...Wes....VA6DWH
> > > >
> > > >
> > > >
> > > [Non-text portions of this message have been removed]
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> >
> > [Non-text portions of this message have been removed]
> >
>

41870. Re: TS-820s...No display lit

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-24 02:51:25 UTC
From: w5rkl
Topic: 41843 Message: 41870

Wes,

I'm not sure what you mean by "not finding any action..." Are you saying you did not find the VFO and CAR signals at the PLL unit plugs I mentioned?

73
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "wintertree" <pioneer6@...> wrote:
>
> Mike....Not sure how to check for oscillator freq'ys in the PLL unit....did manage to find and test vfo output and Car signals....not finding any action....did spend some more time going over things in regards to PLL operation and such....I have come a long way understanding these rigs......but alas still just an infant ....Thankyou for your input....
>
> Wes...VA6DWH
>
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Have you verified all the required oscillator frequencies are present at the PLL Unit?
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> > Have you verified the VFO output frequency present at the PLL Unit? You can sample the VFO output frequency on the PLL unit board at PLL-1 pin 2 and ground on PLL-1 pin 1.
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> > Have you also verified the CAR Unit signal is present at the PLL Unit? You can sample the CAR Unit signal at the PLL Unit plug PLL-1 Pin 6 and ground on pin 5.
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> > All it takes is one missing signal or the signal is at a level that's unusable by the PLL Unit to cause the PLL to switch to a Unlock state.
> >
> > 73
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Denise Hargreaves <pioneer6@> wrote:
> > >
> > > Thanks for the reply Mike....both units have the The jumper plug installed...
> > >
> > > Wes...VA6DWH

> > >
> > >
> > >
> > >
> > > On 2013-04-23, at 1:37 PM, Mike wrote:
> > >
> > > > The TS-820 and the TS-820S can both operate without the digital display
> > > > working.
> > > >
> > > > Did you check the rear 9 pin remote VFO socket for either the factory
> > > > jumper plug or a jumper wired between pins 8 and 9 before you started
> > > > taking voltage measurements?I didn't see any indication that you did
> > > > this check in your initial posting. If you have not then that should be
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> > > > If the factory jumper plug is not plugged into the rear remote VFO
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> > > > pins 8 and 9 on the rear remote VFO socket, the VFO output will be
> > > > "zero", the PLL Unit will switch to an "Unlock" state, the digital
> > > > display will be dark/blank, and the 820 will NOT receiver and transmit.
> > > >
> > > > 73
> > > > Mike
> > > > W5RKL
> > > >
> > > > On 4/23/2013 7:52 AM, wintertree wrote:
> > > >
> > > > > Greeting all....I need a pep talk ! I have a couple of 820's on the
> > > > > bench with the same problem....No digital displays operating
> > > > > ...nothing ....Went throught the service manual and saw at the DG-1
> > > > > trouble shooting page....to check voltage at the "cof"
> > > > > terminal....stated that if 1.2v shows there...a defect in the PLL
> > > > > circuit is the cause....that is the case with both radio's...both show
> > > > > 1.2v.....spent the last few days with schematics....tracing circuits
> > > > > and testing voltages and have not found a resolution....When the "cof"
> > > > > wire is pulled out of circuit...the displays lite up properly....the
> > > > > service manual states that this means the counters work normally....I
> > > > > have limited experience with trouble shooting....I have some equipment
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> > > > > it....Can someone steer me in the direction to start checking
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> > > > > a little push from those with more experience......Thanks all..
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> > > > > Regards...Wes....VA6DWH
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> > > > >
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> > > > [Non-text portions of this message have been removed]
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> > >
> > > [Non-text portions of this message have been removed]
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> >
>

41871. Re: Kenwood TS510

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-24 03:35:55 UTC
From: wx2fa
Topic: 41839 Message: 41871

Jean,

The same plug that is used on the TS-515 (TS-511s) is used on the TS-510, it has pins 8 and 9 jumpered and pins 6 and 7 jumpered. The TS-510 and TS-515 only require pins 8 and 9 to be jumpered (pin 7 is unused), the additional jumper between pins 6 and 7 is required on the earlier JR-310. I have used the same plug interchangeably between my TS-510, TS-511s and JR-310. I hope this helps.

Regards,
Frank WX2FA

--- In TS-520_820_530_830@yahoogroups.com, "Behiels JeanPierre" <on4aef@...> wrote:
>
> Members;
>
> I have obtained a old TS510 transceiver without the external VFO-5D.
> I will make a try with this TRX without the use of this external VFO.
> Did I also have to put a bridge between pins 8 and 9 of the 9 pin remote VFO connector on the back of the transceiver ??
> In the user manual of the later TS515 model there is some attention to the 9 pins connector on the banck,but in the manual of the earlyer TS510 I could not find any information on this subject .. ??
> I could do the same has on a TS515 but I am a little bit scared to burn this nice set..
> I look forward if someone has some details about this use.
>
> Regards Jean ON4AEF.
>
> [Non-text portions of this message have been removed]
>

41872. [TS-520_820_530_830] Kenwood TS510

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-24 08:09:06 UTC
From: Behiels JeanPierre
Topic: 41839 Message: 41872

Many thanks Frank.

Yes I have this 9 pins plug I will give it a try while interconnecting pin8 and 9 of this connector.
Do you have any idee if I can use 6146B tubes in the final.
Are those last a good substitute,because I do not have finals yet for my TS510 !!

Regards and thanks Jean ON4AEF.

----- Original Message -----
From: wx2fa
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, April 24, 2013 5:35 AM
Subject: [TS-520_820_530_830] Re: Kenwood TS510

Jean,

The same plug that is used on the TS-515 (TS-511s) is used on the TS-510, it has pins 8 and 9 jumpered and pins 6 and 7 jumpered. The TS-510 and TS-515 only require pins 8 and 9 to be jumpered (pin 7 is unused), the additional jumper between pins 6 and 7 is required on the earlier JR-310. I have used the same plug interchangeably between my TS-510, TS-511s and JR-310. I hope this helps.

Regards,
Frank WX2FA

--- In TS-520_820_530_830@yahoogroups.com, "Behiels JeanPierre" <on4aef@...> wrote:
>
> Members;
>
> I have obtained a old TS510 transceiver without the external VFO-5D.
> I will make a try with this TRX without the use of this external VFO.
> Did I also have to put a bridge between pins 8 and 9 of the 9 pin remote VFO connector on the back of the transceiver ??
> In the user manual of the later TS515 model there is some attention to the 9 pins connector on the banck,but in the manual of the earlyer TS510 I could not find any information on this subject .. ??
> I could do the same has on a TS515 but I am a little bit scared to burn this nice set..
> I look forward if someone has some details about this use.
>
> Regards Jean ON4AEF.
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

41873. Re: TS-820s...No display lit

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-24 11:29:25 UTC
From: wintertree
Topic: 41843 Message: 41873

Mike....not reading anything at the points that you mentioned.....did find a tutorial on PLL operation on line ....starting to understand your comments on what are possible causes of a PLL to go into "unlock" state....
Regards....Wes...VA6DWH

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Wes,
>
> I'm not sure what you mean by "not finding any action..." Are you saying you did not find the VFO and CAR signals at the PLL unit plugs I mentioned?
>
> 73
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "wintertree" <pioneer6@> wrote:
> >
> > Mike....Not sure how to check for oscillator freq'ys in the PLL unit....did manage to find and test vfo output and Car signals....not finding any action....did spend some more time going over things in regards to PLL operation and such....I have come a long way understanding these rigs......but alas still just an infant ....Thankyou for your input....
> >
> > Wes...VA6DWH
> >
> >
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > Have you verified all the required oscillator frequencies are present at the PLL Unit?
> > >
> > > Have you verified the VFO output frequency present at the PLL Unit? You can sample the VFO output frequency on the PLL unit board at PLL-1 pin 2 and ground on PLL-1 pin 1.
> > >
> > > Have you also verified the CAR Unit signal is present at the PLL Unit? You can sample the CAR Unit signal at the PLL Unit plug PLL-1 Pin 6 and ground on pin 5.
> > >
> > > All it takes is one missing signal or the signal is at a level that's unusable by the PLL Unit to cause the PLL to switch to a Unlock state.
> > >

> > > 73
> > > Mike
> > > W5RKL
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, Denise Hargreaves <pioneer6@> wrote:
> > > >
> > > > Thanks for the reply Mike....both units have the The jumper plug installed...
> > > >
> > > > Wes...VA6DWH
> > > >
> > > >
> > > >
> > > >
> > > > On 2013-04-23, at 1:37 PM, Mike wrote:
> > > >
> > > > > The TS-820 and the TS-820S can both operate without the digital display
> > > > > working.
> > > > >
> > > > > Did you check the rear 9 pin remote VFO socket for either the factory
> > > > > jumper plug or a jumper wired between pins 8 and 9 before you started
> > > > > taking voltage measurements?I didn't see any indication that you did
> > > > > this check in your initial posting. If you have not then that should be
> > > > > the first place you start before venturing into taking voltage measurements.
> > > > >
> > > > > If the factory jumper plug is not plugged into the rear remote VFO
> > > > > socket OR if the plug is not available, a wire jumper connected between
> > > > > pins 8 and 9 on the rear remote VFO socket, the VFO output will be
> > > > > "zero", the PLL Unit will switch to an "Unlock" state, the digital
> > > > > display will be dark/blank, and the 820 will NOT receiver and transmit.
> > > > >
> > > > > 73
> > > > > Mike
> > > > > W5RKL
> > > > >
> > > > > On 4/23/2013 7:52 AM, wintertree wrote:
> > > > >
> > > > > > Greeting all....I need a pep talk ! I have a couple of 820's on the
> > > > > > bench with the same problem....No digital displays operating
> > > > > > ...nothing ....Went throught the service manual and saw at the DG-1
> > > > > > trouble shooting page....to check voltage at the "cof"
> > > > > > terminal....stated that if 1.2v shows there...a defect in the PLL
> > > > > > circuit is the cause....that is the case with both radio's...both show
> > > > > > 1.2v.....spent the last few days with schematics....tracing circuits
> > > > > > and testing voltages and have not found a resolution....When the "cof"
> > > > > > wire is pulled out of circuit...the displays lite up properly....the
> > > > > > service manual states that this means the counters work normally....I
> > > > > > have limited experience with trouble shooting....I have some equipment
> > > > > > here VTVM...scope ...signal Gen....and use it poorly....but can use
> > > > > > it....Can someone steer me in the direction to start checking

> > > > > > further....?I really enjoy being self reliant but realize when I need
> > > > > > a little push from those with more experience......Thanks all..
> > > > > >
> > > > > > Regards...Wes....VA6DWH
> > > > > > >
> > > > > > >
> > > > > >
> > > > > > [Non-text portions of this message have been removed]
> > > > > >
> > > > > >
> > > > >
> > > > >
> > > > >
> > > > > [Non-text portions of this message have been removed]
> > > > >
> > > >
> > >
>

41874. Final tubes S2001a

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-24 15:47:57 UTC
From: Behiels JeanPierre
Topic: 41874 Message: 41874

Hi members;

Someone could help my on a datasheet document of this Japanese final tube ?

Regards Jean ON4AEF.

[Non-text portions of this message have been removed]

41875. Rewiring a US 110V TS530 for 240V

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-24 07:07:38 UTC
From: Jon
Topic: 41875 Message: 41875

I am sure this is a simple one, but are there any cautionary tips or illustrations about the rewire of the TS-530 from 110v to European 240v.

Many thanks
Jon G8KJI

41876. Re: Stuck Transmit Coil

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-24 13:08:33 UTC
From: paul.nussbaum
Topic: 41851 Message: 41876

Thank you so much, Dave; that worked and I was able to proceed with the adjustment... but now I have another problem which I'm about to start another thread.

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
> Paul,
>
> I have previously had similar issue with different slugs, I clean tip of soldering iron and then place on slug and gently heat up and turn immediately whilst still hot, works everytime so far!
>
> 73's
> Dave
> VK5PDL
>
>
>
>
> To: TS-520_820_530_830@yahoogroups.com
> From: paul.nussbaum@...
> Date: Tue, 23 Apr 2013 12:34:43 +0000
> Subject: [TS-520_820_530_830] Stuck Transmit Coil
>
>
>
>
>
> With the help and advice from a previous thread, I was able to fashion one of my adjustment tools to turn all of the ANT and MIX coils fine (and perform the adjustment procedure for those).
>
> I used a hard plastic chop stick and sand paper to fashion an adjustment tool for the larger slots in the transmit coils that works for all of them except 3.5MHz, which won't turn. I did the adjustment for all the others including T1 on RF and T10 on IF in conjunction with the 1.8MHz TX coil adjustment.
>
> I dabbed that 3.5 TX coil top with a q-tip of WD-40 and let it sit for a day, still wouldn't turn, gave it another dab and another day... still won't turn.
>
> It is not cracked or broken, just tight... tight enough that the very tip of the chop stick came off and is now resting in the little slot; I'll fish it out shortly...
>
> I think it does need adjustment because 3.5MHz tunes up "differently" than all the other bands - LOAD control goes full clockwise without reaching RF peak. All the other bands peak LOAD in the center range.

>
> Here is a tuneup snapshot of the bands to provide some data.
> All /x figures are 12 hour clock face knob positions except Plate.
>
> 29.5MHZ 95W @ 210ma Load/11 Plate/28 Drive/2 Car/11:30
> 29MHz 105W @ 210ma Load/11 Plate/28 Drive/12 Car/1
> 28.5MHz 80W @ 210ma Load/11 Plate/28 Drive/11 Car/11
> 28MHz 80W @ 210ma Load/11 Plate/28 Drive/10 Car/11
> 21MHz 80W @ 210ma Load/12 Plate/21 Drive/12 Car/9:30
> 14MHz 80W @ 225ma Load/12 Plate/14 Drive/11 Car/10:30
> 7MHz 75W @ 225ma Load/11 Plate/(3.5!) Drive/10 Car/9
> 3.5MHz 65W @250ma Load/CW Plate/3.5 Drive/11 Car/10:30
> 1.8MHz 65W @250ma Load/1 Plate/18 Drive/11 Car/10
>
> Is this stuck coil causing low power output on the lower bands around 3.5, as well?
>
> Any ideas on how to free up this coil?
> Something other than WD-40?
> Application of heat?
> Or spray it with cold?
>
> Thanks,
> Paul
> AD5FT
>
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

41877. Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-24 13:44:20 UTC
From: paul.nussbaum
Topic: 41877 Message: 41877

I made an error during adjustment. Now ALC is gone.

At beginning the transmit coil adjustments (SG switch OFF, dummy load) I could not raise an ALC level on the meter, noticed the red LED light for the VFO was out, and digital display was out. I found the function switch set to CAL-RMT instead of VFO.

I don't remember turning it off of VFO, but there it was... I had just done the ANT and MIX coils using the CAL-25, so I must have made an error setting it back to CAL-RMT instead of VFO for the transmit coil adjustment.

I set it back to VFO and got the LED back on, digital display returned, but could not get any ALC on the meter when switching to Send to complete the transmit coil adjustments.

Now I don't get ALC in TUN.
Tune up in CW mode has extremely low output (couple of watts).
I have 60ma bias, HV is good.

Any suggestions where to look?

Thanks,
Paul
AD5FT

41878. Re: [TS-520_820_530_830] Final tubes S2001a

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-24 17:07:06 UTC
From: Young Kim
Topic: 41874 Message: 41878

Hi,
It is the same as 6146B. Japanese copied exactly the same spec.
Young
K6hm

From: Behiels JeanPierre <on4aef@telenet.be>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, April 24, 2013 8:47 AM
Subject: [TS-520_820_530_830] Final tubes S2001a

Hi members;

Someone could help my on a datasheet document of this Japanese final tube ?

Regards Jean ON4AEF.

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41879. Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-24 17:12:49 UTC
From: Michael George
Topic: 41877 Message: 41879

Paul,

I just got over that problem with my TS830. I would assume you either cleaned or replaced the RL1 relay on the audio board.

Also, take a good look at the power supply board and see if R14 is burned/charred. This is a 1k ohm 1 watt resistor in the screen grid supply line of abt 275 volts. I missed this resistor on my first inspection and beat my head in for days. Radio shack to the rescue.

I would also assume you have rf power.

Hope this helps, Keep me in the loop.

Love the hobby as I do,

73,

Mike/K3MG

[Non-text portions of this message have been removed]

41880. Re: [TS-520_820_530_830] Final tubes S2001a

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-24 18:10:01 UTC
From: Behiels JeanPierre
Topic: 41874 Message: 41880

Hi Young

Thanks for this confirmation about those tubes.
I can put some 6146B tubes in my Kenwood TS510 in place of old S2001A tubes

Regards es 73's Jean ON4AEF.

----- Original Message -----
From: Young Kim
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, April 24, 2013 7:07 PM
Subject: Re: [TS-520_820_530_830] Final tubes S2001a

Hi,
It is the same as 6146B. Japanese copied exactly the same spec.
Young
K6hm

From: Behiels JeanPierre <on4aef@telenet.be>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, April 24, 2013 8:47 AM
Subject: [TS-520_820_530_830] Final tubes S2001a

Hi members;

Someone could help my on a datasheet document of this Japanese final tube ?

Regards Jean ON4AEF.

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[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41881. Re: [TS-520_820_530_830] Final tubes S2001a

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-24 18:27:48 UTC
From: Young Kim
Topic: 41874 Message: 41881

Hi Jean,
Yes, it would work fine. I found that the 6293 works as well.
The later production (after 1968) 6146W has a same spec. as the 6146B.
Good luck.
Young
K6hm

From: Behiels JeanPierre <on4aef@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, April 24, 2013 11:10 AM
Subject: Re: [TS-520_820_530_830] Final tubes S2001a

Hi Young

Thanks for this confirmation about those tubes.
I can put some 6146B tubes in my Kenwood TS510 in place of old S2001A tubes

Regards es 73's Jean ON4AEF.

----- Original Message -----
From: Young Kim
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Wednesday, April 24, 2013 7:07 PM
Subject: Re: [TS-520_820_530_830] Final tubes S2001a

Hi,
It is the same as 6146B. Japanese copied exactly the same spec.
Young
K6hm

From: Behiels JeanPierre <mailto:on4aef%40telenet.be>
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Wednesday, April 24, 2013 8:47 AM
Subject: [TS-520_820_530_830] Final tubes S2001a

Hi members;

Someone could help my on a datasheet document of this Japanese final tube ?

Regards Jean ON4AEF.

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[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41882. Re: [TS-520_820_530_830] G3OBU Pirate

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-24 19:53:22 UTC
From: Dave & Loraine
Topic: 39914 Message: 41882

Hi Martin,
Please provide your callsign and state your references else it's just more flaming, which is not welcome in this group.
Thanks.
Dave f4eyk

[Non-text portions of this message have been removed]

41883. Re: [TS-520_820_530_830] Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-24 20:19:36 UTC
From: Mike
Topic: 41877 Message: 41883

Grid current can still flow between the final tube cathodes and grids
even if the screen voltage is missing or significantly reduced.

The GRIDis positioned between the Cathode and the screen. If screen
voltage is lost (zeroVDC), electron flow will cease to the screens and
plate but that will not prevent grid current to flow between the cathode
and the grid. The grid is positioned between the cathode and the screen.
If the gridbecomes positive by the driver's RF signal level then current
will flow between the cathode and grid, even with zero screen voltage,
resulting in ALC being indicated on the ALC meter during TUNE mode
DRIVER adjustment. The IP meter indication will be zero because the
screen(screen voltage is zero) is "negative" in respects to the cathode
which blocks the flow of electrons to the screen and platebut that does
NOT prevent electrons from flowing to the positive grid (driver tubes
signal level pushes the grids "Positive").

73
Mike W5RKL

On 4/24/2013 12:12 PM, Michael George wrote:
>
> Paul,
>
> I just got over that problem with my TS830. I would assume you either
> cleaned or replaced the RL1 relay on the audio board.
>
> Also, take a good look at the power supply board and see if R14 is
> burned/charred. This is a 1k ohm 1 watt resistor in the screen grid supply
> line of abt 275 volts. I missed this resistor on my first inspection and
> beat my head in for days. Radio shack to the rescue.
>
> I would also assume you have rf power.
>
> Hope this helps, Keep me in the loop.
>
> Love the hobby as I do,
>
> 73,
>
> Mike/K3MG
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

41884. Re: [TS-520_820_530_830] Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-24 22:02:29 UTC
From: Mike
Topic: 41877 Message: 41884

To understand how this works you have to understand the "Electron Cloud" that hovers over the Cathode even when no conductionis occurring in the final tube (standby). This is all part of understanding how vacuum tubes work and how voltage, whether positive or negative, is applied each element in the tubeand what happens when these potentials change, either positive or negative. This is why it is very important to understand vacuum tube concepts in order to properly troubleshoot and service any vacuum tube circuit. You can easily "duplicate" the same indications by simply setting the rear SG switch to "OFF" (negative voltage is applied to the screens of the final tubes) then start the normal tranmitter tune up procedure in TUNE mode with the meter switch set to ALC, the Mode switch set to TUNE, and the SEND switch set to key the transmitter then adjust the DRIVE control and watch the ALC meter peak. Yes the ALC meter WILL show the "same" peak ALC indication with the SG switch set to OFF as it would with the SG switch set to ON. Don't believe it? Try it with your hybrid and you'll see!!

73
Mike W5RKL

On 4/24/2013 3:19 PM, Mike wrote:
>
> Grid current can still flow between the final tube cathodes and grids
> even if the screen voltage is missing or significantly reduced.
>
> The GRIDis positioned between the Cathode and the screen. If screen
> voltage is lost (zeroVDC), electron flow will cease to the screens and
> plate but that will not prevent grid current to flow between the cathode
> and the grid. The grid is positioned between the cathode and the screen.
> If the gridbecomes positive by the driver's RF signal level then current
> will flow between the cathode and grid, even with zero screen voltage,
> resulting in ALC being indicated on the ALC meter during TUNE mode
> DRIVER adjustment. The IP meter indication will be zero because the
> screen(screen voltage is zero) is "negative" in respects to the cathode
> which blocks the flow of electrons to the screen and platebut that does
> NOT prevent electrons from flowing to the positive grid (driver tubes
> signal level pushes the grids "Positive").
>
> 73
> Mike W5RKL
>
> On 4/24/2013 12:12 PM, Michael George wrote:
> >
> > Paul,

> >
> > I just got over that problem with my TS830. I would assume you either
> > cleaned or replaced the RL1 relay on the audio board.
> >
> > Also, take a good look at the power supply board and see if R14 is
> > burned/charred. This is a 1k ohm 1 watt resistor in the screen grid
> supply
> > line of abt 275 volts. I missed this resistor on my first inspection and
> > beat my head in for days. Radio shack to the rescue.
> >
> > I would also assume you have rf power.
> >
> > Hope this helps, Keep me in the loop.
> >
> > Love the hobby as I do,
> >
> > 73,
> >
> > Mike/K3MG
> >
> > [Non-text portions of this message have been removed]
> >
> >
>
> [Non-text portions of this message have been removed]
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>

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41885. Re: [TS-520_820_530_830] Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-24 22:08:09 UTC
From: Mike
Topic: 41877 Message: 41885

I forgot to mention, performing this "simple" test will NOT harm your Kenwood hybrid nor will it harm the final tubes!Performing simply test such as this is what those who want to learn should try. If you have any doubt at what I am telling you, try the simple test and you will seefor yourself that grid current (ALC indication) can and WILL occur even when the screen voltage is zero or has a negative voltage applied (SG switch in OFF position).

73
MikeW5RKL

On 4/24/2013 5:02 PM, Mike wrote:
>
> To understand how this works you have to understand the "Electron Cloud"
> that hovers over the Cathode even when no conductionis occurring in the
> final tube (standby). This is all part of understanding how vacuum tubes
> work and how voltage, whether positive or negative, is applied each
> element in the tubeand what happens when these potentials change, either
> positive or negative. This is why it is very important to understand
> vacuum tube concepts in order to properly troubleshoot and service any
> vacuum tube circuit. You can easily "duplicate" the same indications by
> simply setting the rear SG switch to "OFF" (negative voltage is applied
> to the screens of the final tubes) then start the normal tranmitter tune
> up procedure in TUNE mode with the meter switch set to ALC, the Mode
> switch set to TUNE, and the SEND switch set to key the transmitter then
> adjust the DRIVE control and watch the ALC meter peak. Yes the ALC meter
> WILL show the "same" peak ALC indication with the SG switch set to OFF
> as it would with the SG switch set to ON. Don't believe it? Try it with
> your hybrid and you'll see!!
>
> 73
> Mike W5RKL
>
> On 4/24/2013 3:19 PM, Mike wrote:
> >
> > Grid current can still flow between the final tube cathodes and grids
> > even if the screen voltage is missing or significantly reduced.
> >
> > The GRIDis positioned between the Cathode and the screen. If screen
> > voltage is lost (zeroVDC), electron flow will cease to the screens and
> > plate but that will not prevent grid current to flow between the cathode
> > and the grid. The grid is positioned between the cathode and the screen.
> > If the gridbecomes positive by the driver's RF signal level then current
> > will flow between the cathode and grid, even with zero screen voltage,

> > resulting in ALC being indicated on the ALC meter during TUNE mode
> > DRIVER adjustment. The IP meter indication will be zero because the
> > screen(screen voltage is zero) is "negative" in respects to the cathode
> > which blocks the flow of electrons to the screen and platebut that does
> > NOT prevent electrons from flowing to the positive grid (driver tubes
> > signal level pushes the grids "Positive").
> >
> > 73
> > Mike W5RKL
> >
> > On 4/24/2013 12:12 PM, Michael George wrote:
> > >
> > > Paul,
> > >
> > > I just got over that problem with my TS830. I would assume you either
> > > cleaned or replaced the RL1 relay on the audio board.
> > >
> > > Also, take a good look at the power supply board and see if R14 is
> > > burned/charred. This is a 1k ohm 1 watt resistor in the screen grid
> > supply
> > > line of abt 275 volts. I missed this resistor on my first
> inspection and
> > > beat my head in for days. Radio shack to the rescue.
> > >
> > > I would also assume you have rf power.
> > >
> > > Hope this helps, Keep me in the loop.
> > >
> > > Love the hobby as I do,
> > >
> > > 73,
> > >
> > > Mike/K3MG
> > >
> > > [Non-text portions of this message have been removed]
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> > [Non-text portions of this message have been removed]
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> >
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

41886. Looking for a non-working DG-5

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-24 22:47:30 UTC
From: tjb813
Topic: 41886 Message: 41886

Looking for a DG-5 display. Non-working. Must be complete without too many dents or dings. Power cable would be a nice addition. Please contact me off-line.

Thanks for reading (and responding).

KD8CN

41887. Re: TV502/506 cables

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-24 22:57:21 UTC
From: james27613
Topic: 41864 Message: 41887

hi

I added a photo album Transverter Connectors,
shows the cables connected to the 12 pin Hirose plug.

There is a photo that shows the rca audio cable pigtail
I added to one cable so it will work with the TV-502.

Each cable is approx. 31" long connector end to end.
Four shielded cables are used and a few unshielded make
up the jacketed cable.

73 james ke4drn

41888. Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 00:53:44 UTC
From: paul.nussbaum
Topic: 41877 Message: 41888

I have not cleaned or replaced the relay on the audio board, but I just observed its mechanical operation - the armature snaps to change position when the Send switch is activated in TUN mode.

I have inspected the boards generally with a flash light and magnifying glass and do not see any resistors that appear charred or burned.

The driver tube gets hot.
I have 60ma bias.
HV reads good.

In TUN mode, meter set to ALC, CAR up, Send switch on, I get no ALC peak with the Drive control anywhere in its range of rotation... the meter does not move from minimum. The meter does operate normally in Receive.

The loss of ALC began after switching to Send while the Function switch was erroneously set to CAL-Remote (with no remote VFO connected), with SG switched to OFF, into a dummy load... any idea what happens when one makes that mistake?

I need a methodology to know what and where to look and measure to find out what has changed to cause the missing ALC.

In the mean time, I'm looking at the schematics, board pictures, and other material to see if I can understand where the ALC is supposed to be...

Thanks,
Paul
AD5FT

--- In TS-520_820_530_830@yahoogroups.com, Michael George <hpdd709@...> wrote:
>
> Paul,
>
> I just got over that problem with my TS830. I would assume you either
> cleaned or replaced the RL1 relay on the audio board.
>
> Also, take a good look at the power supply board and see if R14 is
> burned/charred. This is a 1k ohm 1 watt resistor in the screen grid supply
> line of abt 275 volts. I missed this resistor on my first inspection and
> beat my head in for days. Radio shack to the rescue.
>
> I would also assume you have rf power.
>
> Hope this helps, Keep me in the loop.
>
> Love the hobby as I do,
>

> 73,
>
> Mike/K3MG
>
>
> [Non-text portions of this message have been removed]
>

41889. Re: TS-520S - Losing output power & receive during tune procedure

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 00:24:09 UTC
From: cl5ltd
Topic: 41362 Message: 41889

Here's an update and happy ending.
There was a fault with a relay which was rectified but also I'm following a different tune up procedure and there has been no recurrence of the "fault"

I only adjust the drive control for max noise while in recv, then go to tune, dip the plate, adjust rf using load control, the set alc with carrier control .

I have not encountered any recurrence of the problem I was having. This tune up method is a variation of the ones I've seen demonstrated on you tube, the user manual and other published tune up process where the drive control is used to adjust alc level.

Im going with what has worked for me an start to enjoy using this grand old radio. It made a debut on the boat anchor net with good reports and bottle shop net is next to make an entrance on (VK 80m nets)

Improving antenna for 40/80 is next on the list but I also have a craving for a project radio -520s or similar to work through.

Does this mean I'm hooked?
Is there a known cure?
73s de VK5LTD

--- In TS-520_820_530_830@yahoogroups.com, "cl5ltd" <christopherlarwood@...> wrote:
>
> No, it occurs mainly while I am tuning the radio - moreso after changing bands and when I adjust the drive control while in send.
>
> After the power output drops and I flick out of send, receive is also nearly dead - as though I have turned down rf gain or turned on the attenuator. A on/off power cycle brings back receive but same fault occurs when I try to do the tune process
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> >
> > Does this occur right after you let up on the transmit key?
> >
> > If so, it's probably a relay.
> >
> > Robert
> >
> >
>

41890. Compatible components for TS-830 RF unit X44-1360-00

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 01:02:49 UTC
From: bartbrummans
Topic: 41890 Message: 41890

I've had no luck obtaining a working replacement board, nor finding one for parts use:(

The PO of this rig must have "screw-drivered" the IF cans.
Cores are broken in all sections, Ant, Mix, Drv.

It looks like the TS-820 has the same cores/cans on the DRV side, so I'm going to look for a donor board for those.

I'm going to need at least 8 new cores for the ANT, Mix side and possibly a couple of cans (160,80,40,30,20M)

Anyone know a source for cores/cans? Bob M is currently out of the RF units (working or not)

73
Bart

41891. Re: Compatible components for TS-830 RF unit X44-1360-00

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 01:19:39 UTC
From: roberteleazer@rocketmail.com
Topic: 41890 Message: 41891

I have had some success with using a small screwdriver and a drop of superglue to extract broken cores from coils - although I have yet to try this with a TS-820 or 520, I have a couple that could use it.

It appears to me that the best source for such cores is old CB radios or consumer electronics that use similar sized coils. They sure look similar and I have acquired a few for that purpose. Well, actually I acquired some over the last 30 years for various purposes. Try some flea markets or maybe even E-bay.

All Electronics has some IF transformers at 3 for $1.00 that might provide a source as well, although I can't tell from just looking a the picture they supply.

And, of course, never pass up an interesting looking trash pile!

Good luck!

Robert

--- In TS-520_820_530_830@yahoogroups.com, "bartbrummans" <cocobean64@...> wrote:
>
> I've had no luck obtaining a working replacement board, nor finding one for parts use:(
>
> The PO of this rig must have "screw-drivered" the IF cans.
> Cores are broken in all sections, Ant, Mix, Drv.
>
> It looks like the TS-820 has the same cores/cans on the DRV side, so I'm going to look for a donor board for those.
>
> I'm going to need at least 8 new cores for the ANT, Mix side and possibly a couple of cans (160,80,40,30,20M)
>
> Anyone know a source for cores/cans? Bob M is currently out of the RF units (working or not)
>
> 73
> Bart
>

41892. Re: [TS-520_820_530_830] Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 01:34:11 UTC
From: Mike
Topic: 41877 Message: 41892

Paul,

Your reference to 60ma being "bias" is wrong! None of the meter switch settings will show you biaswith the transmitter keyed. The IP meter's displaying 60ma,with the transmitter keyed, is showing you the Class AB1 final tube's "idling current" flowing in the final tubes, NOT biasor bias voltage!

Mike

On 4/24/2013 7:53 PM, paul.nussbaum wrote:
>
> I have not cleaned or replaced the relay on the audio board, but I
> just observed its mechanical operation - the armature snaps to change
> position when the Send switch is activated in TUN mode.
>
> I have inspected the boards generally with a flash light and
> magnifying glass and do not see any resistors that appear charred or
> burned.
>
> The driver tube gets hot.
> I have 60ma bias.
> HV reads good.
>
> In TUN mode, meter set to ALC, CAR up, Send switch on, I get no ALC
> peak with the Drive control anywhere in its range of rotation... the
> meter does not move from minimum. The meter does operate normally in
> Receive.
>
> The loss of ALC began after switching to Send while the Function
> switch was erroneously set to CAL-Remote (with no remote VFO
> connected), with SG switched to OFF, into a dummy load... any idea
> what happens when one makes that mistake?
>
> I need a methodology to know what and where to look and measure to
> find out what has changed to cause the missing ALC.
>
> In the mean time, I'm looking at the schematics, board pictures, and
> other material to see if I can understand where the ALC is supposed to
> be...
>
> Thanks,
> Paul
> AD5FT

>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Michael George
> <hpdd709@...> wrote:
> >
> > Paul,
> >
> > I just got over that problem with my TS830. I would assume you either
> > cleaned or replaced the RL1 relay on the audio board.
> >
> > Also, take a good look at the power supply board and see if R14 is
> > burned/charred. This is a 1k ohm 1 watt resistor in the screen grid
> supply
> > line of abt 275 volts. I missed this resistor on my first inspection and
> > beat my head in for days. Radio shack to the rescue.
> >
> > I would also assume you have rf power.
> >
> > Hope this helps, Keep me in the loop.
> >
> > Love the hobby as I do,
> >
> > 73,
> >
> > Mike/K3MG
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
>

[Non-text portions of this message have been removed]

41893. Re: [TS-520_820_530_830] Compatible components for TS-830 RF unit X44-1360-00

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 02:26:22 UTC
From: n6wk@...
Topic: 41890 Message: 41893

Exactly which Slugs do you need ?

73,
Gordon
N6WK

On 4/24/2013 6:02 PM, bartbrummans wrote:
>
> I've had no luck obtaining a working replacement board, nor finding
> one for parts use:(
>
> The PO of this rig must have "screw-drivered" the IF cans.
> Cores are broken in all sections, Ant, Mix, Drv.
>
> It looks like the TS-820 has the same cores/cans on the DRV side, so
> I'm going to look for a donor board for those.
>
> I'm going to need at least 8 new cores for the ANT, Mix side and
> possibly a couple of cans (160,80,40,30,20M)
>
> Anyone know a source for cores/cans? Bob M is currently out of the RF
> units (working or not)
>
> 73
> Bart
>
>

41894. Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 03:39:23 UTC
From: Terry Wagoner
Topic: 41877 Message: 41894

If you peak the Drive control with Rx background noise or the marker signal can you then load the rig into dummy load and get approx 100 watts out? Do you have an external wattmeter? If not, suggest you get one. They are not only a good loading aid, but a piece of test gear. Can tell you much more than HV and IP meter in cases like this or when you have an open or shorted coax situation.

If you can load into dummy load then you have RF drive being produced and you have an ALC indication problem or your alignment is such that you do not have enough RF drive at the 6146 control grids to overcome the operating negative DC bias voltage on positive peaks of the RF drive envelope and cause a small level of grid current to flow. A small level of 6146 grid current (approx 40 ua) is required for ALC indication.

It is possible to have pretty decent RF output without having any ALC indication.

Here is some background:

A small amount of grid current (micro-amperes)is required to turn on the ALC amp and pull down the ALC bus voltage which will cause the ALC meter to move up scale. The ALC meter is a FET based voltmeter that measures the ALC bus line voltage. With ALC bus at 3.3vdc the meter will rest at zero on the scale. As microampere grid current flows from RF drive overcoming final control grid dc bias voltage the ALC amp will be turned on and will pull down the ALC bus which is a high Z source and cant stand any load on it. The ALC amp acts like a variable load resistor controlled by grid current produced on positive peaks of the RF drive envelope.

Need to make some measurements.
1. With SG switch off and rig in CW mode peak the Drive control on Rx back ground noise or the marker signal. Then flip to send and measure the RF drive level voltage at Pin 5 of the 6146 control grids. You need a RF millivolt meter, O-scope, or multi-diode rf probe/vtvm to measure this rf voltage. You should have approx 47 rms volts.

2. Measure the negative dc operating bias voltage on Pin 5 with rig keyed. It should be approx -55vdc.

3. Measure RF-1 ALC reference voltage at AF/AVR board. It should be approx 3.3vdc. If not set it with VR-1 trim pot.

Now with your result do a little math.

1. Assume you have 39rf volts then 39 x 1.414 = 55 peak rf volts
2. Assume you have -58vdc grid bias.
3. Then you are approx 3 volts short of grid being 0 volts on peak of the rf drive envelope. Will have no grid current, no ALC amp turn on, no ALC bus voltage pull down, no ALC meter movement up scale.
4. With -58 vdc bias you will need a minimum of approx 41 rf volts. 41 x 1.414 = 57.9 peak rf volts. At 41 rf volts drive the control grid will be 0 volts on peak of the rf drive envelope and just at point of starting to see grid current.

5. So with -58vdc grid bias you will need more than 41 rms rf volts drive to get ALC indication.
6. Set the bias voltage for 60ma resting plate current and then measure that voltage level to see if it is close to -55vdc.
7.With bias voltage set to -55vdc you will need 55/1.414 = 39 rms rf volts drive to get to 0. So 39 rf volts is minimum rf drive you need.

The way you get required 39 plus Rf drive voltage level is by having a good Driver tube, spec Driver tube DC voltages (screen is especially important),spec 6146 control grid dc bias voltage, and good Mixer and Drive coil alignment. Since you apparently had good ALC indication at one point in the coil pack alignment procedure I do not suspect bad high resistance bandswitch contacts.

Sorry so long. Only way I know to quickly and efficiently troubleshoot is to run portion of TX Level Diagram that you will find in the Service manual. Once you know where RF drive voltage is low or missing can focus troubleshooting efforts at that stage/component. It bemuses me why so few folks understand or use TX Level Diagrams.

Terry K9TW

>
>

41895. Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 07:36:17 UTC
From: paul.nussbaum
Topic: 41877 Message: 41895

Thanks Terry,

I am using the dummy load in a Dentron antenna tuner that includes forward and backwards watt meters. When I load in CW mode I get just a couple of watts output on the external meter, nothing on the TS820S meter set to RF.

Thanks for the overview of ALC function.

Measurements

RF drive level voltage at Pin 5 of the 6146 control grids...
I don't have proper instruments, only a VOM. I'll look at some VTVMs tomorrow at the electronics shop... any recommendations?

Pin 5 of the 6146 grid #1:
Finals circuit diagram specs (-100V/-55V)
I measure both tubes at
-99.5V before transmit
-57.5V during transmit
.
ACL ref voltage spec (3.3V), I measure 3.28V

12BY7A Pin 2 grid #1
RF board circuit diagram specs (-43V/0V)
I measure
-40.2V before transmit
.003V during transmit

12BY7A Pin 8 Grid #2 (screen)
RF board circuit diagram specs (250V/210V)
I measure
255V before transmit
224V during transmit

So,
I need the measurement of the RF drive level voltage at Pin 5 of the 6146 control grids to proceed with calculations, but it looks like 6146 control grid DC bias voltage, ALC reference voltage, 12BY7A Grid 1, and 12BY7A Grid 2 (screen) are close to spec... ?

Mix and Drive coils may be close, but I'll repeat after getting the ALC figured out.

In the mean time I'm looking at the TX level diagram...
Paul
AD5FT

41896. RE: [TS-520_820_530_830] Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 08:15:49 UTC
From: Rob S.
Topic: 41877 Message: 41896

Great explanation Terry, Thank you !

That's helped clear up a few details for me,

Cheers,

Rob. VK3BRS

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
Sent: Thursday, 25 April 2013 1:39 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Lost ALC during TX coil adjustment
(TS-820S)

If you peak the Drive control with Rx background noise or the marker signal can you then load the rig into dummy load and get approx 100 watts out? Do you have an external wattmeter? If not, suggest you get one. They are not only a good loading aid, but a piece of test gear. Can tell you much more than HV and IP meter in cases like this or when you have an open or shorted coax situation.

If you can load into dummy load then you have RF drive being produced and you have an ALC indication problem or your alignment is such that you do not have enough RF drive at the 6146 control grids to overcome the operating negative DC bias voltage on positive peaks of the RF drive envelope and cause a small level of grid current to flow. A small level of 6146 grid current (approx 40 ua) is required for ALC indication.

It is possible to have pretty decent RF output without having any ALC indication.

Here is some background:

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Need to make some measurements.
1. With SG switch off and rig in CW mode peak the Drive control on Rx back

ground noise or the marker signal. Then flip to send and measure the RF drive level voltage at Pin 5 of the 6146 control grids. You need a RF millivolt meter, O-scope, or multi-diode rf probe/vtvm to measure this rf voltage. You should have approx 47 rms volts.

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Now with your result do a little math.

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4. With -58 vdc bias you will need a minimum of approx 41 rf volts. 41 x 1.414 = 57.9 peak rf volts. At 41 rf volts drive the control grid will be 0 volts on peak of the rf drive envelope and just at point of starting to see grid current.
5. So with -58vdc grid bias you will need more than 41 rms rf volts drive to get ALC indication.
6. Set the bias voltage for 60ma resting plate current and then measure that voltage level to see if it is close to -55vdc.
7.With bias voltage set to -55vdc you will need 55/1.414 = 39 rms rf volts drive to get to 0. So 39 rf volts is minimum rf drive you need.

The way you get required 39 plus Rf drive voltage level is by having a good Driver tube, spec Driver tube DC voltages (screen is especially important),spec 6146 control grid dc bias voltage, and good Mixer and Drive coil alignment. Since you apparently had good ALC indication at one point in the coil pack alignment procedure I do not suspect bad high resistance bandswitch contacts.

Sorry so long. Only way I know to quickly and efficiently troubleshoot is to run portion of TX Level Diagram that you will find in the Service manual. Once you know where RF drive voltage is low or missing can focus troubleshooting efforts at that stage/component. It bemuses me why so few folks understand or use TX Level Diagrams.

Terry K9TW

>
>

[Non-text portions of this message have been removed]

41897. Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 10:54:41 UTC
From: Terry Wagoner
Topic: 41877 Message: 41897

Paul: Couple of things. Good job on getting the DC voltages. VOMs typically have 50,000 ohms/volt sensitivity so OK for plate and screen voltages but not good for ALC or AGC bus and getting on grids of vacuum tubes.

1. Suggest you get a DMM or a VTVM to get higher input impedance. I prefer the old Heath VTVMs like a IM-18 as it has 11 meg input Z and wont load down your readings and a large analog scale to see peaks and nulls. I suggest Heath as they made 10s of thousands so can always buy a spare for a parts unit. A good DMM also has its place for the DC readings that you just took. Most will have a 10 meg Z, but some do not. A cheap Harbor Freight measures at just under 1 meg and some have different Z depending on the meter range.

2. I assume you have the Tuner in Bypass? Tuner watt meter is fine.

3. I assume you have advanced CAR Level Pot full CCW and peaked the Drive Control. It may not peak at 1200.

4. Your DC readings look good. You can see that you have proper switch over from cutoff to operating bias voltage on the Driver Tube and the Finals.

5. I assume that your -57.5 vdc bias voltage is with 60 ma resting plate current. At -57.5 you will need -57.5/1.414 = 40.67 rms rf volts drive at 6146 Pin 5. So anything less than approx 41 rf volts drive and you will have no ALC meter indication. Anything greater than 41 rf volts and you should see ALC indication assuming the ALC metering is working. Suggest you follow previous suggestion to clean aux relay contacts. Good idea to clean them as easy to do and AGC and ALC bus line is switched by this relay.

6.With the lower RF output you could use a single germanium diode RF probe to take the TX Level diagram readings to see where losing it at. Normally suggest use a two or three diode probe to get on plate of 12BY7A or grid of 6146 finals so you do not exceed the peak inverse voltage of the single diode. See N5ESE to make a probe or buy Hendricks kit or buy used Heathkit 309-c etc off ebay.

7. You cannot accurately measure TIF signal from IF board using RF probe as it is too low a level (approx 35 mv). Absent RF millivolt meter use an O-scope to measure TIF. If you have good RF level at output of TX Mixer safe to assume have adequate TIF level.

Took covers off my TS-820 this AM and here are my readings which may help you. I took these after loading rig at 14.2 mhz into dummy load to 100 watts output. I then turned off SG switch.

1. Cutoff bias voltage on 6146 Pin 5 = -95.10vdc
2. Operating bias voltage on 6146 Pin 5 = -50.25 @60ma resting Ip
3. RF voltage at Pin 5 = 42.2 rf volts
4. CAR Level Pot at number "2"
5. ALC indication at full scale deflection (FSD)and holding there.

So my delta is 42.2 x 1.414 = 59.67 peak rf volts. 59.67 - 50.25 = 9.42 volts.

You can see I am swinging the control grids approx 9 volt positive on peaks of rf drive envelope which results in microampere grid current flowing and ALC meter driving to full scale deflection.

73s Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "paul.nussbaum" <paul.nussbaum@...> wrote:
>
>
> Thanks Terry,
>
> I am using the dummy load in a Dentron antenna tuner that includes forward and backwards watt meters. When I load in CW mode I get just a couple of watts output on the external meter, nothing on the TS820S meter set to RF.
>
> Thanks for the overview of ALC function.
>
> Measurements
>
> RF drive level voltage at Pin 5 of the 6146 control grids...
> I don't have proper instruments, only a VOM. I'll look at some VTVMs tomorrow at the electronics shop... any recommendations?
>
> Pin 5 of the 6146 grid #1:
> Finals circuit diagram specs (-100V/-55V)
> I measure both tubes at
> -99.5V before transmit
> -57.5V during transmit
> .
> ACL ref voltage spec (3.3V), I measure 3.28V
>
> 12BY7A Pin 2 grid #1
> RF board circuit diagram specs (-43V/0V)
> I measure
> -40.2V before transmit
> .003V during transmit
>
> 12BY7A Pin 8 Grid #2 (screen)
> RF board circuit diagram specs (250V/210V)
> I measure
> 255V before transmit
> 224V during transmit
>
> So,
> I need the measurement of the RF drive level voltage at Pin 5 of the 6146 control grids to proceed with calculations, but it looks like 6146 control grid DC bias voltage, ALC reference voltage, 12BY7A Grid 1, and 12BY7A Grid 2 (screen) are close to spec... ?
>
> Mix and Drive coils may be close, but I'll repeat after getting the ALC figured out.
>
> In the mean time I'm looking at the TX level diagram...
> Paul

> AD5FT
>

41898. Re: Compatible components for TS-830 RF unit X44-1360-00

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 11:36:29 UTC
From: Michael George
Topic: 41890 Message: 41898

Try hifissb.com. This is a group from the UK. Have dealt with them and have good results. They offewr boards and components for vintage radios such as the 520 and 830s.

de Mike/K3MG

[Non-text portions of this message have been removed]

41899. Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 11:48:24 UTC
From: Terry Wagoner
Topic: 41877 Message: 41899

Rob:

Yes I like to go to my white board or sheet of paper and draw the ALC circuit and figure out how it works. Can then take some measurements when working per design and record for future when it doesnt. I try to do that with all the circuits as the circuit descriptions all could use further development. Kenwood gave just enough detail for casual user on the main functional blocks.

ALC in the Hybrids is derived differently than most rigs that sample and rectify some rf output to develop the control voltage. With the hybrids the control voltage is always there derived from AVR board RF-1. We pull it down when grid current just begins to flow. Kenwood calls it Amplified ALC which is kind of a misnomer as the ALC transistor is not amplifying a signal it is acting like a variable resistor. I have a nice HP-410C 100 meg Z VTVM which I can actually watch ALC voltage pull down from RF-1 level as we increase RF drive. You can measure with a VTVM but it will pull down the voltage to around 2.6 to 2.7 vdc when you connect it and drives the S-meter upscale to around S3 to S4.

You are not actually looking directly at Grid current when you peak the Drive control. Kenwood has no grid current meter shunts or grid current meter position. This isnt necessary for Class AB1 as there is no grid current. The grid requires no driving power only rf voltage swing. The moment that the driving envelope exceeds the dc operating bias offset and grid current begins to flow ALC bus line voltage is pulled down and TIF rf drive level is reduced. The cow just barely makes it out of the barn before it is pulled back!

It is impossible to over drive the control grids of the finals and exceed the max grid dissipation.

I think all the people who load by making sure the ALC is in middle of the black box or no more than the top of the black box ALC range are confusing it with another design or just dont understand how it works. On You Tube you can see some precautions about this presented by Extra Class holders. They have you peak in the black box and go back and check when done and adjust Car pot again. None of which is in the operating manual loading instructions. I guess they have good intentions. With a science or technical hobby need more than good intentions. Thankfully they are doing no harm to the rig. I have tried to explain this too more than one of these fellows, but most are stubborn and continue to load as they understand how the radio works. Fortunately no harm done unless drive is marginal to begin with.

Some old timers may do this as we were all taught not to exceed max 6146 grid current of approx 2.5 ma to 3.0 ma on our 1950/1960 vintage 50 watt CW Class C Grid Leak Bias transmitters. We had to go back after loading into our lite bulbs and check and adjust grid current reading level. Never wanted to exceed grid current or have loss of grid drive with grid leak bias rigs.

None of that applies to a Hybrid. Its operating bias is fixed bias and not grid leak developed. Of course Kenwood could have been clearer on what they meant when the manual tells you to peak Drive control to maximum ALC indication. Almost every new owner asks

immediately if that means max of black ALC box range or max on the meter scale. Just give a decent CAR Level so you can see a good peak as you tune the Drive stage to resonance. 2/3 to 3/4 scale is good place, but max on ALC box works just fine as well.

The black ALC box is meaningless while loading the rig. It is there for SSB mode to ensure linear operation. When you talk up to the max of the black box you have approx 40ua to 45ua of grid current. Kenwood actually varies the ALC time constants to use it as a crude means of speech compression to increase your talk power without introducing too much adjacent frequency splatter. In no case should you talk rig up outside the ALC box. I try to keep it no more than mid-range. Technically when you have no indication you are operating at most linear place.

I do not have a spectrum analyzer, but have asked the fellows who have L-pans and K3 rigs or similar to look at my signal while I varied the Mic gain for various ALC indications and no one sees any trash if I talk up to the max of the black box.

Probably much more than you wanted.

73s Terry K9TW

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> >
> >
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>
>
> [Non-text portions of this message have been removed]
>

41900. RE: [TS-520_820_530_830] Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 13:02:54 UTC
From: Rob S.
Topic: 41877 Message: 41900

Your answers are never too much Terry,

The information that you share and the time that you spend imparting it is a pleasure to be a part of.

The guys like you (and others) that are prepared to share your (their) knowledge save the rest of us a lot of time and heart ache over issues with our radios

I (and I would suggest many others) appreciate the efforts that you go to sharing knowledge to the group..

Cheers and Thanks Terry !

73's

Rob VK3BRS

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
Sent: Thursday, 25 April 2013 9:48 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Lost ALC during TX coil adjustment (TS-820S)

Rob:

Yes I like to go to my white board or sheet of paper and draw the ALC circuit and figure out how it works. Can then take some measurements when working per design and record for future when it doesnt. I try to do that with all the circuits as the circuit descriptions all could use further development. Kenwood gave just enough detail for casual user on the main functional blocks.

ALC in the Hybrids is derived differently than most rigs that sample and rectify some rf output to develop the control voltage. With the hybrids the control voltage is always there derived from AVR board RF-1. We pull it down when grid current just begins to flow. Kenwood calls it Amplified ALC which is kind of a misnomer as the ALC transistor is not amplifying a signal it is acting like a variable resistor. I have a nice HP-410C 100 meg Z VTVM which I can actually watch ALC voltage pull down from RF-1 level as we increase RF drive. You can measure with a VTVM but it will pull down the voltage to around 2.6 to 2.7 vdc when you connect it and drives the S-meter upscale to around S3 to S4.

You are not actually looking directly at Grid current when you peak the Drive control. Kenwood has no grid current meter shunts or grid current meter position. This isnt necessary for Class AB1 as there is no grid current. The grid requires no driving power only rf voltage swing. The moment that the driving envelope exceeds the dc operating bias offset and grid current begins to flow ALC bus line voltage is pulled down and TIF rf drive level is reduced. The cow just barely makes it out of the barn before it is pulled back!

It is impossible to over drive the control grids of the finals and exceed the max grid dissipation.

I think all the people who load by making sure the ALC is in middle of the black box or no more than the top of the black box ALC range are confusing it with another design or just dont understand how it works. On You Tube you can see some precautions about this presented by Extra Class holders. They have you peak in the black box and go back and check when done and adjust Car pot again. None of which is in the operating manual loading instructions. I guess they have good intentions. With a science or technical hobby need more than good intentions. Thankfully they are doing no harm to the rig. I have tried to explain this too more than one of these fellows, but most are stubborn and continue to load as they understand how the radio works. Fortunately no harm done unless drive is marginal to begin with.

Some old timers may do this as we were all taught not to exceed max 6146 grid current of approx 2.5 ma to 3.0 ma on our 1950/1960 vintage 50 watt CW Class C Grid Leak Bias transmitters. We had to go back after loading into our lite bulbs and check and adjust grid current reading level. Never wanted to exceed grid current or have loss of grid drive with grid leak bias rigs.

None of that applies to a Hybrid. Its operating bias is fixed bias and not grid leak developed. Of course Kenwood could have been clearer on what they meant when the manual tells you to peak Drive control to maximum ALC indication. Almost every new owner asks immediately if that means max of black ALC box range or max on the meter scale. Just give a decent CAR Level so you can see a good peak as you tune the Drive stage to resonance. 2/3 to 3/4 scale is good place, but max on ALC box works just fine as well.

The black ALC box is meaningless while loading the rig. It is there for SSB mode to ensure linear operation. When you talk up to the max of the black box you have approx 40ua to 45ua of grid current. Kenwood actually varies the ALC time constants to use it as a crude means of speech compression to increase your talk power without introducing too much adjacent frequency splatter. In no case should you talk rig up outside the ALC box. I try to keep it no more than mid-range. Technically when you have no indication you are operating at most linear place.

I do not have a spectrum analyzer, but have asked the fellows who have L-pans and K3 rigs or similar to look at my signal while I varied the Mic gain for various ALC indications and no one sees any trash if I talk up to the max of the black box.

Probably much more than you wanted.

73s Terry K9TW

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41901. Re: Compatible components for TS-830 RF unit X44-1360-00

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 13:24:04 UTC
From: bartbrummans
Topic: 41890 Message: 41901

80M- Mix and Ant
40M- Mix and Ant
30M- Mix
20M- Mix and Ant
12M- Mix and Ant

30M- Drive
20M- Drive (need coil also)

Yep..a real mess...

73
Bart

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Exactly which Slugs do you need ?
>
> 73,
> Gordon
> N6WK
>
>
> On 4/24/2013 6:02 PM, bartbrummans wrote:
> >
> > I've had no luck obtaining a working replacement board, nor finding
> > one for parts use:(
> >
> > The PO of this rig must have "screw-drivered" the IF cans.
> > Cores are broken in all sections, Ant, Mix, Drv.
> >
> > It looks like the TS-820 has the same cores/cans on the DRV side, so
> > I'm going to look for a donor board for those.
> >
> > I'm going to need at least 8 new cores for the ANT, Mix side and
> > possibly a couple of cans (160,80,40,30,20M)
> >
> > Anyone know a source for cores/cans? Bob M is currently out of the RF
> > units (working or not)
> >
> > 73
> > Bart
> >
> >
>

41902. Re: Compatible components for TS-830 RF unit X44-1360-00

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 13:25:16 UTC
From: bartbrummans
Topic: 41890 Message: 41902

Thanks for the info Mike,

Been there...done that already. Unfortunately nada...

--- In TS-520_820_530_830@yahoogroups.com, Michael George <hpdd709@...> wrote:
>
> Try hifissb.com. This is a group from the UK. Have dealt with them and have
> good results. They offewr boards and components for vintage radios such as
> the 520 and 830s.
>
> de Mike/K3MG
>
>
> [Non-text portions of this message have been removed]
>

41903. Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 13:25:31 UTC
From: Terry Wagoner
Topic: 41877 Message: 41903

Rob:

Appreciate your feedback. Not looking for any recognition. Guys like me and Mike and others of our generation are just trying to pass on what we learned over 50 years as we are concerned about who will hold up the Tent Poles when we are gone. With the hobby feeder system radically altered and interest level drying up I think I can speak for Mike when I say we hate to see Hybrids end up on the junk pile or collectors shelf because no one has the basic fundamental radio theory knowledge that they can apply to understanding how these treasures work and how to operate and maintain them.

73s Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Rob S." <roberts@...> wrote:
>
> Your answers are never too much Terry,
>
> The information that you share and the time that you spend imparting it is a
> pleasure to be a part of.
>
> The guys like you (and others) that are prepared to share your (their)
> knowledge save the rest of us a lot of time and heart ache over issues with
> our radios
>
> I (and I would suggest many others) appreciate the efforts that you go to
> sharing knowledge to the group..
>
> Cheers and Thanks Terry !
>
> 73's
>
> Rob VK3BRS
>
>
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
> Sent: Thursday, 25 April 2013 9:48 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: Lost ALC during TX coil adjustment
> (TS-820S)
>
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> Probably much more than you wanted.
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> 73s Terry K9TW
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41904. Re: Rewiring a US 110V TS530 for 240V

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 13:29:16 UTC
From: bartbrummans
Topic: 41875 Message: 41904

Look for a TS-530 service manual. They are available on-line.
Then goto page 9 I believe, it has the instructions and illustration.

73
Bart

--- In TS-520_820_530_830@yahoogroups.com, "Jon" <jonathan.richardson@...> wrote:
>
> I am sure this is a simple one, but are there any cautionary tips or illustrations about the rewire of the TS-530 from 110v to European 240v.
>
> Many thanks
> Jon G8KJI
>

41905. Re: [TS-520_820_530_830] Re: Rewiring a US 110V TS530 for 240V

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 13:43:26 UTC
From: Mike
Topic: 41875 Message: 41905

Jon, I just sent you the service manual for the TS-530.

73
Mike W5RKL

On 4/25/2013 8:29 AM, bartbrummans wrote:
>
> Look for a TS-530 service manual. They are available on-line.
> Then goto page 9 I believe, it has the instructions and illustration.
>
> 73
> Bart
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Jon"
> <jonathan.richardson@...> wrote:
> >
> > I am sure this is a simple one, but are there any cautionary tips or
> illustrations about the rewire of the TS-530 from 110v to European 240v.
> >
> > Many thanks
> > Jon G8KJI
> >
>
>

[Non-text portions of this message have been removed]

41906. How to Measure 6146 Grid Current

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 14:35:48 UTC
From: Terry Wagoner
Topic: 41906 Message: 41906

Hopefully last post from me for today. Fingers worn out !

Got off list email questioning how I measured grid current. This person has always loaded by varying CAR pot to make sure ALC stays in black box range. He is skeptical that grid current is as low as 40ua (microamperes). I directed him to Ken Kempski site where he discusses nano-ampere grid current.

I take no offense and dont see this as a challenge. I expect everyone to evaluate and validate what I post here. I make mistakes daily.

Just a reminder of what Grid current is. When the control grid is positive with respect to the cathode dc current will flow from the cathode to the grid and return back to ground thru the -C supply. To measure it we can break the FG lead at the Finals board and get a meter in series. Just make sure you lift at the FG lead and insert meter so that RF choke is still in the path preventing any RF from going back to ALC amp and -C supply. There is an easier way that does not require lifting FG lead.

Here are several ways to measure grid current.
1. Lift the FG lead and insert a 50ua meter movement in series. Be careful with test leads as dealing with -100 vdc.

2. Lift the FG lead and insert a Multi-meter that has DC ua ranges on it. A milli-ohm meter is good for this, but hams seldom have as expensive. I have a very nice Simpson 2795 FET meter that has ua ranges down to 1ua full scale and I have used the 100ua range. This meter has these low ranges as it was used to troubleshoot cathodic protection among other low current circuits. See them from time to time on Ebay. With any multimeter that you put in series with the FG lead and Final board to read dc current level you need to read your manual and look at the Burden Voltage. Some of newer DMMs have very poor Burden. It can greatly affect the accuracy of dc current readings. If you dont understand Burden suggest you Google on it.

3. A method that most hams can employ is the IR drop method that requires no lifting of the FG lead. All the hybrids have a series resistor in the FG line and ALC amp transistor emitter lead. It is typically a 10k resistor and makes an ideal place to read the IR drop and calculate the grid current. I know this aint direct reading but neither is your Ip reading.

Here is how I do it on the TS-830 and it works equally well on the other rigs.

A. Use two micro-grabber test leads. Connect one grabber lead to the FG terminal and connect the other lead to the Emitter of Q19 on the Audio Board. Be careful not to short Q19 leads when connecting to the emitter lead. You will now have your test leads across 10K resistor R102.

B. Load rig to 100 watts out in CW mode and flip SG switch off.

C. Connect your DMM across the micro grabber test leads.

D. Flip to send and measure the voltage drop across R102. You should read approx 0.40 vdc. Try varying your Car pot and watching the voltage drop ie current.

E. I = E/R (darned old theory again) I = 0.40/10,000 = .000040 or 40 ua.

Here is sample of TS-830 6146 Grid current for varying Car pot levels, varying RF drive levels, and varying levels of indicated ALC on the panel meter.

Freq = 7.2 mhz
RF drive = 47.5 volts
Grid Current = 41.5ua
Car pot = 1.5
Meter ALC indication = 50% of black box

RF drive = 48.0 volts
Grid current = 43.7 ua
Car pot = 2.0
Meter ALC indication = 100% of black box

RF drive = 48.0 volts
Grid current = 45.2 ua
Car Pot = 6.0
Meter ALC indication = FSD (just off the peg)

So you can see it doesnt matter where you peak the AlC indication at. You will have a maximum of 41ua to 45ua of 6146 control grid current with ALC meter indicating in the ALC black box and at FSD. Just no way to approach or exceed the 4 ma grid current max for ICAS service. Not a concern with Kenwood hybrids.

OK enough for today.

73s Terry K9TW

41907. Re: [TS-520_820_530_830] Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 14:50:47 UTC
From: Mike
Topic: 41877 Message: 41907

I agree with Terry, we're not looking for the "proverbial" pat on the back. We're also not a couple of old farts, hiding in the shadows, complaining like Jeff Dunham's "Walter" character, but rather we're hams who believe the importance of having a solid basic knowledge base and an understanding of how the hybrids work, before any attempt to operate, troubleshoot and repair any hybrid transceiver.

There isn't a "Geek Squad" you can call on the telephone and have them come to your house to show you how to operate your hybrid, that's what the operator's manual is for. I would never dream of attempting to operate a transceiver such as a Kenwood hybrid without taking the time to read and understand the operating instruction. If I had trouble understanding what the manual is telling me, I would come here and ask for help/explanation. This doesn't happen that often here and that's a shame. A Kenwood hybrid is NOT a television set or a surround sound amplifier where you don't need to understand electronics to operate it. All you have to do with TVs and surround sound systems today is plug it in, connect it to the sat box, cable source, put the batteries in the remote, connect a few speakers, then press the RED ON/OFF button. The Kenwood hybrids are advanced transceivers where the operator should take the time to study the operator's manual before operating the transceiver. A lot of hybrids are bought on ebay, hamfest, and/or from private sales. If the manual doesn't come with the transceiver at the time you buy it, get it and study it BEFORE any attempt is made to operate the transceiver.

Yes, we do get frustrated at times. We don't expect everyone to be experts but we do believe that it's important for the ham who wants to operate their hybrid's properly and learn how to service their hybrid, should at least do "their part" and study. One can't learn and fix anything if they rely solely on someone else to do all the research and give them ALL the answers.

73
Mike W5RKL

On 4/25/2013 8:25 AM, Terry Wagoner wrote:
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> Rob:
>
> Appreciate your feedback. Not looking for any recognition. Guys like
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> > The information that you share and the time that you spend imparting
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> > The guys like you (and others) that are prepared to share your (
> their)
> > knowledge save the rest of us a lot of time and heart ache over
> issues with
> > our radios
> >
> > I (and I would suggest many others) appreciate the efforts that
> you go to
> > sharing knowledge to the group..
> >
> > Cheers and Thanks Terry !
> >
> > 73's
> >
> > Rob VK3BRS
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> > From: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > [mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Terry Wagoner
> > Sent: Thursday, 25 April 2013 9:48 PM
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
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41908. Re: [TS-520_820_530_830] Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 14:56:16 UTC
From: William Lyons
Topic: 41877 Message: 41908

Kadambari,

I hope you enjoy the book - obviously not a long treatise on the subject, but a useful (I hope) deskbook.

The return flight was long (10 hours) but uneventful - the best sort of flight!

Bill

Professor William H. Lyons
Richard H. Larson Professor of Tax Law
College of Law,
University of Nebraska
1875 North 42nd Street
P.O. Box 830902
Lincoln, NE 68583-0902
(402) 472-1246 (Direct)
(402) 472-5185 (FAX)
wlyons2@... (UNL e-mail)

>_____
> From: Terry Wagoner <wagstw46@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Thursday, April 25, 2013 6:48 AM
>Subject: [TS-520_820_530_830] Re: Lost ALC during TX coil adjustment (TS-820S)
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>
>Rob:
>
>Yes I like to go to my white board or sheet of paper and draw the ALC circuit and figure out how it works. Can then take some measurements when working per design and record for future when it doesnt. I try to do that with all the circuits as the circuit descriptions all could use further development. Kenwood gave just enough detail for casual user on the main functional blocks.
>
>ALC in the Hybrids is derived differently than most rigs that sample and rectify some rf output to develop the control voltage. With the hybrids the control voltage is always there derived from AVR board RF-1. We pull it down when grid current just begins to flow. Kenwood calls it Amplified ALC which is kind of a misnomer as the ALC transistor is not amplifying a signal it is acting like a variable resistor. I have a nice HP-410C 100 meg Z VTVM which I can actually watch ALC voltage pull down from RF-1 level as we increase RF drive. You can measure with a VTVM but it will pull down the voltage to around 2.6 to 2.7 vdc when you connect it and drives the S-meter upscale to around S3 to S4.

>
>You are not actually looking directly at Grid current when you peak the Drive control. Kenwood has no grid current meter shunts or grid current meter position. This isnt necessary for Class AB1 as there is no grid current. The grid requires no driving power only rf voltage swing. The moment that the driving envelope exceeds the dc operating bias offset and grid current begins to flow ALC bus line voltage is pulled down and TIF rf drive level is reduced. The cow just barely makes it out of the barn before it is pulled back!
>
>It is impossible to over drive the control grids of the finals and exceed the max grid dissipation.
>
>I think all the people who load by making sure the ALC is in middle of the black box or no more than the top of the black box ALC range are confusing it with another design or just dont understand how it works. On You Tube you can see some precautions about this presented by Extra Class holders. They have you peak in the black box and go back and check when done and adjust Car pot again. None of which is in the operating manual loading instructions. I guess they have good intentions. With a science or technical hobby need more than good intentions. Thankfully they are doing no harm to the rig. I have tried to explain this too more than one of these fellows, but most are stubborn and continue to load as they understand how the radio works. Fortunately no harm done unless drive is marginal to begin with.
>
>Some old timers may do this as we were all taught not to exceed max 6146 grid current of approx 2.5 ma to 3.0 ma on our 1950/1960 vintage 50 watt CW Class C Grid Leak Bias transmitters. We had to go back after loading into our lite bulbs and check and adjust grid current reading level. Never wanted to exceed grid current or have loss of grid drive with grid leak bias rigs.
>
>None of that applies to a Hybrid. Its operating bias is fixed bias and not grid leak developed. Of course Kenwood could have been clearer on what they meant when the manual tells you to peak Drive control to maximum ALC indication. Almost every new owner asks immediately if that means max of black ALC box range or max on the meter scale. Just give a decent CAR Level so you can see a good peak as you tune the Drive stage to resonance. 2/3 to 3/4 scale is good place, but max on ALC box works just fine as well.
>
>The black ALC box is meaningless while loading the rig. It is there for SSB mode to ensure linear operation. When you talk up to the max of the black box you have approx 40ua to 45ua of grid current. Kenwood actually varies the ALC time constants to use it as a crude means of speech compression to increase your talk power without introducing too much adjacent frequency splatter. In no case should you talk rig up outside the ALC box. I try to keep it no more than mid-range. Technically when you have no indication you are operating at most linear place.
>
>I do not have a spectrum analyzer, but have asked the fellows who have L-pans and K3 rigs or similar to look at my signal while I varied the Mic gain for various ALC indications and no one sees any trash if I talk up to the max of the black box.
>
>Probably much more than you wanted.
>
>73s Terry K9TW

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41909. Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 16:27:57 UTC
From: paul.nussbaum
Topic: 41877 Message: 41909

Thank you, Terry.

I appreciate your help learning about this. Addressing your points:

1] Thanks, I'll be looking today for a proper meter., but see 6 and 7 below...

2] Yes, tuner bypassed, straight to dummy load

3] Yes, using marker, CAR CCW

4] Good; is it the relay on the AF board that switchs over from cutoff to operating bias?

5] Hmm... I'm not clear on this... I made all the DC readings in CW mode. I can see 60ma on the meter selected to Ip when mode is SSB during Send on. I measured -57.5V during Send on in CW mode; but I'm used to observing in CW mode that the Ip with the Send on is 75ma before closing the key. Did I measure -57.5V with 75ma resting plate current? Do I need to use SSB mode to measure the bias voltage with 60ma?

6] and 7] I'm not clear on the differences between DMM, VTVM, RF probe, and RF millivolt meter... looking around the internet I see RF probes (and probe circuits) associated with both DMM and VTVM, and I see millivolt meters that can't be used for RF measures. I don't have an o-scope.

I'm heading to the electronics shop shortly to see what I find there...

Thanks much,
Paul
AD5FT

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Paul: Couple of things. Good job on getting the DC voltages. VOMs typically have 50,000 ohms/volt sensitivity so OK for plate and screen voltages but not good for ALC or AGC bus and getting on grids of vacuum tubes.
>
> 1. Suggest you get a DMM or a VTVM to get higher input impedance. I prefer the old Heath VTVMs like a IM-18 as it has 11 meg input Z and wont load down your readings and a large analog scale to see peaks and nulls. I suggest Heath as they made 10s of thousands so can always buy a spare for a parts unit. A good DMM also has its place for the DC readings that you just took. Most will have a 10 meg Z, but some do not. A cheap Harbor Freight measures at just under 1 meg and some have different Z depending on the meter range.
>
> 2. I assume you have the Tuner in Bypass? Tuner watt meter is fine.
>
> 3. I assume you have advanced CAR Level Pot full CCW and peaked the Drive Control. It may not peak at 1200.
>

> 4. Your DC readings look good. You can see that you have proper switch over from cutoff to operating bias voltage on the Driver Tube and the Finals.
>
> 5. I assume that your -57.5 vdc bias voltage is with 60 ma resting plate current. At -57.5 you will need -57.5/1.414 = 40.67 rms rf volts drive at 6146 Pin 5. So anything less than approx 41 rf volts drive and you will have no ALC meter indication. Anything greater than 41 rf volts and you should see ALC indication assuming the ALC metering is working. Suggest you follow previous suggestion to clean aux relay contacts. Good idea to clean them as easy to do and AGC and ALC bus line is switched by this relay.
>
> 6.With the lower RF output you could use a single germanium diode RF probe to take the TX Level diagram readings to see where losing it at. Normally suggest use a two or three diode probe to get on plate of 12BY7A or grid of 6146 finals so you do not exceed the peak inverse voltage of the single diode. See N5ESE to make a probe or buy Hendricks kit or buy used Heathkit 309-c etc off ebay.
>
> 7. You cannot accurately measure TIF signal from IF board using RF probe as it is too low a level (approx 35 mv). Absent RF millivolt meter use an O-scope to measure TIF. If you have good RF level at output of TX Mixer safe to assume have adequate TIF level.
>
> Took covers off my TS-820 this AM and here are my readings which may help you. I took these after loading rig at 14.2 mhz into dummy load to 100 watts output. I then turned off SG switch.
>
> 1. Cutoff bias voltage on 6146 Pin 5 = -95.10vdc
> 2. Operating bias voltage on 6146 Pin 5 = -50.25 @60ma resting Ip
> 3. RF voltage at Pin 5 = 42.2 rf volts
> 4. CAR Level Pot at number "2"
> 5. ALC indication at full scale deflection (FSD)and holding there.
>
> So my delta is 42.2 x 1.414 = 59.67 peak rf volts. 59.67 - 50.25 = 9.42 volts.
>
> You can see I am swinging the control grids approx 9 volt positive on peaks of rf drive envelope which results in microampere grid current flowing and ALC meter driving to full scale deflection.
>
> 73s Terry K9TW
>
>

41910. Re: [TS-520_820_530_830] Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 16:48:27 UTC
From: John Davidson
Topic: 41877 Message: 41910

I spent most of my ham career with no RF Wattmeter hooked up.
Most of the rigs I used had a final tube plate current meter that we used to peak drive and dip plate current and set loading capacitor to a specified Ip at plate tuning dip,
 This was a given, that those settings would give you max RF output within final tube specs, and that worked just fine !

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, April 24, 2013 11:39 PM
Subject: [TS-520_820_530_830] Re: Lost ALC during TX coil adjustment (TS-820S)

If you peak the Drive control with Rx background noise or the marker signal can you then load the rig into dummy load and get approx 100 watts out? Do you have an external wattmeter? If not, suggest you get one. They are not only a good loading aid, but a piece of test gear. Can tell you much more than HV and IP meter in cases like this or when you have an open or shorted coax situation.
It is possible to have pretty decent RF output without having any ALC indication.

Terry K9TW

>
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[Non-text portions of this message have been removed]

41911. Re: [TS-520_820_530_830] Re: Compatible components for TS-830 RF unit X44-1360-00

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 16:59:26 UTC
From: n6wk@...
Topic: 41890 Message: 41911

Do you need just the slugs except for the one you say you need the Coil
as well or are you after the complete coil with slug installed ?
Dollar Value for all ?
I have the 80 meter Ant slug, but not a complete Coil for 80 Ant.

Gordon
N6WK

On 4/25/2013 6:24 AM, bartbrummans wrote:
>
> 80M- Mix and Ant
> 40M- Mix and Ant
> 30M- Mix
> 20M- Mix and Ant
> 12M- Mix and Ant
>
> 30M- Drive
> 20M- Drive (need coil also)
>
> Yep..a real mess...
>
> 73
> Bart
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:
> >
> > Exactly which Slugs do you need ?
> >
> > 73,
> > Gordon
> > N6WK
> >
> >
> > On 4/24/2013 6:02 PM, bartbrummans wrote:
> > >
> > > I've had no luck obtaining a working replacement board, nor finding
> > > one for parts use:(
> > >
> > > The PO of this rig must have "screw-drivered" the IF cans.
> > > Cores are broken in all sections, Ant, Mix, Drv.
> > >
> > > It looks like the TS-820 has the same cores/cans on the DRV side, so
> > > I'm going to look for a donor board for those.

> > >
> > > I'm going to need at least 8 new cores for the ANT, Mix side and
> > > possibly a couple of cans (160,80,40,30,20M)
> > >
> > > Anyone know a source for cores/cans? Bob M is currently out of the RF
> > > units (working or not)
> > >
> > > 73
> > > Bart
> > >
> > >
> >
>
>

41912. Re: [TS-520_820_530_830] Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 17:09:28 UTC
From: John Davidson
Topic: 41877 Message: 41912

I WONDER IF even a quarter of today's ham population understands any vacuum tube theory, (or even cares).
73, JD

From: Mike <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, April 24, 2013 6:02 PM
Subject: Re: [TS-520_820_530_830] Re: Lost ALC during TX coil adjustment (TS-820S)

To understand how this works you have to understand the "Electron Cloud"
that hovers over the Cathode even when no conductionis occurring in the
final tube (standby). This is all part of understanding how vacuum tubes
work and how voltage, whether positive or negative, is applied each
element in the tubeand what happens when these potentials change, either
positive or negative. This is why it is very important to understand
vacuum tube concepts in order to properly troubleshoot and service any
vacuum tube circuit.

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41913. Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 17:20:09 UTC
From: Terry Wagoner
Topic: 41877 Message: 41913

I suppose you measure voltage with your finger tips as well. I would not be surprised. A watt meter is a tool just like a voltmeter. I dont consider it a frill or luxury.

The old dip and load method certainly works to load a hybrid, but tuning to max rf output without exceeding max Ip is easier to do, quicker to do, less stress on the finals, easier to teach, and most efficient place to operate at. Before wattmeters we all used lamp bulbs on are tuned feeders or thermocouple RF ammeters to load are rigs. I dont think very many were limited to just a plate current meter and if you were you soon learned the limitations of it. I think the last time I was limited to just dip and load was with my DX-20 in 1960.

Even Kenwood was smarter than that as they gave us the RF meter position so we at least had relative RF power indication to load with.

Also the dip is not necessarily where you want to operate. Depending on several factors including neutralization the dip may or may not occur at maximum RF output. I think you need to read about over-coupling and under-coupling which my Elmer taught me back in the 50s/60s AM transmitter and amplifier days.

Even Kenwood came around to realizing that no need to use Dip and Load method. Read the TS-530 and TS-830 loading instructions. On the TS830 go to page 18 and read the very last NOTE. It is pretty clear what they think is a simpler method.

Lastly unscrew your coax connector off your hybrid and load using the Dip and Load method and tell me what you see. I wonder if a new hybrid owner today would recognize it?

Since you need an SWR bridge to trim your antennas it is silliness not to invest just a few dollars more in a Wattmeter that serves 3 functions
1. Tuning and modulation aid (it will have much better ballistics than your Ip meter for determining mic gain settings)
2. Troubleshooting your feed line and antenna and showing intermitants and faults easier than your Ip or HV meter.
3. Use to measure SWR

A Heath HM-102 can be had for $50 and a Drake W4 for around $70. I am not telling the new folks they must have a peak reading Bird.

A wattmeter is just another nice tool to have at the operating position and in the shack. Ip X Hv = DC input power, which may or may not have any direct relationship to output power.

I think new folks who follow my advice will appreciate what this tool will do for them.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> I spent most of my ham career with no RF Wattmeter hooked up.
> Most of the rigsÂ I used had a final tube Â plate current meter that we used to peak

drive and dip plate current and set loading capacitor to a specified Ip at plate tuning dip,
> Â This was a given, that those settings would give you Â maxÂ RF output within final tube specs, and that worked just fine !
>
>
> _____
> From: Terry Wagoner <wagstw46@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, April 24, 2013 11:39 PM
> Subject: [TS-520_820_530_830] Re: Lost ALC during TX coil adjustment (TS-820S)
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> If you peak the Drive control with Rx background noise or the marker signal can you then load the rig into dummy load and get approx 100 watts out? Do you have an external wattmeter? If not, suggest you get one. They are not only a good loading aid, but a piece of test gear. Can tell you much more than HV and IP meter in cases like this or when you have an open or shorted coax situation.
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>
> Terry K9TW
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> [Non-text portions of this message have been removed]
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41914. Re: [TS-520_820_530_830] Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 17:47:55 UTC
From: William Lyons
Topic: 41877 Message: 41914

My apologies to the list for the incorrect posting. The message obviously was an attempt at a response to a completely different e-mail.

Bill W1LXE

Professor William H. Lyons
Richard H. Larson Professor of Tax Law
College of Law,
University of Nebraska
1875 North 42nd Street
P.O. Box 830902
Lincoln, NE 68583-0902
(402) 472-1246 (Direct)
(402) 472-5185 (FAX)
wlyons2@... (UNL e-mail)

>_____
> From: Terry Wagoner <wagstw46@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Thursday, April 25, 2013 6:48 AM
>Subject: [TS-520_820_530_830] Re: Lost ALC during TX coil adjustment (TS-820S)
>
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>Rob:
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>It is impossible to over drive the control grids of the finals and exceed the max grid dissipation.
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41915. Re: [TS-520_820_530_830] Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 18:25:49 UTC
From: John Davidson
Topic: 41877 Message: 41915

Just a few points to ponder.

From: Terry Wagoner <wagstw46@...>

Subject: [TS-520_820_530_830] Re: adjustment (TS-820S)

,
 I had been a ham almost a decade before I had access to a wattmeter, then on the job, I used one every day.

I suppose you measure voltage with your finger tips as well. I would not be surprised. A watt meter is a tool just like a voltmeter. I dont consider it a frill or luxury.
No I use a meter
. I think the last time I was limited to just dip and load was with my DX-20 in 1960.

Now you know what I was talking about, this is the kind of gear I used
. . I think you need to read about over-coupling and under-coupling which my Elmer taught me back in the 50s/60s AM transmitter and amplifier days.

That's what the loading control on a Pi network is for, getting the loading right indicated by the plate current

Even what they think is a simpler method.
Should we go on tuning for max output no matter how high the Ip goes> ? I don't like the idea.

A wattmeter is just another nice tool to have at the operating position and in the shack. Ip X Hv = DC input power, which may or may not have any direct relationship to output power.
I still think it does, or comes pretty close, if everything is tuned properly.

I think new folks who follow my advice will appreciate what this tool will do for them. Your advice is a great help to the new guys, for sure ! Keep it up !

Terry K9TW

--- In mailto:TS-520_820_530_830%40yahoogroups.com, John Davidson <k8jd@...> wrote:
>
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> Sent: Wednesday, April 24, 2013 11:39 PM
> Subject: [TS-520_820_530_830] Re: Lost ALC during TX coil adjustment (TS-820S)
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[Non-text portions of this message have been removed]

41916. Re: [TS-520_820_530_830] Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 18:33:23 UTC
From: John Davidson
Topic: 41877 Message: 41916

I typed my comments in italics and Yahoo mail changed them so you have no clear indication of what I added to Terry's posting reply.
Sorry if it makes no sense. I added my initials after my rebuttal comment lines here.

From: John Davidson <k8jd@yahoo.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Thursday, April 25, 2013 2:25 PM
Subject: Re: [TS-520_820_530_830] Re: Lost ALC during TX coil adjustment (TS-820S)

Just a few points to ponder.

From: Terry Wagoner <mailto:wagstw46%40yahoo.com>

Subject: [TS-520_820_530_830] Re: adjustment (TS-820S)

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Your advice is a great help to the new guys, for sure ! Keep it up !,JD

Terry K9TW

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73, K8JD

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41917. Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 20:23:31 UTC
From: Terry Wagoner
Topic: 41877 Message: 41917

I never said load for max out regardless of Ip. Do not know where you got that from. I have always taught and observed after adjusting the tank capacitor to resonance in Tune mode ie dipping the plate current then load for max out without exceeding the max plate current for your particular transmitter. Leave meter on Ip position and use wattmeter to load for max output.

There are numerous ways you can get 200ma or 225ma on the Ip meter position and not have 100 watts output.

A new person may have no clue as to what a LC parallel resonant circuit is, what a Pi-network is, what the Tank capacitor or the loading capacitor do. When they have problems inside that PA cage or with whatever is connected to that SO-239 connector it is nice to have a wattmeter to tell them they have a problem.

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
>
>
>
> Just a few points to ponder.
>
> _____
>
> From: Terry Wagoner <wagstw46@...>
> Â
> Subject: [TS-520_820_530_830] Re:Â adjustment (TS-820S)
> Â
>
> ,
> Â I had been a ham almost a decade before I had access to a wattmeter, then on the job, I used one every day.
> Â
>
>
> Â
>
> I suppose you measure voltage with your finger tips as well. I would not be surprised. A watt meter is a tool just like a voltmeter. I dont consider it a frill or luxury.
> No I use a meter
> . I think the last time I was limited to just dip and load was with my DX-20 in 1960.
> Â
> Now you know what I was talking about,Â this is the kind of gear I used
> . . I think you need to read about over-coupling and under-coupling which my Elmer taught me back in the 50s/60s AM transmitter and amplifier days.
>
> That's what the loading control on a Pi network is for, getting the loading right indicated by the plate current

>
> Even what they think is a simpler method.
> Should we go on tuning Â for max output no matter how high the Ip goes>Â ? I don't like the idea.
>
> A wattmeter is just another nice tool to have at the operating position and in the shack. Ip X Hv = DC input power, which may or may not have any direct relationship to output power.
> I still think it does, or comes pretty close, Â if everything is tuned properly.Â
>
> I think new folks who follow my advice will appreciate what this tool will do for them.
> Your advice isÂ a great help to the new guys, for sure ! Keep it up !
>
> Terry K9TW
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, John Davidson <k8jd@> wrote:
> >
> > I spent most of my ham career with no RF Wattmeter hooked up.
> > Most of the rigsÃ□Â I used had a final tube Ã□Â plate current meter that we used to peak drive and dip plate current and set loading capacitor to a specified Ip at plate tuning dip,
> > Ã□Â This was a given, that those settings would give you Ã□Â maxÃ□Â RF output within final tube specs, and that worked just fine !
> >
> >
> > _____
> > From: Terry Wagoner <wagstw46@>
> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > Sent: Wednesday, April 24, 2013 11:39 PM
> > Subject: [TS-520_820_530_830] Re: Lost ALC during TX coil adjustment (TS-820S)
> >
> >
> > Ã□Â
> >
> > If you peak the Drive control with Rx background noise or the marker signal can you then load the rig into dummy load and get approx 100 watts out? Do you have an external wattmeter? If not, suggest you get one. They are not only a good loading aid, but a piece of test gear. Can tell you much more than HV and IP meter in cases like this or when you have an open or shorted coax situation.
> > It is possible to have pretty decent RF output without having any ALC indication.
> >
> > Terry K9TW
> >
> > >
> > >
> > >
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> >
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> > [Non-text portions of this message have been removed]
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>
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41918. Re: Compatible components for TS-830 RF unit X44-1360-00

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 20:23:42 UTC
From: k5hfg
Topic: 41890 Message: 41918

Bart,
Hold up. I got your Email. I will send an Email as soon as I get cleaned up here. Just got home and saw you had made an inquiry. I will get to it directly.

Don K5HFG

41919. Re: Compatible components for TS-830 RF unit X44-1360-00

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 20:38:33 UTC
From: k5hfg
Topic: 41890 Message: 41919

Bart,
Am having trouble sending. Shoot me an Email dlbowders at nepower dot coop

K5HFG

41920. RE: [TS-520_820_530_830] Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 22:11:00 UTC
From: Rob S.
Topic: 41877 Message: 41920

My comments included you too Mike 8-)

When I was typing the first post I was going to include all of the names of the people that I keep seeing post, even a couple from VK but I decided against it just in case I forgot someone.

I believe that this and most other Amateur related groups displays some of the true spirit of Amateur Radio, that is to impart knowledge and to " fix it yourself "

Terry added a third point, one that I hadn't considered, to carry on the Torch for these great radios for years to come.

Just occasionally it's nice to recognize the unselfish efforts of others 8-)

Cheers Mike and Group,

73's

Rob. VK3BRS

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Mike
Sent: Friday, 26 April 2013 12:51 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: Lost ALC during TX coil adjustment (TS-820S)

I agree with Terry, we're not looking for the "proverbial" pat on the back. We're also not a couple of old farts, hiding in the shadows, complaining like Jeff Dunham's "Walter" character, but rather we're hams who believe the importance of having a solid basic knowledge base and an understanding of how the hybrids work, before any attempt to operate, troubleshoot and repair any hybrid transceiver.

There isn't a "Geek Squad" you can call on the telephone and have them come to your house to show you how to operate your hybrid, that's what the operator's manual is for. I would never dream of attempting to operate a transceiver such as a Kenwood hybrid without taking the time to read and understand the operating instruction. If I had trouble understanding what the manual is telling me, I would come here and ask for help/explanation. This doesn't happen that often here and that's a shame. A Kenwood hybrid is NOT a television set or a surround sound amplifier where you don't need to understand electronics to operate it. All you have to do with TVs and surround sound systems today is plug it

in, connect it to the sat box, cable source, put the batteries in the remote, connect a few speakers, then press the RED ON/OFF button. The Kenwood hybrids are advanced transceivers where the operator should take the time to study the operator's manual before operating the transceiver. A lot of hybrids are bought on ebay, hamfest, and/or from private sales. If the manual doesn't come with the transceiver at the time you buy it, get it and study it BEFORE any attempt is made to operate the transceiver.

Yes, we do get frustrated at times. We don't expect everyone to be experts but we do believe that it's important for the ham who wants to operate their hybrid's properly and learn how to service their hybrid, should at least do "their part" and study. One can't learn and fix anything if they rely solely on someone else to do all the research and give them ALL the answers.

73
Mike W5RKL

On 4/25/2013 8:25 AM, Terry Wagoner wrote:
>
> Rob:
>
> Appreciate your feedback. Not looking for any recognition. Guys like
> me and Mike and others of our generation are just trying to pass on
> what we learned over 50 years as we are concerned about who will hold
> up the Tent Poles when we are gone. With the hobby feeder system
> radically altered and interest level drying up I think I can speak for
> Mike when I say we hate to see Hybrids end up on the junk pile or
> collectors shelf because no one has the basic fundamental radio theory
> knowledge that they can apply to understanding how these treasures
> work and how to operate and maintain them.
>
> 73s Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Rob S." <roberts@...>
> wrote:
> >
> > Your answers are never too much Terry,
> >
> > The information that you share and the time that you spend imparting
> it is a
> > pleasure to be a part of.
> >
> > The guys like you (and others) that are prepared to share your (
> their)
> > knowledge save the rest of us a lot of time and heart ache over
> issues with
> > our radios

> >
> > I (and I would suggest many others) appreciate the efforts that
> you go to
> > sharing knowledge to the group..
> >
> > Cheers and Thanks Terry !
> >
> > 73's
> >
> > Rob VK3BRS
> >
> >
> >
> > From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > [mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Terry Wagoner
> > Sent: Thursday, 25 April 2013 9:48 PM
> > To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Subject: [TS-520_820_530_830] Re: Lost ALC during TX coil adjustment
> > (TS-820S)
> >
> >
> >
> >
> >
> > Rob:
> >
> > Yes I like to go to my white board or sheet of paper and draw the ALC
> > circuit and figure out how it works. Can then take some measurements
> when
> > working per design and record for future when it doesnt. I try to do
> that
> > with all the circuits as the circuit descriptions all could use further
> > development. Kenwood gave just enough detail for casual user on the main
> > functional blocks.
> >
> > ALC in the Hybrids is derived differently than most rigs that sample and
> > rectify some rf output to develop the control voltage. With the
> hybrids the
> > control voltage is always there derived from AVR board RF-1. We pull
> it down
> > when grid current just begins to flow. Kenwood calls it Amplified
> ALC which
> > is kind of a misnomer as the ALC transistor is not amplifying a
> signal it is

> > acting like a variable resistor. I have a nice HP-410C 100 meg Z
> VTVM which
> > I can actually watch ALC voltage pull down from RF-1 level as we
> increase RF
> > drive. You can measure with a VTVM but it will pull down the voltage to
> > around 2.6 to 2.7 vdc when you connect it and drives the S-meter
> upscale to
> > around S3 to S4.
> >
> > You are not actually looking directly at Grid current when you peak the
> > Drive control. Kenwood has no grid current meter shunts or grid current
> > meter position. This isnt necessary for Class AB1 as there is no grid
> > current. The grid requires no driving power only rf voltage swing. The
> > moment that the driving envelope exceeds the dc operating bias
> offset and
> > grid current begins to flow ALC bus line voltage is pulled down and
> TIF rf
> > drive level is reduced. The cow just barely makes it out of the barn
> before
> > it is pulled back!
> >
> > It is impossible to over drive the control grids of the finals and
> exceed
> > the max grid dissipation.
> >
> > I think all the people who load by making sure the ALC is in middle
> of the
> > black box or no more than the top of the black box ALC range are
> confusing
> > it with another design or just dont understand how it works. On You
> Tube you
> > can see some precautions about this presented by Extra Class
> holders. They
> > have you peak in the black box and go back and check when done and
> adjust
> > Car pot again. None of which is in the operating manual loading
> > instructions. I guess they have good intentions. With a science or
> technical
> > hobby need more than good intentions. Thankfully they are doing no
> harm to
> > the rig. I have tried to explain this too more than one of these
> fellows,
> > but most are stubborn and continue to load as they understand how
> the radio
> > works. Fortunately no harm done unless drive is marginal to begin with.
> >
> > Some old timers may do this as we were all taught not to exceed max 6146
> > grid current of approx 2.5 ma to 3.0 ma on our 1950/1960 vintage 50
> watt CW
> > Class C Grid Leak Bias transmitters. We had to go back after loading

> into
> > our lite bulbs and check and adjust grid current reading level.
> Never wanted
> > to exceed grid current or have loss of grid drive with grid leak
> bias rigs.
> >
> > None of that applies to a Hybrid. Its operating bias is fixed bias
> and not
> > grid leak developed. Of course Kenwood could have been clearer on
> what they
> > meant when the manual tells you to peak Drive control to maximum ALC
> > indication. Almost every new owner asks immediately if that means max of
> > black ALC box range or max on the meter scale. Just give a decent
> CAR Level
> > so you can see a good peak as you tune the Drive stage to resonance.
> 2/3 to
> > 3/4 scale is good place, but max on ALC box works just fine as well.
> >
> > The black ALC box is meaningless while loading the rig. It is there
> for SSB
> > mode to ensure linear operation. When you talk up to the max of the
> black
> > box you have approx 40ua to 45ua of grid current. Kenwood actually
> varies
> > the ALC time constants to use it as a crude means of speech
> compression to
> > increase your talk power without introducing too much adjacent frequency
> > splatter. In no case should you talk rig up outside the ALC box. I
> try to
> > keep it no more than mid-range. Technically when you have no
> indication you
> > are operating at most linear place.
> >
> > I do not have a spectrum analyzer, but have asked the fellows who have
> > L-pans and K3 rigs or similar to look at my signal while I varied
> the Mic
> > gain for various ALC indications and no one sees any trash if I talk
> up to
> > the max of the black box.
> >
> > Probably much more than you wanted.
> >
> > 73s Terry K9TW
> >
> > >
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41921. "Angel hair" for rewinding L41....

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-25 23:12:24 UTC
From: bartbrummans
Topic: 41921 Message: 41921

Well,

My #42 came in...good thing it is a 1600ft spool...LOL (smallest I could find).

If you need some, let me know.

Boy oh boy...it is "Angel hair" and with my fat fingers.....:)

On the serious side, what if the windings overlap or cross, does it make a difference?

73
Bart

41922. Re: Compatible components for TS-830 RF unit X44-1360-00

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-26 12:25:02 UTC
From: bartbrummans
Topic: 41890 Message: 41922

Thanks to everyone here for the help and suggestions.
By shear luck I ran across a fellow ham whom had some spares.

This will save a ton of work, as my RF unit was in very sad shape.

73
Bart

--- In TS-520_820_530_830@yahoogroups.com, "bartbrummans" <cocobean64@...> wrote:
>
> I've had no luck obtaining a working replacement board, nor finding one for parts use:(
>
> The PO of this rig must have "screw-drivered" the IF cans.
> Cores are broken in all sections, Ant, Mix, Drv.
>
> It looks like the TS-820 has the same cores/cans on the DRV side, so I'm going to look for a donor board for those.
>
> I'm going to need at least 8 new cores for the ANT, Mix side and possibly a couple of cans (160,80,40,30,20M)
>
> Anyone know a source for cores/cans? Bob M is currently out of the RF units (working or not)
>
> 73
> Bart
>

41923. RE: [TS-520_820_530_830] Re: Compatible components for TS-830 RF unit X44-1360-00

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-26 13:13:19 UTC
From: fpath fpath
Topic: 41890 Message: 41923

Bart,

Trying looking for some old CB chassis that can be salvaged for parts.

Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: cocobean64@...
Date: Fri, 26 Apr 2013 12:25:02 +0000
Subject: [TS-520_820_530_830] Re: Compatible components for TS-830 RF unit X44-1360-00

Thanks to everyone here for the help and suggestions.
By shear luck I ran across a fellow ham whom had some spares.

This will save a ton of work, as my RF unit was in very sad shape.

73
Bart

--- In TS-520_820_530_830@yahoogroups.com, "bartbrummans" <cocobean64@...> wrote:
>
> I've had no luck obtaining a working replacement board, nor finding one for parts use:(
>
> The PO of this rig must have "screw-drivered" the IF cans.
> Cores are broken in all sections, Ant, Mix, Drv.
>
> It looks like the TS-820 has the same cores/cans on the DRV side, so I'm going to look for a donor board for those.
>
> I'm going to need at least 8 new cores for the ANT, Mix side and possibly a couple of cans (160,80,40,30,20M)
>
> Anyone know a source for cores/cans? Bob M is currently out of the RF units (working or not)
>
> 73
> Bart
>

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41924. Re: INTERMITTANT RX SENS

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-27 01:02:34 UTC
From: bartbrummans
Topic: 26 Message: 41924

Ditto on the relay (Ant relay), just replaced it on my TS-830, it's the same relay/location as on the 530 I believe.
Fixed the rx issue...
If you cannot find it in the UK, Jim at www.Hybridrestore.com has them.

--- In TS-520_820_530_830@yahoogroups.com, "sparks98.g4kki" <sparks98.g4kki@...> wrote:
>
> Hi Bill,
> thanks for that info, i have tried to clean the relay contacts but it has made very little difference.
> I will see if i can get a replacement relay from it over here but not sure yet how available they are in the
> uk. Most the dealers here don't want to know you if they are'nt going to do the job themselves and
> if your rig is over a couple of years old it's obsolete !
> The cleaner i have used is Servisol super 10, i suppose that they are nearly all the same .I might try
> putting the tx/rx over on the other contacts and tape the aux ones up for now. Never used the aux socket.
>
> 73's
> de
> Bill
> G4KKI. RSARS 1596 FISTS 7709
> ----- Original Message -----
> From: Bill
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tuesday, September 10, 2002 1:30 AM
> Subject: Re: [TS-520_820_530_830] INTERMITTANT RX SENS
>
>
> Definitely a relay. If you have a good cleaner such
> as Cailube, you can just spritz the contacts a bit,
> and cycle it. If you can, also slide a very narrow
> piece of manila folder paper between the contacts with
> the juice on it, and try to get both the NC and the NO
> contacts.
>
> If you have to replace the relay, it's Kenwood part
> number S51-4402-05.
>
> If you cannot locate one of these locally, let me
> know, email direct please.
>
> 73!

>
> Bill K0ZL
> --- "sparks98.g4kki" <sparks98.g4kki@...>
> wrote:
> > Hi All,
> > i am a new member, i am G4KKI and i live in
> > Manchester in the North West of England.
> > I have a ts530s.which has developed a slight fault
> > and i wondered ifanyone has come across this and got
> > a cure
> > .It seems to keep going deaf,i click the key or send
> > switch and signals comeback up to normal.
> > The bandswitches seem ok . Wondered if perhaps the
> > tx/rx relay might be at fault ?
> >
> > Not had time yet to read through the messages that
> > have been posted to the group but will do so
> > later this evening.
> > A very good afternoon/evening/morning to who ever is
> > in the group,where ever you may be
> >
> > 73's de
> >
> > Bill Stevenson G4KKI. RSARS 1596 FISTS 7709
> >
>
>
> =====
>
> see our website www.amateur-repairs.com
>
>
> _____
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>

41925. Re: INTERMITTANT RX SENS

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-27 10:15:23 UTC
From: Terry Wagoner
Topic: 26 Message: 41925

You are all talking about very different relays. K0ZL is talking about the 4PDT flat pack aux relay which does cause several intermittent problems. Ordinarily I would advise you to troubleshoot this condition by studying the RX path from the SO-239 to the RF board and first exhausting the experiential based items followed by signal injection/signal tracing and not just replacing a relay on a guess. I have seen poor solder connection at the So-239 where tinned lead will actually pull out, dirty RF attenuator switch, dirty RF board molex Conn 3, or bad solder connection at Conn 3.

The antenna T/R relays for the TS-530 and the TS-830 are different animals. Both are located under the PA cage in metal shield cans. The TS-830 uses a plug in Omron MX-2P and the the TS-530 uses a miniature solder in Fujitsu FBR321DO12. It is Kenwood part number S51-2407-05 and no longer available. Also, the two antenna T/R relays will not interchange. I have never seen a MX-2P in a TS-530, but have heard of at least one owner who reports one installed which I believe is a mod unless it is an export version of the 530. You need to determine which configuration you have and easy to do by pulling the shield can.

As to the Antenna T/R Relay causing receiver de-sensitivity that would not be common in my experience. The NC contact in this relay sees virtually no current unless the rig has been exposed to ESD. The contacts cannot be cleaned on the TS-530 FBR Ant T/R relay.

If you have the original clear plastic case Omron LZN4 flat pack Aux relay cleaning the contacts can be done, but in my experience will at best be a temporary fix. The LZN4 is no longer available, but can be replaced with a Aromat NF4EB or similar. I suggest buying one from Ken or Jim and replacing.

This issue is definitely a multiple repeat FAQ.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "bartbrummans" <cocobean64@...> wrote:
>
> Ditto on the relay (Ant relay), just replaced it on my TS-830, it's the same relay/location as on the 530 I believe.
> Fixed the rx issue...
> If you cannot find it in the UK, Jim at www.Hybridrestore.com has them.
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> --- In TS-520_820_530_830@yahoogroups.com, "sparks98.g4kki" <sparks98.g4kki@> wrote:
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> > Hi Bill,
> > thanks for that info, i have tried to clean the relay contacts but it has made very little difference.
> > I will see if i can get a replacement relay from it over here but not sure yet how available they are in the
> > uk. Most the dealers here don't want to know you if they are'nt going to do the job themselves and
> > if your rig is over a couple of years old it's obsolete !

> > The cleaner i have used is Servisol super 10, i suppose that they are nearly all the same .I might try
> > putting the tx/rx over on the other contacts and tape the aux ones up for now. Never used the aux socket.
> >
> > 73's
> > de
> > Bill
> > G4KKI. RSARS 1596 FISTS 7709
> > ----- Original Message -----
> > From: Bill
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Tuesday, September 10, 2002 1:30 AM
> > Subject: Re: [TS-520_820_530_830] INTERMITTANT RX SENS
> >
> >
> > Definitely a relay. If you have a good cleaner such
> > as Cailube, you can just spritz the contacts a bit,
> > and cycle it. If you can, also slide a very narrow
> > piece of manila folder paper between the contacts with
> > the juice on it, and try to get both the NC and the NO
> > contacts.
> >
> > If you have to replace the relay, it's Kenwood part
> > number S51-4402-05.
> >
> > If you cannot locate one of these locally, let me
> > know, email direct please.
> >
> > 73!
> >
> > Bill K0ZL
> > --- "sparks98.g4kki" <sparks98.g4kki@>
> > wrote:
> > > Hi All,
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> > > I have a ts530s.which has developed a slight fault
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> > > a cure
> > > .It seems to keep going deaf,i click the key or send
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> > see our website www.amateur-repairs.com
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41926. RE: [TS-520_820_530_830] Re: INTERMITTANT RX SENS

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-27 11:13:55 UTC
From: fpath fpath
Topic: 26 Message: 41926

Bill,

What Terry said is 100%, however, as I am the lucky owner of two 530s, I had a similar problem years ago and it actually related to the RF att switch on the front panel. Try giving it a little wiggle\push in out before cycling through transmit and see if that helps. Mine just had a build up of age in it, I gave it a good blast of deoxit and cycled the switch numerous times, blew out with compressed air and it appeared to fix it, been good for 5+ years.

Remember if you going to go into the PA cage, make sure the radio is disconnected from power and you have discharged the HV, the voltages here are lethal! If it isn't the RF att switch, my money is on the molex connector, either dry joint or just dirty. As Terry said just replacing relays on a hunch is pointless in my opinion and applying heat the the foil track for too long can cause them to lift, so why introduce another problem without looking at the typical easy solve first.

73's
Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: wagstw46@...
Date: Sat, 27 Apr 2013 10:15:23 +0000
Subject: [TS-520_820_530_830] Re: INTERMITTANT RX SENS

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41927. Re; TS830 Frequency Stability

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-27 14:17:26 UTC
From: hpdd709
Topic: 41927 Message: 41927

I have refurbished two TS830s and love both. Have received many fine compliments on audio quality and received signallevel. I don't have an external VFO to minimize the VFO drift. Both my radios drift 60 to 100 hz, even after a 45 minute warm up. But I must say, after the 45 minute warm up, the drift is at a minimum.

I was told that a modification can be done to the TS830 VFO to help eliminate the drift and bring the stability to the degree of the newer digital VFOs of the radios on the market today.

Does anyone know if there is any information out there?

Tnx,

Enjoy the hobby as I do.

73,

Mike/K3MG

41928. Re: [TS-520_820_530_830] Re; TS830 Frequency Stability

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-27 14:33:54 UTC
From: Mark Gilger
Topic: 41927 Message: 41928

Adding a VFO stabilizer is what's required. There
are two main units available. One is from Cumbria
Designs: http://www.cumbriadesigns.co.uk/ The
second is from K4DPK http://home.comcast.net/~k4dpk/

I have both units and they do as advertised.

Regards,
Mark

At 10:17 AM 4/27/2013, hpdd709 wrote:
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>
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>73,
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>Mike/K3MG
>
>

[Non-text portions of this message have been removed]

41929. Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-27 16:05:38 UTC
From: paul.nussbaum
Topic: 41877 Message: 41929

The trip to the electronics shop to find a VTVM was no good; the guy behind the counter thought it was some type of capacitor. I pointed to a Heath VTVM behind him, but all the stuff up there was antique display not for sale...

I'm looking at a popular online auction site and may have one in a little while.

I did notice that an unbuilt still in box IM-18 sold for $711...!
Paul
AD5FT

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
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> Rob:
>
> Yes I like to go to my white board or sheet of paper and draw the ALC circuit and figure out how it works. Can then take some measurements when working per design and record for future when it doesnt. I try to do that with all the circuits as the circuit descriptions all could use further development. Kenwood gave just enough detail for casual user on the main functional blocks.
>
> ALC in the Hybrids is derived differently than most rigs that sample and rectify some rf output to develop the control voltage. With the hybrids the control voltage is always there derived from AVR board RF-1. We pull it down when grid current just begins to flow. Kenwood calls it Amplified ALC which is kind of a misnomer as the ALC transistor is not amplifying a signal it is acting like a variable resistor. I have a nice HP-410C 100 meg Z VTVM which I can actually watch ALC voltage pull down from RF-1 level as we increase RF drive. You can measure with a VTVM but it will pull down the voltage to around 2.6 to 2.7 vdc when you connect it and drives the S-meter upscale to around S3 to S4.
>
> You are not actually looking directly at Grid current when you peak the Drive control. Kenwood has no grid current meter shunts or grid current meter position. This isnt necessary for Class AB1 as there is no grid current. The grid requires no driving power only rf voltage swing. The moment that the driving envelope exceeds the dc operating bias offset and grid current begins to flow ALC bus line voltage is pulled down and TIF rf drive level is reduced. The cow just barely makes it out of the barn before it is pulled back!
>
> It is impossible to over drive the control grids of the finals and exceed the max grid dissipation.
>
> I think all the people who load by making sure the ALC is in middle of the black box or no more than the top of the black box ALC range are confusing it with another design or just dont understand how it works. On You Tube you can see some precautions about this presented by Extra Class holders. They have you peak in the black box and go back and check when done and adjust Car pot again. None of which is in the operating manual loading instructions. I guess they have good intentions. With a science or technical hobby need more than good intentions. Thankfully they are doing no harm to the rig. I have tried to

explain this too more than one of these fellows, but most are stubborn and continue to load as they understand how the radio works. Fortunately no harm done unless drive is marginal to begin with.
>
> Some old timers may do this as we were all taught not to exceed max 6146 grid current of approx 2.5 ma to 3.0 ma on our 1950/1960 vintage 50 watt CW Class C Grid Leak Bias transmitters. We had to go back after loading into our lite bulbs and check and adjust grid current reading level. Never wanted to exceed grid current or have loss of grid drive with grid leak bias rigs.
>
> None of that applies to a Hybrid. Its operating bias is fixed bias and not grid leak developed. Of course Kenwood could have been clearer on what they meant when the manual tells you to peak Drive control to maximum ALC indication. Almost every new owner asks immediately if that means max of black ALC box range or max on the meter scale. Just give a decent CAR Level so you can see a good peak as you tune the Drive stage to resonance. 2/3 to 3/4 scale is good place, but max on ALC box works just fine as well.
>
> The black ALC box is meaningless while loading the rig. It is there for SSB mode to ensure linear operation. When you talk up to the max of the black box you have approx 40ua to 45ua of grid current. Kenwood actually varies the ALC time constants to use it as a crude means of speech compression to increase your talk power without introducing too much adjacent frequency splatter. In no case should you talk rig up outside the ALC box. I try to keep it no more than mid-range. Technically when you have no indication you are operating at most linear place.
>
> I do not have a spectrum analyzer, but have asked the fellows who have L-pans and K3 rigs or similar to look at my signal while I varied the Mic gain for various ALC indications and no one sees any trash if I talk up to the max of the black box.
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> Probably much more than you wanted.
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> 73s Terry K9TW
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> > [Non-text portions of this message have been removed]
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41930. Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-27 18:07:23 UTC
From: Terry Wagoner
Topic: 41877 Message: 41930

It doesnt have to be an IM-18. IM-28, IM-11 or even one of the older models. The basic circuit is very similar in all the units. There are couple of IM-18s on Ebay now in the $10 to $20 range. It would be better if you could find one with the original switchable probe if you can.

I usually recap the power supply, install NOS tubes, clean the switches and pots and often find the C battery has leaked and has corroded the contact spring and battery holder. If it is beyond cleaning up just dont install a battery. You dont need resistance function on it. Your DMM or VOM will be fine for resistance readings.

You can also look for an RCA VoltOhmyst model 97 or 98. They were kind of the Cadillac of VTVMs. I just suggested Heath as easy to get parts or a parts unit for them.

EICO, Knight also made VTVMs.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "paul.nussbaum" <paul.nussbaum@...> wrote:
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41931. Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-27 18:21:35 UTC
From: paul.nussbaum
Topic: 41877 Message: 41931

Some of us learned about vacuum tubes through audio frequency applications before becoming interested in RF. My HiFi is all tubes, and as a guitarist, all six of my amplifiers are tube amps. I used a 1963 republication of the revised 1962 printing of the original 1955 Navy training course NAVPERS 10087-A to learn - well written, clear, direct, designed to train for practical results.

Even we who are fairly knowledgeable about tube amplification are just seeing the tip of the iceberg of what is entailed in transceiver circuits. I'm glad the gray beards here are so willing to devote their time and energy to helping all of us.

Paul
AD5FT

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
>
>
> I WONDER IFÂ even a quarter of today's ham population understandsÂ any vacuum tube theory,
> (or even cares).
> 73, JD
>
> _____
> From: Mike <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, April 24, 2013 6:02 PM
> Subject: Re: [TS-520_820_530_830] Re: Lost ALC during TX coil adjustment (TS-820S)
>
>
> Â
>
> To understand how this works you have to understand the "Electron Cloud"
> that hovers over the Cathode even when no conductionis occurring in the
> final tube (standby). This is all part of understanding how vacuum tubes
> work and how voltage, whether positive or negative, is applied each
> element in the tubeand what happens when these potentials change, either
> positive or negative. This is why it is very important to understand
> vacuum tube concepts in order to properly troubleshoot and service any
> vacuum tube circuit.
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41932. Re: [TS-520_820_530_830] Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-27 18:45:45 UTC
From: Mike
Topic: 41877 Message: 41932

To add to Terry's response, a few additional Heathkit VTVMs are the IM-11, IM-17 (all solid state battery powered) and V7A and the Eico 232.

Another VTVM that's nice to have is the IM-21 that measures AC voltages from .01 to 300VAC. AC volt meters such as the IM-21 are not professional quality meters but they do serve a purpose and provide a means to measure AC voltage, especially aligning receivers for a peak audio signal at the speaker. Probes for AC VTVMs such as the IM-21 use Banana Plug probes, one for Positive and one for Negative.

The Heathkit VTVMs were basically the same with only a few changes made to the various models. I see Heathkit IM-18 VTVMs on ebay quite often.

If the VTVM doesn't come with probes then you will have to find the original probe or make them yourself, they're not difficult to make. The probes typically have a 1 Meg 1/2 watt resistor in series with the probe's tip. The resistor is required for DC voltage measurements but not required for AC/Ohms. Therefore, you can make 2 probes, one with the resistor and one without. You can also make a probe using a piece of small diameter PVC pipe with a slide switch embedded/mounted inside the PVC probe housing that switches the resistor in and out of the probe. Again, they're not difficult to make.

Most VTVM are designed to measure up to a maximum of 1500 volts (AC/DC) and resistance values from R x 1 to R x 1 meg.

73
Mike W5RKL

On 4/27/2013 1:07 PM, Terry Wagoner wrote:
>
> It doesnt have to be an IM-18. IM-28, IM-11 or even one of the older
> models. The basic circuit is very similar in all the units. There are
> couple of IM-18s on Ebay now in the $10 to $20 range. It would be
> better if you could find one with the original switchable probe if you
> can.
>
> I usually recap the power supply, install NOS tubes, clean the
> switches and pots and often find the C battery has leaked and has
> corroded the contact spring and battery holder. If it is beyond
> cleaning up just dont install a battery. You dont need resistance
> function on it. Your DMM or VOM will be fine for resistance readings.
>
> You can also look for an RCA VoltOhmyst model 97 or 98. They were kind
> of the Cadillac of VTVMs. I just suggested Heath as easy to get parts

> or a parts unit for them.
>
> EICO, Knight also made VTVMs.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "paul.nussbaum"
> <paul.nussbaum@...> wrote:
> >
> > The trip to the electronics shop to find a VTVM was no good; the guy
> behind the counter thought it was some type of capacitor. I pointed to
> a Heath VTVM behind him, but all the stuff up there was antique
> display not for sale...
> >
> > I'm looking at a popular online auction site and may have one in a
> little while.
> >
> > I did notice that an unbuilt still in box IM-18 sold for $711...!
> > Paul
> > AD5FT
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Terry Wagoner"
> <wagstw46@> wrote:
> > >
> > > Rob:
> > >
> > > Yes I like to go to my white board or sheet of paper and draw the
> ALC circuit and figure out how it works. Can then take some
> measurements when working per design and record for future when it
> doesnt. I try to do that with all the circuits as the circuit
> descriptions all could use further development. Kenwood gave just
> enough detail for casual user on the main functional blocks.
> > >
> > > ALC in the Hybrids is derived differently than most rigs that
> sample and rectify some rf output to develop the control voltage. With
> the hybrids the control voltage is always there derived from AVR board
> RF-1. We pull it down when grid current just begins to flow. Kenwood
> calls it Amplified ALC which is kind of a misnomer as the ALC
> transistor is not amplifying a signal it is acting like a variable
> resistor. I have a nice HP-410C 100 meg Z VTVM which I can actually
> watch ALC voltage pull down from RF-1 level as we increase RF drive.
> You can measure with a VTVM but it will pull down the voltage to
> around 2.6 to 2.7 vdc when you connect it and drives the S-meter
> upscale to around S3 to S4.
> > >
> > > You are not actually looking directly at Grid current when you
> peak the Drive control. Kenwood has no grid current meter shunts or
> grid current meter position. This isnt necessary for Class AB1 as

> there is no grid current. The grid requires no driving power only rf
> voltage swing. The moment that the driving envelope exceeds the dc
> operating bias offset and grid current begins to flow ALC bus line
> voltage is pulled down and TIF rf drive level is reduced. The cow just
> barely makes it out of the barn before it is pulled back!
> > >
> > > It is impossible to over drive the control grids of the finals and
> exceed the max grid dissipation.
> > >
> > > I think all the people who load by making sure the ALC is in
> middle of the black box or no more than the top of the black box ALC
> range are confusing it with another design or just dont understand how
> it works. On You Tube you can see some precautions about this
> presented by Extra Class holders. They have you peak in the black box
> and go back and check when done and adjust Car pot again. None of
> which is in the operating manual loading instructions. I guess they
> have good intentions. With a science or technical hobby need more than
> good intentions. Thankfully they are doing no harm to the rig. I have
> tried to explain this too more than one of these fellows, but most are
> stubborn and continue to load as they understand how the radio works.
> Fortunately no harm done unless drive is marginal to begin with.
> > >
> > > Some old timers may do this as we were all taught not to exceed
> max 6146 grid current of approx 2.5 ma to 3.0 ma on our 1950/1960
> vintage 50 watt CW Class C Grid Leak Bias transmitters. We had to go
> back after loading into our lite bulbs and check and adjust grid
> current reading level. Never wanted to exceed grid current or have
> loss of grid drive with grid leak bias rigs.
> > >
> > > None of that applies to a Hybrid. Its operating bias is fixed bias
> and not grid leak developed. Of course Kenwood could have been clearer
> on what they meant when the manual tells you to peak Drive control to
> maximum ALC indication. Almost every new owner asks immediately if
> that means max of black ALC box range or max on the meter scale. Just
> give a decent CAR Level so you can see a good peak as you tune the
> Drive stage to resonance. 2/3 to 3/4 scale is good place, but max on
> ALC box works just fine as well.
> > >
> > > The black ALC box is meaningless while loading the rig. It is
> there for SSB mode to ensure linear operation. When you talk up to the
> max of the black box you have approx 40ua to 45ua of grid current.
> Kenwood actually varies the ALC time constants to use it as a crude
> means of speech compression to increase your talk power without
> introducing too much adjacent frequency splatter. In no case should
> you talk rig up outside the ALC box. I try to keep it no more than
> mid-range. Technically when you have no indication you are operating
> at most linear place.
> > >
> > > I do not have a spectrum analyzer, but have asked the fellows who
> have L-pans and K3 rigs or similar to look at my signal while I varied

> the Mic gain for various ALC indications and no one sees any trash if
> I talk up to the max of the black box.
> > >
> > > Probably much more than you wanted.
> > >
> > > 73s Terry K9TW
> > >
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41933. Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-27 20:31:32 UTC
From: Terry Wagoner
Topic: 41877 Message: 41933

Hi Mike: Yes you are correct can make your own probes, but couple of precautions.

1. Make sure what ever "pen body" you use has sufficient dielectric strength. You are going to be measuring 900 vdc anode voltage so cant have any breakdown or tracks. Heath had liability so pretty safe bet that the probe body they used would easily withstand well in excess of 1500 vdc. Their switch had no exposed metal on outside of probe.

2. Make sure your electrical connection from probe tip to test lead is well within whatever you use for a probe body and has some kind of strain relief so it cant pull out.

3. Do not skimp on the test lead wire. Many cheap meters are actually dangerous in my opinion. The weak links are the probes and internal connections and when they use small gauge plastic insulated test leads. I would recommend you use something equivalent to Belden 5KV test prod wire. It is very flexible and good dielectric.

4. DO NOT be tempted to eliminate the 1 meg series resistor in the probe tip body or move it inside the meter. It is there for a reason. This series resistor decouples the test lead shunt capacitance so that when you touch the probe tip to the grid of an oscillator tube to measure bias voltage you do not pull the oscillator off frequency or worse yet shut it down. There are other examples, but you get the idea.

Finally this is not probe related.

If you are going to get serious about servicing Kenwood Hybrids or other tube boat anchor rigs I highly recommend you get the real Cadillac VTVM and that would be a HP410B or HP410C. I have a refurbed 410C with the FET board updates that replace the old chopper. These meters have over 100Meg input Z. This allows you to get on the AGC bus (rail) without affecting the gain controlled stages. Again these meters are for folks with adequate disposable income or who have a serious RF service bench for tube rigs. A refurbed unit can go for $200 to $300. You can pick up non-refurbed for around $75 to $100.

If you think your current multimeter is adequate just connect it to your Hybrid AGC bus and watch what happens to your S-meter and listen to the receiver. A multimeter with 2 meg input Z will pull the AGC bus down to around 1.25vdc and drive the S meter to 10 over S-9 or higher and the RX noise will fall off and affect weak signal copy. A 5 meg input Z meter will pull the bus down to approx 2.4 vdc and run the S meter up to around S7 plus.

So as Mike says no reason you cant hombrew your own VTVM probes. Just make sure the electrical and mechanical design is safe.

73s Terry K9TW

Probes for AC VTVMs such as the IM-21 use
> Banana Plug probes, one for Positive and one for Negative.
>

> If the VTVM doesn't come with probes then you will have to find the
> original probe or make them yourself, they're not difficult to make. The

> probes typically have a 1 Meg 1/2 watt resistor in series with the
> probe's tip. The resistor is required for DC voltage measurements but
> not required for AC/Ohms. Therefore, you can make 2 probes, one with the
> resistor and one without. You can also make a probe using a piece of
> small diameter PVC pipe with a slide switch embedded/mounted inside the
> PVC probe housing that switches the resistor in and out of the probe.
> Again, they're not difficult to make.
>
> Most VTVM are designed to measure up to a maximum of 1500 volts (AC/DC)
> and resistance values from R x 1 to R x 1 meg.
>
> 73
> Mike W5RKL
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41934. TS 820 problem with dipping the final

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-27 21:53:02 UTC
From: eoxer
Topic: 41934 Message: 41934

Hello

Tried loading the final but after several attempts (no dip) with adequate drive and idling current per instructions, fuse blew and smoked a 20 ohm resistor part of R2 (10 ohm 1 watt). I can replace the resistors and fuse. Any ideas on why it might have blown other than the part went bad. Other resistors a in R2 and R3 of the final board appear okay. R2 is apparently made up of two half watt 20 ohm resistors to get 10 ohms at 1 watt. Thanks for any help with this.

73,

Ed, W8EO

41935. Re: TS 820 problem with dipping the final

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-27 22:09:01 UTC
From: Terry Wagoner
Topic: 41934 Message: 41935

You have blown a cathode meter shunt resistor. What do you know about the final tubes? Is this first time to try to load with these finals?

Most likely a final has arced over. When these tubes arc over you have approx 850 volts from Anode to Cathode and the cathode meter shunts along with the power supply ESR is all that limits the fault current. I = 850/5 = 170 amps. That is why the primary fuse blows and the resistor(s)can fail violently.

I dont like to re-use any finals that have arced over. Some folks replace both meter shunt resistors and re-try and it may work 2nd time around. If you do this and the two 10 ohm meter shunts fail again I would toss these finals.

Without a dc hi-pot tester there is no good way to check your finals.

I place a series string of 3 silicon diodes across my cathode meter shunts to limit the voltage drop to approx 2.1 vdc. This should prevent the resistors from failing and protects your Ip panel meter.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "eoxer" <eaoxer@...> wrote:
>
> Hello
>
> Tried loading the final but after several attempts (no dip) with adequate drive and idling current per instructions, fuse blew and smoked a 20 ohm resistor part of R2 (10 ohm 1 watt). I can replace the resistors and fuse. Any ideas on why it might have blown other than the part went bad. Other resistors a in R2 and R3 of the final board appear okay. R2 is apparently made up of two half watt 20 ohm resistors to get 10 ohms at 1 watt. Thanks for any help with this.
>
> 73,
>
> Ed, W8EO
>

41936. Re: TS 820 problem with dipping the final

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-27 22:47:11 UTC
From: Terry Wagoner
Topic: 41934 Message: 41936

I forgot to mention. Normally I do not recommend installing any mods in the hybrids. However after experiencing multiple cathode resistor failures with a variety of 30 to 40 year old 6146 finals I decided to install some arc over protection.

In addition to the diode string across the cathode resistors I also installed a Glitch resistor in the anode supply and MOVs on each screen grid.

I used a couple of 5.6 ohm Ohmite Type OYs in series on a phenolic terminal strip at output of the HV filter caps. Now with 5 ohms cathode resistance, 11 ohms glitch resistor, and 5 - 10 ohms power supply ESR I have approx 20 to 25 ohms limiting fault current. So I = 850/20 = approx 45 amps. Primary fuse will still blow but lower fault current isnt as hard on HV filter caps, HV rectifier diodes and the power transformer.

Wont go into the calcs for sizing the MOVs here. I think Mark Gilger WB0IQK has developed a technical bulletin on this mod and posted it on his website?

73s Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> You have blown a cathode meter shunt resistor. What do you know about the final tubes? Is this first time to try to load with these finals?
>
> Most likely a final has arced over. When these tubes arc over you have approx 850 volts from Anode to Cathode and the cathode meter shunts along with the power supply ESR is all that limits the fault current. I = 850/5 = 170 amps. That is why the primary fuse blows and the resistor(s)can fail violently.
>
> I dont like to re-use any finals that have arced over. Some folks replace both meter shunt resistors and re-try and it may work 2nd time around. If you do this and the two 10 ohm meter shunts fail again I would toss these finals.
>
> Without a dc hi-pot tester there is no good way to check your finals.
>
> I place a series string of 3 silicon diodes across my cathode meter shunts to limit the voltage drop to approx 2.1 vdc. This should prevent the resistors from failing and protects your Ip panel meter.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "eoxer" <eaoxer@> wrote:
> >
> > Hello
> >
> > Tried loading the final but after several attempts (no dip) with adequate drive and idling current per instructions, fuse blew and smoked a 20 ohm resistor part of R2 (10 ohm

1 watt). I can replace the resistors and fuse. Any ideas on why it might have blown other than the part went bad. Other resistors a in R2 and R3 of the final board appear okay. R2 is apparently made up of two half watt 20 ohm resistors to get 10 ohms at 1 watt. Thanks for any help with this.
> >
> > 73,
> >
> > Ed, W8EO
> >
>

41937. Re: [TS-520_820_530_830] Re: TS 820 problem with dipping the final

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-28 00:39:47 UTC
From: Mark Gilger
Topic: 41934 Message: 41937

Terry's modification is posted here:

http://wb4hfn.com/KENWOOD/Articles/Technical_EX-004.pdf

I've installed this in several problem radio's,
and once installed I never had another failure. It's worth the time to install.

Regards,
Mark, WB0IQK

At 06:47 PM 4/27/2013, Terry Wagoner wrote:
>
>
>I forgot to mention. Normally I do not recommend
>installing any mods in the hybrids. However
>after experiencing multiple cathode resistor
>failures with a variety of 30 to 40 year old
>6146 finals I decided to install some arc over protection.
>
>In addition to the diode string across the
>cathode resistors I also installed a Glitch
>resistor in the anode supply and MOVs on each screen grid.
>
>I used a couple of 5.6 ohm Ohmite Type OYs in
>series on a phenolic terminal strip at output of
>the HV filter caps. Now with 5 ohms cathode
>resistance, 11 ohms glitch resistor, and 5 - 10
>ohms power supply ESR I have approx 20 to 25
>ohms limiting fault current. So I = 850/20 =
>approx 45 amps. Primary fuse will still blow but
>lower fault current isnt as hard on HV filter
>caps, HV rectifier diodes and the power transformer.
>
>Wont go into the calcs for sizing the MOVs here.
>I think Mark Gilger WB0IQK has developed a
>technical bulletin on this mod and posted it on his website?
>
>73s Terry K9TW
>
>--- In
><mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com,
>"Terry Wagoner" <wagstw46@...> wrote:
> >
> > You have blown a cathode meter shunt
> resistor. What do you know about the final
> tubes? Is this first time to try to load with these finals?

> >
> > Most likely a final has arced over. When
> these tubes arc over you have approx 850 volts
> from Anode to Cathode and the cathode meter
> shunts along with the power supply ESR is all
> that limits the fault current. I = 850/5 = 170
> amps. That is why the primary fuse blows and
> the resistor(s)can fail violently.
> >
> > I dont like to re-use any finals that have
> arced over. Some folks replace both meter shunt
> resistors and re-try and it may work 2nd time
> around. If you do this and the two 10 ohm meter
> shunts fail again I would toss these finals.
> >
> > Without a dc hi-pot tester there is no good way to check your finals.
> >
> > I place a series string of 3 silicon diodes
> across my cathode meter shunts to limit the
> voltage drop to approx 2.1 vdc. This should
> prevent the resistors from failing and protects your Ip panel meter.
> >
> > Terry K9TW
> >
> > --- In
> <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com,
> "eoxer" <eaoxer@> wrote:
> > >
> > > Hello
> > >
> > > Tried loading the final but after several
> attempts (no dip) with adequate drive and
> idling current per instructions, fuse blew and
> smoked a 20 ohm resistor part of R2 (10 ohm 1
> watt). I can replace the resistors and fuse.
> Any ideas on why it might have blown other than
> the part went bad. Other resistors a in R2 and
> R3 of the final board appear okay. R2 is
> apparently made up of two half watt 20 ohm
> resistors to get 10 ohms at 1 watt. Thanks for any help with this.
> > >
> > > 73,
> > >
> > > Ed, W8EO
> > >
> >
>
>

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41938. VFO stabilizer or lock for the hybrids...good, bad...experience?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-28 02:34:32 UTC
From: bartbrummans
Topic: 41938 Message: 41938

Both my hybrids drift a bit, which is the nature of the beast I guess...:)
Replaced some of the known components and it did get better.
Did find a couple options on the net that help "cure" the drift.

****** K4DPK's VFO Stabilizer *******
****** X-lock by Cumbria designs ****

Does anyone have experience with either?

73
Bart

41939. Re: VFO stabilizer or lock for the hybrids...good, bad...experience?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-28 11:27:29 UTC
From: Terry Wagoner
Topic: 41938 Message: 41939

The hybrid owners operating manuals provide the design specs for warm up and long term drift. You can check your drift against those published specs. Most rigs meet or exceed those specs, however some do not. I have two TS-830s and one is very quick to stabilize and has very little long term drift. It exceeds the specs and is essentially lock solid in very short time and the other will drift for hours down freq and then lock and then start back up freq. Never does completely settle down.

By the way VFO drift is not caused by a dirty or corroded rotor shaft contact wiper. That situation causes drop out or noise or jumping in frequency. Two very different conditions.

Excessive drift is almost always caused by one of combination of four things.
1. 9vdc regulated supply problem
2. Bad VFO PC board ground connections
3. Bad VFO PC board components typically fixed cap or fixed TC caps) 4. Dirty/leaky PC board surface

If you have remote VFO easy to see if problem is 9 vdc. If remote does not drift and internal does then not due to 9vdc as is common supply. Also, if no remote VFO for comparisons then internal VFO can be temporarily powered by one or two fresh 9vdc batteries in parallel to rule out or confirm the rigs regulated 9vdc as the source.

Some report success loosening and tightening the VFO PC board mounting screws and with cleaning both sides of the PC board. Some use alcohol and others use lacquer thinner. I would be very careful with either so you dont melt any components.

Performing VFO drift Compensation (TC) is a little bit of science and art. Very time consuming and frustrating. Not easy to do anymore as type NPO,N,and P TC caps are not readily available. You can see the typical problem TC caps in the VFO if you look where low Pf value caps have been placed in parallel to split the rf current heating affect and you can tell a TC cap by its prefix. Look on the parts list legend and you will see the various TC caps that were employed. A type CC45 is a TC cap. Look at the parts listing for your VFO and can see locations of all. Do not sub a regular cap for a TC cap.

You can put VFO on bench and power up and bring soldering iron tip close to each cap and see which ones are more sensitive and replace them. I have spend hours subing P and N types for NPOs. By the way a modern version of the NPO is a COG.

I have no experience with installing these "Huff and Puff" circuits. Mark Gilger has installed both common units and has very good experience with both.

I may end up installing one for my one VFO that I have affectionately labeled my DMO or "dont move over" unit!

73s Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "bartbrummans" <cocobean64@...> wrote:
>

> Both my hybrids drift a bit, which is the nature of the beast I guess...:)
> Replaced some of the known components and it did get better.
> Did find a couple options on the net that help "cure" the drift.
>
> ****** K4DPK's VFO Stabilizer *******
> ****** X-lock by Cumbria designs ****
>
> Does anyone have experience with either?
>
> 73
> Bart
>

41940. Eico 249 VTVM

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-28 13:09:19 UTC
From: Terry Wagoner
Topic: 41940 Message: 41940

There is an EICO 249 VTVM listed on QTH by WA0VRC this am for $25. The manual is available on BAMA. This is a nice unit with meter that even has a P-P scale. No idea what condition it is in or if he has the probes.

Terry K9TW

41941. Re: VFO stabilizer or lock for the hybrids...good, bad...experience?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-28 07:53:45 UTC
From: jf1vru
Topic: 41938 Message: 41941

My VFO drifts 460 Hz in first 45 min. But VFO-230 is very stable, it drifts only 14 Hz in same range.

Shibu JF1VRU

--- In TS-520_820_530_830@yahoogroups.com, "bartbrummans" <cocobean64@...> wrote:
>
> Both my hybrids drift a bit, which is the nature of the beast I guess...:)
> Replaced some of the known components and it did get better.
> Did find a couple options on the net that help "cure" the drift.
>
> ****** K4DPK's VFO Stabilizer *******
> ****** X-lock by Cumbria designs ****
>
> Does anyone have experience with either?
>
> 73
> Bart
>

41942. Re: VFO stabilizer or lock for the hybrids...good, bad...experience?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-28 20:06:19 UTC
From: w5rkl
Topic: 41938 Message: 41942

The VFO-230 is not powered by the transceiver like the VFO-240 is. The VFO-230 has its own built in power supply. The VFO-240 requires power from the transceiver.

The VFO-230 is also a digital VFO but the TS-530 and TS-830 internal VFOs and the remote VFO-240 are all analog and all 3 are powered by the transceiver.

73
Mike W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "jf1vru" <shibus@...> wrote:
>
> My VFO drifts 460 Hz in first 45 min. But VFO-230 is very stable, it drifts only 14 Hz in same range.
>
> Shibu JF1VRU
>
> --- In TS-520_820_530_830@yahoogroups.com, "bartbrummans" <cocobean64@> wrote:
> >
> > Both my hybrids drift a bit, which is the nature of the beast I guess...:)
> > Replaced some of the known components and it did get better.
> > Did find a couple options on the net that help "cure" the drift.
> >
> > ****** K4DPK's VFO Stabilizer *******
> > ****** X-lock by Cumbria designs ****
> >
> > Does anyone have experience with either?
> >
> > 73
> > Bart
> >
>

41943. Re: TS 820 problem with dipping the final

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-29 02:45:25 UTC
From: eoxer
Topic: 41934 Message: 41943

--- In TS-520_820_530_830@yahoogroups.com, "eoxer" <eaoxer@...> wrote:
>
> Hello
>
> Tried loading the final but after several attempts (no dip) with adequate drive and idling current per instructions, fuse blew and smoked a 20 ohm resistor part of R2 (10 ohm 1 watt). I can replace the resistors and fuse. Any ideas on why it might have blown other than the part went bad. Other resistors a in R2 and R3 of the final board appear okay. R2 is apparently made up of two half watt 20 ohm resistors to get 10 ohms at 1 watt. Thanks for any help with this.
>
> 73,
>
> Ed, W8EO
>

Terry and Mark,

Thanks again for the quick reply on the TS-820.

No more problem with exploding resistors. Both have been replaced. I'm also back to using the original 6146's... back to square one with inability to dip the final. There appears to be adequate drive and even an intermittent output that lights a 100 watt bulb nicely. I'm thinking the finals need replacement or is there something else I should consider?

73,

Ed, W8EO

41944. Re: TS 820 problem with dipping the final

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-29 10:36:30 UTC
From: Terry Wagoner
Topic: 41934 Message: 41944

Does it behave like this on all bands? Have you pulled the Antenna TR Relay and cleaned the contacts? If not, I would try that first. It is under metal shield can near final board. Carefully clean by pulling printer paper wetted with contact cleaner thru the contacts. Can also temporarily swap with the Aux relay as they are the same. Pull and clean both. Wont hurt to do as preventive maintenance.

Regards lite bulb dummy load we used them for years as tuning indicators and dummy loads. While they will work for testing your rig absent anything else, I suggest you buy or build a "real" dummy load. Your problem is another reason I suggest buying or building a wattmeter to help trouble shoot these kinds of problems. Looking at Ip meter is ok but sure nice to see what level of actual RF you have at that SO-239 connector.

Biggest problem with Lite bulb dummy load is that it can radiate significant distant and cause on band interference. If you are going to use it to test your rig you need to listen on frequency first.

Contrary to popular opinion it will not hurt your tube rig. Would not use with solid state finals. Yes the filament resistance changes from cold to hot, but does so very quickly so not a real problem. At HF frequency it has very little reactance and is nearly unity power factor. There are several WWII surplus dummy load/tuning devices that used an incandescent lamp and viewing lense to load and test transmitters up to the VHF range. QST did some testing many years ago before non-inductive resistor dummy loads and watt meters were common place in ham shacks.

Here is some of the details from that testing.
60 Watt bulb Cold = 27 ohms Hot = 219 ohms SWR approx 4 to 1
100 Watt bulb Cold = 20 ohms Hot = 132 ohms SWR approx 2.6 to 1
250 Watt bulb Cold = 4.5 ohm Hot = 53 ohms SWR near 1:1 (bulb not easily found today)
Can also can place bulbs in parallel. For example 3- 60 watt in parallel for approx 73 ohms
Brilliance will be approx 3/4 normal with RF ac applied as opposed to 60hz ac.

Summary: Start by cleaning Ant TR relay and buy or build a dummy load.
Can find a Celwave watt dry type on Ebay for around $50. These are nice as they have a BNC connector test port that is a capacitive tap that can use to drive a rf meter or your O-scope. I have one rated at 250 watts with very good duty cycle.
Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "eoxer" <eaoxer@...> wrote:
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "eoxer" <eaoxer@> wrote:
> >
> > Hello
> >
> > Tried loading the final but after several attempts (no dip) with adequate drive and

idling current per instructions, fuse blew and smoked a 20 ohm resistor part of R2 (10 ohm 1 watt). I can replace the resistors and fuse. Any ideas on why it might have blown other than the part went bad. Other resistors a in R2 and R3 of the final board appear okay. R2 is apparently made up of two half watt 20 ohm resistors to get 10 ohms at 1 watt. Thanks for any help with this.
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41945. Re: TS 820 problem with dipping the final

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-29 13:26:18 UTC
From: Terry Wagoner
Topic: 41934 Message: 41945

As a point of interest the military dummy loads like the AN/URM-13 and DA-38/USM-13 used Carbon Filament bulbs and not the tungsten filaments of today. Their hot/cold resistance ratio is the inverse of todays common (and soon to be extinct if his excellency has his way)tungsten lamps. These dummy loads used four Type 46 carbon filament lamps in parallel. The resistance of these lamps changed from approx 400 ohms cold to approx 170 ohms hot in just under 0.10 seconds. The resistance stayed pretty constant from approx 1300 degree C to 1900 degrees C. So 170/4 = approx 43 ohms. Close enough to 50 ohms.

You see these surplus military units from time to time at hamfests. A good one will come in metal case toolbox with set of spare lamps. The unit looks like a small metal coffee can with a coax connector on one end and the other end is open with the four lamps in recessed sockets so operator could see the brilliance as they tuned the transmitter tank circuit. Would simply tune for max brilliance and the modes then were CW and AM and on AM could watch the flashing with modulation. I am not sure but believe they were rated at 20 watts continuous duty. Probably conservative as most military ratings. Of course they would radiate, but military apparently wasnt too worried about inteference.

So if you want to continue to use lite bulb tuning aid/dummy load get yourself some Robertson Carbon Filament lamps in place of your modern tungsten filament lamps. Robertson lamps were used in the 50s as heat lamps. I see one listed on Ebay now for $66.00. Ouch!

Sorry Gordon back to Hybrid stuff now!

73s Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Does it behave like this on all bands? Have you pulled the Antenna TR Relay and cleaned the contacts? If not, I would try that first. It is under metal shield can near final board. Carefully clean by pulling printer paper wetted with contact cleaner thru the contacts. Can also temporarily swap with the Aux relay as they are the same. Pull and clean both. Wont hurt to do as preventive maintenance.
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unity power factor. There are several WWII surplus dummy load/tuning devices that used an incandescent lamp and viewing lense to load and test transmitters up to the VHF range. QST did some testing many years ago before non-inductive resistor dummy loads and watt meters were common place in ham shacks.
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> > > Hello
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>

41946. Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-29 19:06:39 UTC
From: paul.nussbaum
Topic: 41877 Message: 41946

I have a Heathkit IM-18 on the way. I have downloaded the user manual with schematic and am studying both while waiting for the VTVM to arrive. Looking forward to learning how to use it troubleshooting the ALC problem.
Sure to be back with questions about procedure and interpretation of findings soon.
Thanks,
Paul
AD5FT

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Paul: Couple of things. Good job on getting the DC voltages. VOMs typically have 50,000 ohms/volt sensitivity so OK for plate and screen voltages but not good for ALC or AGC bus and getting on grids of vacuum tubes.
>
> 1. Suggest you get a DMM or a VTVM to get higher input impedance. I prefer the old Heath VTVMs like a IM-18 as it has 11 meg input Z and wont load down your readings and a large analog scale to see peaks and nulls. I suggest Heath as they made 10s of thousands so can always buy a spare for a parts unit. A good DMM also has its place for the DC readings that you just took. Most will have a 10 meg Z, but some do not. A cheap Harbor Freight measures at just under 1 meg and some have different Z depending on the meter range.
>
> 2. I assume you have the Tuner in Bypass? Tuner watt meter is fine.
>
> 3. I assume you have advanced CAR Level Pot full CCW and peaked the Drive Control. It may not peak at 1200.
>
> 4. Your DC readings look good. You can see that you have proper switch over from cutoff to operating bias voltage on the Driver Tube and the Finals.
>
> 5. I assume that your -57.5 vdc bias voltage is with 60 ma resting plate current. At -57.5 you will need -57.5/1.414 = 40.67 rms rf volts drive at 6146 Pin 5. So anything less than approx 41 rf volts drive and you will have no ALC meter indication. Anything greater than 41 rf volts and you should see ALC indication assuming the ALC metering is working. Suggest you follow previous suggestion to clean aux relay contacts. Good idea to clean them as easy to do and AGC and ALC bus line is switched by this relay.
>
> 6.With the lower RF output you could use a single germanium diode RF probe to take the TX Level diagram readings to see where losing it at. Normally suggest use a two or three diode probe to get on plate of 12BY7A or grid of 6146 finals so you do not exceed the peak inverse voltage of the single diode. See N5ESE to make a probe or buy Hendricks kit or buy used Heathkit 309-c etc off ebay.
>
> 7. You cannot accurately measure TIF signal from IF board using RF probe as it is too low a level (approx 35 mv). Absent RF millivolt meter use an O-scope to measure TIF. If you have good RF level at output of TX Mixer safe to assume have adequate TIF level.

>
> Took covers off my TS-820 this AM and here are my readings which may help you. I took these after loading rig at 14.2 mhz into dummy load to 100 watts output. I then turned off SG switch.
>
> 1. Cutoff bias voltage on 6146 Pin 5 = -95.10vdc
> 2. Operating bias voltage on 6146 Pin 5 = -50.25 @60ma resting Ip
> 3. RF voltage at Pin 5 = 42.2 rf volts
> 4. CAR Level Pot at number "2"
> 5. ALC indication at full scale deflection (FSD)and holding there.
>
> So my delta is 42.2 x 1.414 = 59.67 peak rf volts. 59.67 - 50.25 = 9.42 volts.
>
> You can see I am swinging the control grids approx 9 volt positive on peaks of rf drive envelope which results in microampere grid current flowing and ALC meter driving to full scale deflection.
>
> 73s Terry K9TW
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "paul.nussbaum" <paul.nussbaum@> wrote:
> >
> >
> > Thanks Terry,
> >
> > I am using the dummy load in a Dentron antenna tuner that includes forward and backwards watt meters. When I load in CW mode I get just a couple of watts output on the external meter, nothing on the TS820S meter set to RF.
> >
> > Thanks for the overview of ALC function.
> >
> > Measurements
> >
> > RF drive level voltage at Pin 5 of the 6146 control grids...
> > I don't have proper instruments, only a VOM. I'll look at some VTVMs tomorrow at the electronics shop... any recommendations?
> >
> > Pin 5 of the 6146 grid #1:
> > Finals circuit diagram specs (-100V/-55V)
> > I measure both tubes at
> > -99.5V before transmit
> > -57.5V during transmit
> > .
> > ACL ref voltage spec (3.3V), I measure 3.28V
> >
> > 12BY7A Pin 2 grid #1
> > RF board circuit diagram specs (-43V/0V)
> > I measure
> > -40.2V before transmit
> > .003V during transmit

> >
> > 12BY7A Pin 8 Grid #2 (screen)
> > RF board circuit diagram specs (250V/210V)
> > I measure
> > 255V before transmit
> > 224V during transmit
> >
> > So,
> > I need the measurement of the RF drive level voltage at Pin 5 of the 6146 control grids to proceed with calculations, but it looks like 6146 control grid DC bias voltage, ALC reference voltage, 12BY7A Grid 1, and 12BY7A Grid 2 (screen) are close to spec... ?
> >
> > Mix and Drive coils may be close, but I'll repeat after getting the ALC figured out.
> >
> > In the mean time I'm looking at the TX level diagram...
> > Paul
> > AD5FT
> >
>

41947. PSK31 and TS-830S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-29 18:08:16 UTC
From: miltschreiber
Topic: 41947 Message: 41947

Greetings, I am new to the Yahoo KENWOOD TS-520_820_530_830
group. I have a TS-830S. I recently became interested in digital modes, and I've done a bit of searching here, but I'm still pretty confused. I'm receiving PSK31 just fine. I've run an audio cable from from the SP-230 to my sound card. Fldigi does a fine job of decoding.

It's on the transmitting side that my confusion starts. Since PSK31 has a very narrow bandwidth, how do I tune my 830 to be dead on the receiving frequency so that I can transmit and be heard at the other end?

I haven't made any hookup yet from the sound card line out to the mic on the TS-830S yet, but it looks like a gadget like the Signalink can handle this pretty well. Before I spend $, I just wanted to get a handle on how successfully PSK31 can be managed with the TS-830S.

Thanks and 73's,
KK4MZZ
Milton

41948. Re: [TS-520_820_530_830] VFO stabilizer or lock for the hybrids...good, bad...experience?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-29 01:24:01 UTC
From: Jim
Topic: 41938 Message: 41948

Bart-

I use an X-Lock in an old Swan Cygnet 270 that I restored. It makes all the difference in the world with this rig. Within 5 minutes of turning it on, I can set a freq and it stays there and that rig is almost all tubes with only a couple of transistors in the VFO. I've been very happy.

I will say that it does take a little bit of work to get it installed. With the 270, I had to go into the VFO and change some of the pad caps they had across the trimmers for the various bands so I could net the VFO on freq with respect to the dial.

I've thought about putting one in my 530, but not sure if RIT would play nicely so I decided to leave it be. The 270 does not have RIT.

Jim, KC1RM

On 4/27/2013 10:34 PM, bartbrummans wrote:
>
> Both my hybrids drift a bit, which is the nature of the beast I guess...:)
> Replaced some of the known components and it did get better.
> Did find a couple options on the net that help "cure" the drift.
>
> ****** K4DPK's VFO Stabilizer *******
> ****** X-lock by Cumbria designs ****
>
> Does anyone have experience with either?
>
> 73
> Bart
>

[Non-text portions of this message have been removed]

41949. kenwood TS-830S, VFO-230, SM-220 repair

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-29 19:50:14 UTC
From: Fred
Topic: 41949 Message: 41949

I know there is someone who is the "guru" of repairing this line of equipment(kenwood TS-830S, VFO-230, SM-220), but I cannot remember his name and how to contact him.
can anyone help ?
thanks, Fred

41950. Re: Lost ALC during TX coil adjustment (TS-820S)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-29 20:23:24 UTC
From: Terry Wagoner
Topic: 41877 Message: 41950

Paul: Very good. A good first piece of test gear for Hybrid work. Dont forget to measure rf drive levels you will need more than just the IM-18. You will need two rf probes or a single switchable one. A single diode for the TX Mixer output at MD on RF board and three diode probe to measure output of Driver tube at DP and at control grids Pin 5 of the Finals. Can make or buy the probes.

Do a good visual on the IM-18 internals and check the tightness of the terminal strip and ground lug hardware. Clean the pots and switches. Later may want to replace C1 electrolytic filter cap and the 6AL5 and 12AU7 tubes.

The cal procedure is pretty easy and no battery needed unless you want to use the resistance function.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "paul.nussbaum" <paul.nussbaum@...> wrote:
>
> I have a Heathkit IM-18 on the way. I have downloaded the user manual with schematic and am studying both while waiting for the VTVM to arrive. Looking forward to learning how to use it troubleshooting the ALC problem.
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> > > Paul
> > > AD5FT
> > >
> >
>

41951. Re: [TS-520_820_530_830] VFO stabilizer or lock for the hybrids...good, bad...experience?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-29 20:40:00 UTC
From: Mark Gilger
Topic: 41938 Message: 41951

RIT works correctly using either of the two Stabilizers.

Regards,
Mark

At 09:24 PM 4/28/2013, Jim wrote:
>
>
>Bart-
>
>I use an X-Lock in an old Swan Cygnet 270 that I restored. It makes all
>the difference in the world with this rig. Within 5 minutes of turning
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> >
>
>[Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

41952. Re: [TS-520_820_530_830] kenwood TS-830S, VFO-230, SM-220 repair

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-29 20:41:20 UTC
From: Mark Gilger
Topic: 41949 Message: 41952

He might be on this list:

Kenwood service and technical support:
K4EAA ☐ Ken, FL, - EMAIL:
<mailto:ken@...>ken@... , Web:
<http://www.k4eaa.com/>www.k4eaa.com (Temporarily Suspended Hybrid Repairs)
K3TEN ☐ Ken, NJ, Phone: (609)846-5190 , Email:
<mailto:k3ten@...>k3ten@verizon.net ,
Web: <http://www.k3ten.com/index.html>http://www.k3ten.com/index.html
WA8SAJ ☐ Jeff, OH - Phone: (440)951-6406, EMAIL:
<mailto:wa8saj@ncweb.com>wa8saj@... , Web:
<http://wb4hfn.com/Services/WA8SAJ/SAJ-Repair.htm>http://wb4hfn.com/Services/WA8SAJ/SAJ-Repair.htm

N9HE ☐ Steve, AZ, Email: <mailto:n9he@...>n9he@...
WB2KNR ☐ Jim, NJ, Email:
<mailto:jimlamanteer@...>jimlamanteer@...
AK4AA ☐ David Lyndon, NC, Email:
<mailto:ak4aa36@...>ak4aa36@..., Web:
<http://oldhamdave.com/>http://oldhamdave.com/
W0NTA ☐ Dick, CO, Phone:
(970)356-2011 Email:
<mailto:w0nta@...>w0nta@... , Web:
<http://www.w0nta.com/>http://www.w0nta.com
K9TW ☐ Terry, MI, Phone:
(269)663-8943 Email: <mailto:wagstw46@...>wagstw46@...
N6WK ☐ Gordon, CA, Email:
<mailto:n6wk@...>n6wk@... Web:
<http://www.n6wk.com/kenwood/>http://www.n6wk.com/kenwood/
(Temporarily Suspended Hybrid Repairs)
W0NTA - Dick ☐ Denver, CA Phone: 970-356-2011,
Email: <mailto:housden@...>housden@...
HamRepair.com - Cal Fisher ☐ TX,
Phone: 214.476.5107,
E-Mail:<mailto:info@...>
info@..., Web: <http://hamrepair.com/>http://hamrepair.com/
Affordable Radio Repair, Mike Alexander,
Florence, CO. ,E-Mail:
<mailto:mike@affordableradiorepair.com>mike@...
Web:<http://www.affordableradiorepair.com/>http://www.affordableradiorepair.com/
Kenwood Hybrid Restoration & Repair, KE7OAY, Jim
Showker, Oregon Email:
<mailto:jim@hybridrestore.com>jim@...
Web: <http://www.hybridrestore.com/>http://www.hybridrestore.com/
Turner Radio, Lancaster, Calf., 616-945-9097

Email: <mailto:k6aru@...>k6aru@...
KC9INK, Walley, Indianapolis, IN, Does local
repair work only, E Mail
<mailto:wallydoc@...>wallydoc@...,
Phone 317 823 9380 (Also TS-940 repair)
* (TS-940) Clif Holland KA5IPF, AVVid, Mabank, TX
75147 Phone: 214-850-0973
Email: <mailto:clif@...>clif@...
Web: <http://www.avvid.com/>http://www.avvid.com/

Regards,
Mark, WB0IQK

At 03:50 PM 4/29/2013, Fred wrote:
>
>
>I know there is someone who is the "guru" of repairing this line of
>equipment(kenwood TS-830S, VFO-230, SM-220), but
>I cannot remember his name and how to contact him.
>can anyone help ?
>thanks, Fred
>
>

[Non-text portions of this message have been removed]

41953. Re: [TS-520_820_530_830] PSK31 and TS-830S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-29 20:50:40 UTC
From: KB1TCD
Topic: 41947 Message: 41953

Milton,

I have not used digi with the TS-830S but I have used fldigi with my
TS-120S with no problem; should be no problem with a hybrid.
I use a Yaesu 897 for voice and digital with a Signalink on 6m ; we have
two digi nets a week plus a bulletin and also use RMS Express on 40m.
I use the 830 strictly for voice.

73 de Jose Douglas KB1TCD

41954. Re: [TS-520_820_530_830] PSK31 and TS-830S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-29 21:22:05 UTC
From: John Davidson
Topic: 41947 Message: 41954

The computer does all the tuning and handles the bandwidth issues. You just set the VFO to the packet freq and fine tune with the computer program.
The biggest problem I have read about is the stability of the VFO in the hybrid radios is not good enough for the very narrow psk signals. If you just drft a few Hz you loose your link with the other station.

From: miltschreiber <mschreiber@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, April 29, 2013 2:08 PM
Subject: [TS-520_820_530_830] PSK31 and TS-830S

Greetings, I am new to the Yahoo KENWOOD TS-520_820_530_830
group. I have a TS-830S. I recently became interested in digital modes, and I've done a bit of searching here, but I'm still pretty confused.

It's on the transmitting side that my confusion starts. Since PSK31 has a very narrow bandwidth, how do I tune my 830 to be dead on the receiving frequency so that I can transmit and be heard at the other end? Before I spend $, I just wanted to get a handle on how successfully PSK31 can be managed with the TS-830S.

Thanks and 73's,
KK4MZZ
Milton

[Non-text portions of this message have been removed]

41955. Re: [TS-520_820_530_830] PSK31 and TS-830S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-29 21:47:15 UTC
From: Mike
Topic: 41947 Message: 41955

Milton,

Before you start operating PSK31, I recommend you take some time and
watch the video at the link below FIRST. I think the video will answer a
lot of your questions about PSK31.

http://www.howtomakeonline.org/QEMR9MoneyhGBpQj/Introduction-to-PSK31-Receiving.html

If you have any questions about the video come back here and ask, don't
"assume" anything, you could be making a wrong assumption.

73
Mike W5RKL

On 4/29/2013 1:08 PM, miltschreiber wrote:
>
> Greetings, I am new to the Yahoo KENWOOD TS-520_820_530_830
> group. I have a TS-830S. I recently became interested in digital
> modes, and I've done a bit of searching here, but I'm still pretty
> confused. I'm receiving PSK31 just fine. I've run an audio cable from
> from the SP-230 to my sound card. Fldigi does a fine job of decoding.
>
> It's on the transmitting side that my confusion starts. Since PSK31
> has a very narrow bandwidth, how do I tune my 830 to be dead on the
> receiving frequency so that I can transmit and be heard at the other end?
>
> I haven't made any hookup yet from the sound card line out to the mic
> on the TS-830S yet, but it looks like a gadget like the Signalink can
> handle this pretty well. Before I spend $, I just wanted to get a
> handle on how successfully PSK31 can be managed with the TS-830S.
>
> Thanks and 73's,
> KK4MZZ
> Milton
>
>

[Non-text portions of this message have been removed]

41956. Re: [TS-520_820_530_830] PSK31 and TS-830S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-29 22:04:54 UTC
From: Cliff White
Topic: 41947 Message: 41956

I've thought of buying a crystal to put into one of the fix channel
slots for 14.070 (the normal psk31 freq). Would that fix the stability
problems?

Respectfully,
Cliff White, W5CNW
w5cnw@... <mailto:w5cnw@...>
On 04/29/2013 04:22 PM, John Davidson wrote:
> The computer does all the tuning and handles the bandwidth issues. You just set the VFO to the packet freq and fine tune with the computer program.
> The biggest problem I have read about is the stability of the VFO in the hybrid radios is not good enough for the very narrow psk signals. If you just drft a few Hz you loose your link with the other station.
>
>
> _____
> From: miltschreiber <mschreiber@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, April 29, 2013 2:08 PM
> Subject: [TS-520_820_530_830] PSK31 and TS-830S
>
>
>
>
> Greetings, I am new to the Yahoo KENWOOD TS-520_820_530_830
> group. I have a TS-830S. I recently became interested in digital modes, and I've done a bit of searching here, but I'm still pretty confused.
>
> It's on the transmitting side that my confusion starts. Since PSK31 has a very narrow bandwidth, how do I tune my 830 to be dead on the receiving frequency so that I can transmit and be heard at the other end? Before I spend $, I just wanted to get a handle on how successfully PSK31 can be managed with the TS-830S.
>
> Thanks and 73's,
> KK4MZZ
> Milton
>
>
>
>
> [Non-text portions of this message have been removed]
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>
> Yahoo! Groups Links
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41957. Re: [TS-520_820_530_830] PSK31 and TS-830S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-29 22:18:37 UTC
From: Mike
Topic: 41947 Message: 41957

Yes it would.The crystal frequency for 14.070 is 5.570Mhz. The formula for calculating the crystal frequency is on page 21of the TS-830 operator's manual.The crystal "replaces" the VFO when operating the FIX CHANNEL feature.

You can purchase new crystals from International Crystals in Oklahoma City, OK.

http://www.icmfg.com/

Give them a call, they have a toll free 800 number, to discuss pricing and lead times.

73
Mike W5RKL

On 4/29/2013 5:04 PM, Cliff White wrote:
>
> I've thought of buying a crystal to put into one of the fix channel
> slots for 14.070 (the normal psk31 freq). Would that fix the stability
> problems?
>
> Respectfully,
> Cliff White, W5CNW
> w5cnw@... <mailto:w5cnw%40arrl.net> <mailto:w5cnw@...
> <mailto:w5cnw%40arrl.net>>
> On 04/29/2013 04:22 PM, John Davidson wrote:
> > The computer does all the tuning and handles the bandwidth issues.
> You just set the VFO to the packet freq and fine tune with the
> computer program.
> > The biggest problem I have read about is the stability of the VFO in
> the hybrid radios is not good enough for the very narrow psk signals.
> If you just drft a few Hz you loose your link with the other station.
> >
> >
> > _____
> > From: miltschreiber <mschreiber@...
> <mailto:mschreiber%40geohydro.com>>
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Monday, April 29, 2013 2:08 PM
> > Subject: [TS-520_820_530_830] PSK31 and TS-830S
> >
> >
> >
> >

> > Greetings, I am new to the Yahoo KENWOOD TS-520_820_530_830
> > group. I have a TS-830S. I recently became interested in digital
> modes, and I've done a bit of searching here, but I'm still pretty
> confused.
> >
> > It's on the transmitting side that my confusion starts. Since PSK31
> has a very narrow bandwidth, how do I tune my 830 to be dead on the
> receiving frequency so that I can transmit and be heard at the other
> end? Before I spend $, I just wanted to get a handle on how
> successfully PSK31 can be managed with the TS-830S.
> >
> > Thanks and 73's,
> > KK4MZZ
> > Milton
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
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> >
> > Yahoo! Groups Links
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41958. Low Power

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-30 00:16:29 UTC
From: bnorman37
Topic: 41958 Message: 41958

Hello to the group! I have an 830 that had been putting out full power until recently. One day fine the next day 25W output only. The pre-select/drive peaks like normal. Tune/load controls behave normally. Tune/load control shafts are in alignment and rotate normally. HV is normal. Everything seems completely normal except for low power. This condition exists on all bands and all antennas. I've also checked all jumper cables. I put in my spare finals this evening and no change. Any ideas will be very much appreciated. 73...Barry KF4WGR

41959. Re: Low Power

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-30 10:32:06 UTC
From: Terry Wagoner
Topic: 41958 Message: 41959

1. What is Ip reading?

2. Do you have another wattmeter to try?

3. Do you have a rf probe and VTVM or an O-scope? If so can measure the voltage across your 50 ohm dummy load resistor. P = E squared/R.

100 watts output you should measure approx 71 rms rf volts (200 P-P) and 25 watts you should measure approx 35 rms rf volts (99 P-P).

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "bnorman37" <bnorman@...> wrote:
>
> Hello to the group! I have an 830 that had been putting out full power until recently. One day fine the next day 25W output only. The pre-select/drive peaks like normal. Tune/load controls behave normally. Tune/load control shafts are in alignment and rotate normally. HV is normal. Everything seems completely normal except for low power. This condition exists on all bands and all antennas. I've also checked all jumper cables. I put in my spare finals this evening and no change. Any ideas will be very much appreciated. 73...Barry KF4WGR
>

41960. Re: [TS-520_820_530_830] Re: Low Power

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-30 10:46:49 UTC
From: Mark L. Hammond
Topic: 41958 Message: 41960

I'll second number 2 below! A few months back, this same scenario drove me nuts for a few days, and it turned out to be a bad wattmeter...felt both silly and glad at the same time.

Thanks to encouragement from a few folks on this list, I bought a new wattmeter and realized that yes indeed, my other meter had failed.

73,

Mark N8MH

At 10:32 AM 4/30/2013 +0000, you wrote:
>
>
>1. What is Ip reading?
>
>2. Do you have another wattmeter to try?
>
>3. Do you have a rf probe and VTVM or an O-scope? If so can measure the voltage across your 50 ohm dummy load resistor. P = E squared/R.
>
>100 watts output you should measure approx 71 rms rf volts (200 P-P) and 25 watts you should measure approx 35 rms rf volts (99 P-P).
>
>Terry K9TW
>
>--- In <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com, "bnorman37" <bnorman@...> wrote:
>>
>> Hello to the group! I have an 830 that had been putting out full power until recently. One day fine the next day 25W output only. The pre-select/drive peaks like normal. Tune/load controls behave normally. Tune/load control shafts are in alignment and rotate normally. HV is normal. Everything seems completely normal except for low power. This condition exists on all bands and all antennas. I've also checked all jumper cables. I put in my spare finals this evening and no change. Any ideas will be very much appreciated. 73...Barry KF4WGR
>>
>
>

[Non-text portions of this message have been removed]

41961. TS 530SP Dial Speed

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-30 07:14:04 UTC
From: C A
Topic: 41961 Message: 41961

Just replaced a '430S with a mint '530SP. Absolutely beautiful rig that lives up to its reputation. The only "con" I have is the tuning speed which is entirely too fast for an old man. Difficult to stop on freq. The '430 was 10kc per revolution which was a piece of cake, the '530 is 25kc per revolution. By any chance is there a mod to slow it down?

Tnx

41962. Re: Low Power

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-30 12:17:07 UTC
From: bnorman37
Topic: 41958 Message: 41962

I'll check Ip and I do have another watt meter I can try. I'm using a Wavenode station monitor and I suppose the sensor could be bad. I do have an VTVM I can use to check the voltage across the dummy load resistor. Good ideas, thanks!

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> 1. What is Ip reading?
>
> 2. Do you have another wattmeter to try?
>
> 3. Do you have a rf probe and VTVM or an O-scope? If so can measure the voltage across your 50 ohm dummy load resistor. P = E squared/R.
>
> 100 watts output you should measure approx 71 rms rf volts (200 P-P) and 25 watts you should measure approx 35 rms rf volts (99 P-P).
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "bnorman37" <bnorman@> wrote:
> >
> > Hello to the group! I have an 830 that had been putting out full power until recently. One day fine the next day 25W output only. The pre-select/drive peaks like normal. Tune/load controls behave normally. Tune/load control shafts are in alignment and rotate normally. HV is normal. Everything seems completely normal except for low power. This condition exists on all bands and all antennas. I've also checked all jumper cables. I put in my spare finals this evening and no change. Any ideas will be very much appreciated. 73...Barry KF4WGR
> >
>

41963. Re: Low Power

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-30 17:00:21 UTC
From: Terry Wagoner
Topic: 41958 Message: 41963

Will need 3 diode RF probe and VTVM. At 71 rf volts the PIV will be approx 200 volts so a single 1n34A diode (50 volt PIV rating) will not like to measure 71 rms rf volts across your dummy load. Unfortunately I learned this the hard way many years ago after I made my first homebrew rf probe!

Is your Wavenode displaying Reflected Power at same time it is displaying 25 watts Forward power(I assume average watts)?

If so, what is it telling you. I have no experience with the Wavenode and know nothing about its reliability.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "bnorman37" <bnorman@...> wrote:
>
> I'll check Ip and I do have another watt meter I can try. I'm using a Wavenode station monitor and I suppose the sensor could be bad. I do have an VTVM I can use to check the voltage across the dummy load resistor. Good ideas, thanks!
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > 1. What is Ip reading?
> >
> > 2. Do you have another wattmeter to try?
> >
> > 3. Do you have a rf probe and VTVM or an O-scope? If so can measure the voltage across your 50 ohm dummy load resistor. P = E squared/R.
> >
> > 100 watts output you should measure approx 71 rms rf volts (200 P-P) and 25 watts you should measure approx 35 rms rf volts (99 P-P).
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "bnorman37" <bnorman@> wrote:
> > >
> > > Hello to the group! I have an 830 that had been putting out full power until recently. One day fine the next day 25W output only. The pre-select/drive peaks like normal. Tune/load controls behave normally. Tune/load control shafts are in alignment and rotate normally. HV is normal. Everything seems completely normal except for low power. This condition exists on all bands and all antennas. I've also checked all jumper cables. I put in my spare finals this evening and no change. Any ideas will be very much appreciated. 73...Barry KF4WGR
> > >
> > >
>

41964. Re: [TS-520_820_530_830] Re: Low Power

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-30 18:11:40 UTC
From: Bob Macklin
Topic: 41958 Message: 41964

If you get a Heathkit Cantenna it has a built in RF detector. It uses a resistive divider.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Terry Wagoner
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, April 30, 2013 10:00 AM
Subject: [TS-520_820_530_830] Re: Low Power

Will need 3 diode RF probe and VTVM. At 71 rf volts the PIV will be approx 200 volts so a single 1n34A diode (50 volt PIV rating) will not like to measure 71 rms rf volts across your dummy load. Unfortunately I learned this the hard way many years ago after I made my first homebrew rf probe!

Is your Wavenode displaying Reflected Power at same time it is displaying 25 watts Forward power(I assume average watts)?

If so, what is it telling you. I have no experience with the Wavenode and know nothing about its reliability.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "bnorman37" <bnorman@...> wrote:
>
> I'll check Ip and I do have another watt meter I can try. I'm using a Wavenode station monitor and I suppose the sensor could be bad. I do have an VTVM I can use to check the voltage across the dummy load resistor. Good ideas, thanks!
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > 1. What is Ip reading?
> >
> > 2. Do you have another wattmeter to try?
> >
> > 3. Do you have a rf probe and VTVM or an O-scope? If so can measure the voltage across your 50 ohm dummy load resistor. P = E squared/R.
> >
> > 100 watts output you should measure approx 71 rms rf volts (200 P-P) and 25 watts you should measure approx 35 rms rf volts (99 P-P).
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "bnorman37" <bnorman@> wrote:

> > >
> > > Hello to the group! I have an 830 that had been putting out full power until recently. One day fine the next day 25W output only. The pre-select/drive peaks like normal. Tune/load controls behave normally. Tune/load control shafts are in alignment and rotate normally. HV is normal. Everything seems completely normal except for low power. This condition exists on all bands and all antennas. I've also checked all jumper cables. I put in my spare finals this evening and no change. Any ideas will be very much appreciated. 73...Barry KF4WGR
> > >
> >
>

[Non-text portions of this message have been removed]

41965. Re: TS 820 problem with dipping the final

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-30 20:51:23 UTC
From: eoxer
Topic: 41934 Message: 41965

Hi Terry,

Tnx for the info. Did some inspecting and cleaning of contacts mostly on the bandswitch which helped alot. The rig is now performing as it should and loading a G5RV and making contacts with good signal reports on cw and phone. Thanks again.

73,

Ed, W8EO

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Does it behave like this on all bands? Have you pulled the Antenna TR Relay and cleaned the contacts? If not, I would try that first. It is under metal shield can near final board. Carefully clean by pulling printer paper wetted with contact cleaner thru the contacts. Can also temporarily swap with the Aux relay as they are the same. Pull and clean both. Wont hurt to do as preventive maintenance.
>
> Regards lite bulb dummy load we used them for years as tuning indicators and dummy loads. While they will work for testing your rig absent anything else, I suggest you buy or build a "real" dummy load. Your problem is another reason I suggest buying or building a wattmeter to help trouble shoot these kinds of problems. Looking at Ip meter is ok but sure nice to see what level of actual RF you have at that SO-239 connector.
>
> Biggest problem with Lite bulb dummy load is that it can radiate significant distant and cause on band interference. If you are going to use it to test your rig you need to listen on frequency first.
>
> Contrary to popular opinion it will not hurt your tube rig. Would not use with solid state finals. Yes the filament resistance changes from cold to hot, but does so very quickly so not a real problem. At HF frequency it has very little reactance and is nearly unity power factor. There are several WWII surplus dummy load/tuning devices that used an incandescent lamp and viewing lense to load and test transmitters up to the VHF range. QST did some testing many years ago before non-inductive resistor dummy loads and watt meters were common place in ham shacks.
>
> Here is some of the details from that testing.
> 60 Watt bulb Cold = 27 ohms Hot = 219 ohms SWR approx 4 to 1
> 100 Watt bulb Cold = 20 ohms Hot = 132 ohms SWR approx 2.6 to 1
> 250 Watt bulb Cold = 4.5 ohm Hot = 53 ohms SWR near 1:1 (bulb not easily found today)
> Can also can place bulbs in parallel. For example 3- 60 watt in parallel for approx 73 ohms
> Brilliance will be approx 3/4 normal with RF ac applied as opposed to 60hz ac.
>
> Summary: Start by cleaning Ant TR relay and buy or build a dummy load.
> Can find a Celwave watt dry type on Ebay for around $50. These are nice as they have a

BNC connector test port that is a capacitive tap that can use to drive a rf meter or your O-scope. I have one rated at 250 watts with very good duty cycle.
> Terry K9TW
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "eoxer" <eaoxer@> wrote:
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "eoxer" <eaoxer@> wrote:
> > >
> > > Hello
> > >
> > > Tried loading the final but after several attempts (no dip) with adequate drive and idling current per instructions, fuse blew and smoked a 20 ohm resistor part of R2 (10 ohm 1 watt). I can replace the resistors and fuse. Any ideas on why it might have blown other than the part went bad. Other resistors a in R2 and R3 of the final board appear okay. R2 is apparently made up of two half watt 20 ohm resistors to get 10 ohms at 1 watt. Thanks for any help with this.
> > >
> > > 73,
> > >
> > > Ed, W8EO
> > >
> > Terry and Mark,
> >
> > Thanks again for the quick reply on the TS-820.
> >
> > No more problem with exploding resistors. Both have been replaced. I'm also back to using the original 6146's... back to square one with inability to dip the final. There appears to be adequate drive and even an intermittent output that lights a 100 watt bulb nicely. I'm thinking the finals need replacement or is there something else I should consider?
> >
> > 73,
> >
> > Ed, W8EO
> >
>

41966. Re: Low Power

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-30 21:06:07 UTC
From: Terry Wagoner
Topic: 41958 Message: 41966

The Heath Cantenna detector circuit dc output voltage provides a relative power indication. It is very frequency dependent. If you apply a fixed level of RF power at 3.5 mhz it will give an indication on your meter. Apply that exact same level of power at 29mhz and it will give a much higher meter deflection.

For example at 100 watts into the Cantenna on 7.2Mhz the detector will produce approx 2.25 vdc and at 14.2Mhz it will produce approx 1.35 vdc. Unless you develop a spread sheet for your particular Cantenna the detector circuit is not very useful.

No need to rush out and buy a Cantenna (I have them at operating position under bench in oil catch basins)and use Cel-Wave dry type on service bench with capacitive divider tap to drive O-scope.

Very simple to read the IR drop across your dummy load resistor. With any 50 ohm dummy load that you have just connect a coaxial Tee at input to your Dummy Load and use your O-scope or RF probe/VTVM or RF Millivolt meter to measure from the open center pin of this Tee to the connector body shell. No need to open up your dummy load to read the IR drop across the internal resistor. With coaxial Tee at input you should read approx 70.7 volts from center pin to shell if you have 100 watts input to the dummy load and it is close to 50 ohms resistance.

The Cantenna circuit can be modified with appropriate caps to provide frequency compensation and change the divider string and add a cal trim pot and then can be calibrated to drive a ua meter movement to read wattage. I think CQ or 73 Magazine had an article describing this mod.

Terry K9TW

--- In TS-520_820_530_830@...m, "Bob Macklin" <macklinbob@...> wrote:
>
> If you get a Heathkit Cantenna it has a built in RF detector. It uses a resistive divider.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Terry Wagoner
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tuesday, April 30, 2013 10:00 AM
> Subject: [TS-520_820_530_830] Re: Low Power
>
>
>
> Will need 3 diode RF probe and VTVM. At 71 rf volts the PIV will be approx 200 volts so a

single 1n34A diode (50 volt PIV rating) will not like to measure 71 rms rf volts across your dummy load. Unfortunately I learned this the hard way many years ago after I made my first homebrew rf probe!
>
> Is your Wavenode displaying Reflected Power at same time it is displaying 25 watts Forward power(I assume average watts)?
>
> If so, what is it telling you. I have no experience with the Wavenode and know nothing about its reliability.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "bnorman37" <bnorman@> wrote:
> >
> > I'll check Ip and I do have another watt meter I can try. I'm using a Wavenode station monitor and I suppose the sensor could be bad. I do have an VTVM I can use to check the voltage across the dummy load resistor. Good ideas, thanks!
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > >
> > > 1. What is Ip reading?
> > >
> > > 2. Do you have another wattmeter to try?
> > >
> > > 3. Do you have a rf probe and VTVM or an O-scope? If so can measure the voltage across your 50 ohm dummy load resistor. P = E squared/R.
> > >
> > > 100 watts output you should measure approx 71 rms rf volts (200 P-P) and 25 watts you should measure approx 35 rms rf volts (99 P-P).
> > >
> > > Terry K9TW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "bnorman37" <bnorman@> wrote:
> > > >
> > > > Hello to the group! I have an 830 that had been putting out full power until recently. One day fine the next day 25W output only. The pre-select/drive peaks like normal. Tune/load controls behave normally. Tune/load control shafts are in alignment and rotate normally. HV is normal. Everything seems completely normal except for low power. This condition exists on all bands and all antennas. I've also checked all jumper cables. I put in my spare finals this evening and no change. Any ideas will be very much appreciated. 73...Barry KF4WGR
> > > >
> > >
> > >
> >
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>
>
>
> [Non-text portions of this message have been removed]
>

41967. Re: Low Power

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-30 22:04:23 UTC
From: bnorman37
Topic: 41958 Message: 41967

Eureka! Much thanks to Terry and the group, the problem is apparently a bad RF sensor for the Wavenode. I have a spare I put in line and all is well. Another clue that there was nothing wrong with the xmit was that my amp's plate and grid currents were normal. Thanks again for the help! 73...Barry KF4WGR

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> The Heath Cantenna detector circuit dc output voltage provides a relative power indication. It is very frequency dependent. If you apply a fixed level of RF power at 3.5 mhz it will give an indication on your meter. Apply that exact same level of power at 29mhz and it will give a much higher meter deflection.
>
> For example at 100 watts into the Cantenna on 7.2Mhz the detector will produce approx 2.25 vdc and at 14.2Mhz it will produce approx 1.35 vdc. Unless you develop a spread sheet for your particular Cantenna the detector circuit is not very useful.
>
> No need to rush out and buy a Cantenna (I have them at operating position under bench in oil catch basins)and use Cel-Wave dry type on service bench with capacitive divider tap to drive O-scope.
>
> Very simple to read the IR drop across your dummy load resistor. With any 50 ohm dummy load that you have just connect a coaxial Tee at input to your Dummy Load and use your O-scope or RF probe/VTVM or RF Millivolt meter to measure from the open center pin of this Tee to the connector body shell. No need to open up your dummy load to read the IR drop across the internal resistor. With coaxial Tee at input you should read approx 70.7 volts from center pin to shell if you have 100 watts input to the dummy load and it is close to 50 ohms resistance.
>
> The Cantenna circuit can be modified with appropriate caps to provide frequency compensation and change the divider string and add a cal trim pot and then can be calibrated to drive a ua meter movement to read wattage. I think CQ or 73 Magazine had an article describing this mod.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@> wrote:
> >
> > If you get a Heathkit Cantenna it has a built in RF detector. It uses a resistive divider.
> >
> > Bob Macklin
> > K5MYJ
> > Seattle, Wa.
> > "Real Radios Glow In The Dark"
> > ----- Original Message -----

> > From: Terry Wagoner
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Tuesday, April 30, 2013 10:00 AM
> > Subject: [TS-520_820_530_830] Re: Low Power
> >
> >
> >
> > Will need 3 diode RF probe and VTVM. At 71 rf volts the PIV will be approx 200 volts so a single 1n34A diode (50 volt PIV rating) will not like to measure 71 rms rf volts across your dummy load. Unfortunately I learned this the hard way many years ago after I made my first homebrew rf probe!
> >
> > Is your Wavenode displaying Reflected Power at same time it is displaying 25 watts Forward power(I assume average watts)?
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> > If so, what is it telling you. I have no experience with the Wavenode and know nothing about its reliability.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "bnorman37" <bnorman@> wrote:
> > >
> > > I'll check Ip and I do have another watt meter I can try. I'm using a Wavenode station monitor and I suppose the sensor could be bad. I do have an VTVM I can use to check the voltage across the dummy load resistor. Good ideas, thanks!
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > > >
> > > > 1. What is Ip reading?
> > > >
> > > > 2. Do you have another wattmeter to try?
> > > >
> > > > 3. Do you have a rf probe and VTVM or an O-scope? If so can measure the voltage across your 50 ohm dummy load resistor. P = E squared/R.
> > > >
> > > > 100 watts output you should measure approx 71 rms rf volts (200 P-P) and 25 watts you should measure approx 35 rms rf volts (99 P-P).
> > > >
> > > > Terry K9TW
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "bnorman37" <bnorman@> wrote:
> > > > >
> > > > > Hello to the group! I have an 830 that had been putting out full power until recently. One day fine the next day 25W output only. The pre-select/drive peaks like normal. Tune/load controls behave normally. Tune/load control shafts are in alignment and rotate normally. HV is normal. Everything seems completely normal except for low power. This condition exists on all bands and all antennas. I've also checked all jumper cables. I put in my spare finals this evening and no change. Any ideas will be very much appreciated. 73...Barry KF4WGR
> > > > >

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> >
> > [Non-text portions of this message have been removed]
> >
>

41968. Use of "Canned Air"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-30 15:52:58 UTC
From: ve5sja
Topic: 41968 Message: 41968

I have been looking for Canned Air. I have assumed it was air.

I left a can of a "gas duster" at my local Walmart because it listed another ingredient with a long name. I finally bought a can of compressed "Dust Away" from a photo shop. It consists of 100% difluoroethane as far as I can interpret the label and the associated MSDS sheet. It is recommended for removing dust. I think that that is the same as the Walmart product.

Mike, Is this the product that you are recommending?

John, VE5SJA

41969. Re: Low Power

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-30 22:11:50 UTC
From: Terry Wagoner
Topic: 41958 Message: 41969

Sorry got my dc output voltages copied wrong from my chart. I even forgot I had developed one. Should have been 2.25vdc on 14.2 mhz and 1.35vdc on 7.2 Mhz. The higher you go in Freq the higher the dc output voltage.

Dont forget the voltage you want to read across the dummy load is RF and not DC. Power = E squared/R. To be accurate you can measure the resistance of your dummy load from center pin to shield of the SO-239 connector. Very few are exactly 50 ohms.

All I was trying to do was to provide an easy way to see what the actual output power is in the absence of another calibrated wattmeter.

If you really have 25 watts output then you would read approx 35 rf volts at the coax tee.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> The Heath Cantenna detector circuit dc output voltage provides a relative power indication. It is very frequency dependent. If you apply a fixed level of RF power at 3.5 mhz it will give an indication on your meter. Apply that exact same level of power at 29mhz and it will give a much higher meter deflection.
>
> For example at 100 watts into the Cantenna on 7.2Mhz the detector will produce approx 2.25 vdc and at 14.2Mhz it will produce approx 1.35 vdc. Unless you develop a spread sheet for your particular Cantenna the detector circuit is not very useful.
>
>
>

41970. Re: [TS-520_820_530_830] Use of "Canned Air"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-30 22:53:42 UTC
From: Joseph Stiles
Topic: 41968 Message: 41970

John

Sorry to jump in here..but...if the can states that it can be used on photo equipment, computers,...etc...it's safe to
us on your rig. The makers...add "stuff" so the junkies can't "sniff/inhale it.

If it's up to me...I'd rather have a pint!

73 Joe
WB7UQU

From: ve5sja <johnallen46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, April 30, 2013 8:52 AM
Subject: [TS-520_820_530_830] Use of "Canned Air"

I have been looking for Canned Air. I have assumed it was air.

I left a can of a "gas duster" at my local Walmart because it listed another ingredient with a long name. I finally bought a can of compressed "Dust Away" from a photo shop. It consists of 100% difluoroethane as far as I can interpret the label and the associated MSDS sheet. It is recommended for removing dust. I think that that is the same as the Walmart product.

Mike, Is this the product that you are recommending?

John, VE5SJA

[Non-text portions of this message have been removed]

41971. Re: Use of "Canned Air"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-04-30 23:43:29 UTC
From: Terry Wagoner
Topic: 41968 Message: 41971

I have been using Walmart canned air for some time and I admit a bit nervous about it. As you note the MSDS sheet shows that it is flammable and should be used with adequate ventilation.

I have never found anything that really works as well as good old Freon 113 for cleaning off solder flux on the trace side and oily/greasy dirt on component side of PC boards.

I have discovered that if you tip the Walmart can slightly while blowing off the board you will release the propellant and it does a very good job of cleaning off oily dirt from boards. It evaporates quickly. Just have to be careful and not get frost bite.

One of my big concerns is I do not know if there is any possible reaction with Diflouroethane and the aluminum canned filter caps.

I am interested in the experience/recommendations of other members. I dont really have any other source of dry air.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "ve5sja" <johnallen46@...> wrote:
>
> I have been looking for Canned Air. I have assumed it was air.
>
> I left a can of a "gas duster" at my local Walmart because it listed another ingredient with a long name. I finally bought a can of compressed "Dust Away" from a photo shop. It consists of 100% difluoroethane as far as I can interpret the label and the associated MSDS sheet. It is recommended for removing dust. I think that that is the same as the Walmart product.
>
> Mike, Is this the product that you are recommending?
>
> John, VE5SJA
>

41972. Re: [TS-520_820_530_830] Re: Use of "Canned Air"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 01:23:11 UTC
From: Joseph Stiles
Topic: 41968 Message: 41972

Terry & Group,

  I have been using "DUST OFF" for the past 3 years. I buy it at "Costco" by the 6 pack. It also is based on diflouroethane. I have not suffered any problems or noticed any difficulty with it. It is used mostly for blowing off band switch wafers, pots etc. after using Deoxit for the first cleaning. As I stated prior, the makers add noxious "stuff" to make it difficult for the junkies to high on it...even says so on the can....go figure. The label on the can states not to tip it when spraying or the "liquid contents" may come out. I must admit...the "contents" do make a good solvent...just doesn't last long.... evaporates in a flash.

73 Joe
WB7UQU

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, April 30, 2013 4:43 PM
Subject: [TS-520_820_530_830] Re: Use of "Canned Air"

I have been using Walmart canned air for some time and I admit a bit nervous about it. As you note the MSDS sheet shows that it is flammable and should be used with adequate ventilation.

I have never found anything that really works as well as good old Freon 113 for cleaning off solder flux on the trace side and oily/greasy dirt on component side of PC boards.

I have discovered that if you tip the Walmart can slightly while blowing off the board you will release the propellant and it does a very good job of cleaning off oily dirt from boards. It evaporates quickly. Just have to be careful and not get frost bite.

One of my big concerns is I do not know if there is any possible reaction with Diflouroethane and the aluminum canned filter caps.

I am interested in the experience/recommendations of other members. I dont really have any other source of dry air.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "ve5sja" <johnallen46@...> wrote:
>
> I have been looking for Canned Air. I have assumed it was air.
>
> I left a can of a "gas duster" at my local Walmart because it listed another ingredient with a long name. I finally bought a can of compressed "Dust Away" from a photo shop. It consists of 100% difluoroethane as far as I can interpret the label and the associated MSDS

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>
> Mike, Is this the product that you are recommending?
>
> John, VE5SJA
>

[Non-text portions of this message have been removed]

41973. TS-520 vfo to 25mhz

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 01:56:37 UTC
From: hsumaverick01
Topic: 41973 Message: 41973

I just recently acquired a TS-520 and am still learning how to navigate the vfo knob. I am trying to check the receive of the unit by tuning to 25mhz to listen to the clock. What actual settings would I need to use?

Chris
N5HSU

41974. Re: [TS-520_820_530_830] TS-520 vfo to 25mhz

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 02:22:53 UTC
From: GEAgent21@...
Topic: 41973 Message: 41974

I am also trying to figure out the controls on a TS-520 that I just
installed a 10 meter antenna for. I have been following this site for a while.
Lots of good info.
Greg
KC9VVU

In a message dated 4/30/2013 10:11:06 P.M. Eastern Daylight Time,
hsumaverick01@... writes:

I just recently acquired a TS-520 and am still learning how to navigate the
vfo knob. I am trying to check the receive of the unit by tuning to 25mhz
to listen to the clock. What actual settings would I need to use?

Chris
N5HSU

[Non-text portions of this message have been removed]

41975. Re: [TS-520_820_530_830] Use of "Canned Air"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 02:46:11 UTC
From: Mike
Topic: 41968 Message: 41975

John,

I'm not in the shack at the moment, that's where I keep the canned air, but the can is Green and white color and sold at Walmart. Terry's right, if you tilt the can a bit the propellant will comeout as "White frost" and is very coldso don't allow it to get on your skin. If you shake the can it turns cold.

I have never had any problems using it on any metal, PC boards either component or foil side, even aluminum.

73
Mike W5RKL

On 4/30/2013 10:52 AM, ve5sja wrote:
>
> I have been looking for Canned Air. I have assumed it was air.
>
> I left a can of a "gas duster" at my local Walmart because it listed
> another ingredient with a long name. I finally bought a can of
> compressed "Dust Away" from a photo shop. It consists of 100%
> difluoroethane as far as I can interpret the label and the associated
> MSDS sheet. It is recommended for removing dust. I think that that is
> the same as the Walmart product.
>
> Mike, Is this the product that you are recommending?
>
> John, VE5SJA
>
>

[Non-text portions of this message have been removed]

41976. Re: Use of "Canned Air"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 05:19:28 UTC
From: paul.nussbaum
Topic: 41968 Message: 41976

I make my own. I have a 5 gallon steel tank rated to 125psi that I use to keep my bicycle and automobile tires maintained, has a gauge, hose, valve, etc.
I have not found a place to air it up yet, so I pressurize it using my bicycle pump... yes, it takes a while; I pretend it's exercise.

Paul
AD5FT

--- In TS-520_820_530_830@yahoogroups.com, "ve5sja" <johnallen46@...> wrote:
>
> I have been looking for Canned Air. I have assumed it was air.
>
> I left a can of a "gas duster" at my local Walmart because it listed another ingredient with a long name. I finally bought a can of compressed "Dust Away" from a photo shop. It consists of 100% difluoroethane as far as I can interpret the label and the associated MSDS sheet. It is recommended for removing dust. I think that that is the same as the Walmart product.
>
> Mike, Is this the product that you are recommending?
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> John, VE5SJA
>

41977. Re: [TS-520_820_530_830] TS-520 vfo to 25mhz

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 05:23:19 UTC
From: Joseph Stiles
Topic: 41973 Message: 41977

Chris

The 520 will not rcv WWV/JJY on 25Mhz. It will only rcv it on 10Mhz. Look on pages 11 & 12 and also Section 4.5 (page 20) of the operators manual.
If you do not have one, you may find one at: n6wk.com Gordon has many manuals on his site that are free...THANKS GORDON!!!

73 Joe
WB7UQU

From: "GEAgent21@..." <GEAgent21@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, April 30, 2013 7:22 PM
Subject: Re: [TS-520_820_530_830] TS-520 vfo to 25mhz

I am also trying to figure out the controls on a TS-520 that I just
installed a 10 meter antenna for. I have been following this site for a while.
Lots of good info.
Greg
KC9VVU

In a message dated 4/30/2013 10:11:06 P.M. Eastern Daylight Time,
hsumaverick01@... writes:

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vfo knob. I am trying to check the receive of the unit by tuning to 25mhz
to listen to the clock. What actual settings would I need to use?

Chris
N5HSU

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41978. Re: Use of "Canned Air"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 10:57:07 UTC
From: Terry Wagoner
Topic: 41968 Message: 41978

No offense but you are not making "dry" air. Anytime you compress air you have moisture in your tank. That is why they place a brass petcock on the bottom of the tank so you can blow it out. I have nice air compressor in my garage and it has the standard "moisture" separator on the output, but it does not produce Dry or moisture free air. It is just a water trap with a drain petcock on the bottom.

I would never use my shop air to blow off my boards or my rig. I suppose you could if you then placed in the oven?

There are couple of ways to dry the air from a compressor so that is is essentially moisture free. A Desiccant unit with replaceable cartridges will run you about $600 from Northern Tool and a Refrigerated Dryer will run $1500 to $2000 depending on CFM.

This is the reason people are interested in moisture free canned air at the service bench. They are looking for the ease of use. I dont want to run a compressed air line from garage into house and cant justify buying a air dryer. Take a look on You Tube and you will see a variety of home made dryers. Not sure how they measure the output air moisture content to confirm these things are working.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "paul.nussbaum" <paul.nussbaum@...> wrote:
>
> I make my own. I have a 5 gallon steel tank rated to 125psi that I use to keep my bicycle and automobile tires maintained, has a gauge, hose, valve, etc.
> I have not found a place to air it up yet, so I pressurize it using my bicycle pump... yes, it takes a while; I pretend it's exercise.
>
> Paul
> AD5FT
>
> --- In TS-520_820_530_830@yahoogroups.com, "ve5sja" <johnallen46@> wrote:
> >
> > I have been looking for Canned Air. I have assumed it was air.
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> > I left a can of a "gas duster" at my local Walmart because it listed another ingredient with a long name. I finally bought a can of compressed "Dust Away" from a photo shop. It consists of 100% difluoroethane as far as I can interpret the label and the associated MSDS sheet. It is recommended for removing dust. I think that that is the same as the Walmart product.
> >
> > Mike, Is this the product that you are recommending?
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> > John, VE5SJA
> >
>

41979. Re: Use of "Canned Air"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 11:16:43 UTC
From: Terry Wagoner
Topic: 41968 Message: 41979

Here is about as cheap a compressed air dryer as I have seen. Have to work the math of how many Walmart cans for break even (not counting power to run it). Just be aware it is Harbor Freight quality level and not Devilbiss. I probably wont be getting one any time soon.

http://www.harborfreight.com/compressed-air-dryer-40211.html

Terry K9TW
>
>
> There are couple of ways to dry the air from a compressor so that is is essentially moisture free. A Desiccant unit with replaceable cartridges will run you about $600 from Northern Tool and a Refrigerated Dryer will run $1500 to $2000 depending on CFM.
>
> >
> >
>

41980. Re: Use of "Canned Air"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 12:04:31 UTC
From: Terry Wagoner
Topic: 41968 Message: 41980

One last thought on canned air.

You could go to computer shop and buy Belkin Blaster brand. It is $8.99 for 12oz can. It is 100% 1,1,1,2-Tetrafluoroethane which is R-134A auto air conditioner refrigerant.

Could probably buy small cans of R-134A cheaper at auto stores or Walmart, but have to be careful that it is just plain R-134A with no leak sealant or compressor oil additives. Would need to buy cheap can tap kit to use it.

You can buy a 30lb cylinder of R-134A at Sams Club or Rural King for around $100. That is equivalent to 40 Belkin cans.

OK enough of this.

Terry K9TW

41981. Re: [TS-520_820_530_830] Re: Use of "Canned Air"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 13:49:31 UTC
From: Joe - W7RKN
Topic: 41968 Message: 41981

I really think that it depends on where you live. When you only have a 10% relative humidity, high water content in your compressed air is NOT an issue.

Joe - W7RKN
Reno, Nevada

----- Original Message -----
From: "Terry Wagoner" <wagstw46@...>
Subject: [TS-520_820_530_830] Re: Use of "Canned Air"

> No offense but you are not making "dry" air. Anytime you compress air you
> have moisture in your tank. That is why they place a brass petcock on the
> bottom of the tank so you can blow it out. I have nice air compressor in
> my garage and it has the standard "moisture" separator on the output, but
> it does not produce Dry or moisture free air. It is just a water trap with
> a drain petcock on the bottom.
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> I would never use my shop air to blow off my boards or my rig. I suppose
> you could if you then placed in the oven?
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> There are couple of ways to dry the air from a compressor so that is is
> essentially moisture free. A Desiccant unit with replaceable cartridges
> will run you about $600 from Northern Tool and a Refrigerated Dryer will
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> This is the reason people are interested in moisture free canned air at
> the service bench. They are looking for the ease of use. I dont want to
> run a compressed air line from garage into house and cant justify buying a
> air dryer. Take a look on You Tube and you will see a variety of home made
> dryers. Not sure how they measure the output air moisture content to
> confirm these things are working.

41982. Re: [TS-520_820_530_830] Re: Use of "Canned Air"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 14:12:38 UTC
From: Joe
Topic: 41968 Message: 41982

Has anyone considered using nitrogen?

ON 5/1/2013 9:49 AM, Joe - W7RKN wrote:
> No offense but you are not making "dry" air. Anytime you compress air you
> have moisture in your tank.

41983. Re: [TS-520_820_530_830] Re: Use of "Canned Air"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 14:13:14 UTC
From: Chris Robinson
Topic: 41968 Message: 41983

When I worked in the auto shop years ago, we had a paint booth also. The filters for moisture are not all that expensive, but they ae when you go through a filter every other day or so. As a result, we used the container for the filter, and shoved a large roll of Toilet Paper in it. This was more effective then the original filters.

On Wed, May 1, 2013 at 3:57 AM, Terry Wagoner <wagstw46@...> wrote:

> **
>
>
> No offense but you are not making "dry" air. Anytime you compress air you
> have moisture in your tank. That is why they place a brass petcock on the
> bottom of the tank so you can blow it out. I have nice air compressor in my
> garage and it has the standard "moisture" separator on the output, but it
> does not produce Dry or moisture free air. It is just a water trap with a
> drain petcock on the bottom.
>
> I would never use my shop air to blow off my boards or my rig. I suppose
> you could if you then placed in the oven?
>
> There are couple of ways to dry the air from a compressor so that is is
> essentially moisture free. A Desiccant unit with replaceable cartridges
> will run you about $600 from Northern Tool and a Refrigerated Dryer will
> run $1500 to $2000 depending on CFM.
>
> This is the reason people are interested in moisture free canned air at
> the service bench. They are looking for the ease of use. I dont want to run
> a compressed air line from garage into house and cant justify buying a air
> dryer. Take a look on You Tube and you will see a variety of home made
> dryers. Not sure how they measure the output air moisture content to
> confirm these things are working.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "paul.nussbaum" <paul.nussbaum@...>
> wrote:
> >
> > I make my own. I have a 5 gallon steel tank rated to 125psi that I use
> to keep my bicycle and automobile tires maintained, has a gauge, hose,
> valve, etc.
> > I have not found a place to air it up yet, so I pressurize it using my
> bicycle pump... yes, it takes a while; I pretend it's exercise.
> >
> > Paul

> > AD5FT
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "ve5sja" <johnallen46@>
> wrote:
> > >
> > > I have been looking for Canned Air. I have assumed it was air.
> > >
> > > I left a can of a "gas duster" at my local Walmart because it listed
> another ingredient with a long name. I finally bought a can of compressed
> "Dust Away" from a photo shop. It consists of 100% difluoroethane as far as
> I can interpret the label and the associated MSDS sheet. It is recommended
> for removing dust. I think that that is the same as the Walmart product.
> > >
> > > Mike, Is this the product that you are recommending?
> > >
> > > John, VE5SJA
> > >
> >
>
>
>

--
Making life hell for others since 1973

Mr.C.Robinson
73 DE KF6NFW

[Non-text portions of this message have been removed]

41984. Re: [TS-520_820_530_830] Re: Use of "Canned Air"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 14:19:59 UTC
From: Joe - W7RKN
Topic: 41968 Message: 41984

Uh...you clipped the wrong quote..the one below, that you attributed to me, isn't! LOL

Joe - W7RKN

----- Original Message -----
From: Joe
Subject: Re: [TS-520_820_530_830] Re: Use of "Canned Air"

Has anyone considered using nitrogen?

ON 5/1/2013 9:49 AM, Joe - W7RKN wrote:
> No offense but you are not making "dry" air. Anytime you compress air you
> have moisture in your tank.

[Non-text portions of this message have been removed]

41985. Re: [TS-520_820_530_830] Re: Use of "Canned Air"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 14:25:56 UTC
From: Joe
Topic: 41968 Message: 41985

Oops, My apologies, just trying to be space efficient on the reply.

Joe

On 5/1/2013 10:19 AM, Joe - W7RKN wrote:
> Uh...you clipped the wrong quote..the one below, that you attributed to me, isn't! LOL
>
> Joe - W7RKN
>

41986. Re: [TS-520_820_530_830] Re: Use of "Canned Air"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 14:27:03 UTC
From: Richard Radke
Topic: 41968 Message: 41986

nitrogen is what we used in the darkroom for blowing off negs and
film holders (back in the day)...a 100 lb. cylinder would last a year
plus with almost daily use

Rick
W9WS

On May 1, 2013, at 9:12 AM, Joe wrote:

Has anyone considered using nitrogen?

ON 5/1/2013 9:49 AM, Joe - W7RKN wrote:
> No offense but you are not making "dry" air. Anytime you compress
air you
> have moisture in your tank.

[Non-text portions of this message have been removed]

41987. Re: [TS-520_820_530_830] Re: Use of "Canned Air"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 14:35:59 UTC
From: John Davidson
Topic: 41968 Message: 41987

I bought a "Rig Blaster" from the internet. I can't figger out how to blow the dust out of my chassis with it yet !!!
 I guess I wasted my money !!.

From: Terry Wagoner <wagstw46@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 1, 2013 7:16 AM
Subject: [TS-520_820_530_830] Re: Use of "Canned Air"

Here is about as cheap a compressed air dryer as I have seen. Have to work the math of how many Walmart cans for break even (not counting power to run it). Just be aware it is Harbor Freight quality level and not Devilbiss. I probably wont be getting one any time soon.

http://www.harborfreight.com/compressed-air-dryer-40211.html

Terry K9TW
>
>
> There are couple of ways to dry the air from a compressor so that is is essentially moisture free. A Desiccant unit with replaceable cartridges will run you about $600 from Northern Tool and a Refrigerated Dryer will run $1500 to $2000 depending on CFM.
>
> >
> >
>

[Non-text portions of this message have been removed]

41988. Re: [TS-520_820_530_830] Re: Use of "Canned Air"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 14:43:33 UTC
From: Joe
Topic: 41968 Message: 41988

You should have bought the ham "Lots of hot air" option. Joe

On 5/1/2013 10:35 AM, John Davidson wrote:
> I bought a "Rig Blaster" from the internet. I can't figger out how to blow the dust out of my chassis with it yet !!!
> I guess I wasted my money !!.
>
>
> _____
> From: Terry Wagoner <wagstw46@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, May 1, 2013 7:16 AM
> Subject: [TS-520_820_530_830] Re: Use of "Canned Air"
>
>
>
>
> Here is about as cheap a compressed air dryer as I have seen. Have to work the math of how many Walmart cans for break even (not counting power to run it). Just be aware it is Harbor Freight quality level and not Devilbiss. I probably wont be getting one any time soon.
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> http://www.harborfreight.com/compressed-air-dryer-40211.html
>
> Terry K9TW
>>
>> There are couple of ways to dry the air from a compressor so that is is essentially moisture free. A Desiccant unit with replaceable cartridges will run you about $600 from Northern Tool and a Refrigerated Dryer will run $1500 to $2000 depending on CFM.
>>
>> >
>
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>
> [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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41989. Re: Use of "Canned Air"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 13:15:15 UTC
From: ve5sja
Topic: 41968 Message: 41989

Thanks for the information, everyone. It looks like I have the equivalent of what is recommended. I happen to live and shop in Canada where prices are often different, and seldom less. Although the comparative prices between brands may have the same ranking, so Terry's suggestion is worth investigating after I run out of this can.

John

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> One last thought on canned air.
>
> You could go to computer shop and buy Belkin Blaster brand. It is $8.99 for 12oz can. It is 100% 1,1,1,2-Tetrafluoroethane which is R-134A auto air conditioner refrigerant.
>
> Could probably buy small cans of R-134A cheaper at auto stores or Walmart, but have to be careful that it is just plain R-134A with no leak sealant or compressor oil additives. Would need to buy cheap can tap kit to use it.
>
> You can buy a 30lb cylinder of R-134A at Sams Club or Rural King for around $100. That is equivalent to 40 Belkin cans.
>
> OK enough of this.
>
>
> Terry K9TW
>

41990. Re: [TS-520_820_530_830] TS-520 vfo to 25mhz

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 15:20:21 UTC
From: John Davidson
Topic: 41973 Message: 41990

If you didn't get the user manual you better download one or you will be lost.

From: hsumaverick01 <hsumaverick01@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, April 30, 2013 9:56 PM
Subject: [TS-520_820_530_830] TS-520 vfo to 25mhz

I just recently acquired a TS-520 and am still learning how to navigate the vfo knob. I am trying to check the receive of the unit by tuning to 25mhz to listen to the clock. What actual settings would I need to use?

Chris
N5HSU

[Non-text portions of this message have been removed]

41991. Re: [TS-520_820_530_830] TS-520 vfo to 25mhz

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 15:19:04 UTC
From: John Davidson
Topic: 41973 Message: 41991

The TS520 (no S) goes to 10-10.5 mHz band when you press the WWV/JJY button.
Set your VFO dial to 000 to hear WWV at 10 .000 mHz.
yOU can also hear the 30M band (no transmit) when you push the WWV button.

From: hsumaverick01 <hsumaverick01@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, April 30, 2013 9:56 PM
Subject: [TS-520_820_530_830] TS-520 vfo to 25mhz

I just recently acquired a TS-520 and am still learning how to navigate the vfo knob. I am trying to check the receive of the unit by tuning to 25mhz to listen to the clock. What actual settings would I need to use?

Chris
N5HSU

[Non-text portions of this message have been removed]

41992. Re: [TS-520_820_530_830] TS-520 vfo to 25mhz

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 15:21:23 UTC
From: John Davidson
Topic: 41973 Message: 41992

If you didn't get the user manual with the rig you will get lost , download one and read it before you get into trouble and blow out final tubes.

From: hsumaverick01 <hsumaverick01@me.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, April 30, 2013 9:56 PM
Subject: [TS-520_820_530_830] TS-520 vfo to 25mhz

I just recently acquired a TS-520 and am still learning how to navigate the vfo knob. I am trying to check the receive of the unit by tuning to 25mhz to listen to the clock. What actual settings would I need to use?

Chris
N5HSU

[Non-text portions of this message have been removed]

41993. Re: [TS-520_820_530_830] Re: Use of "Canned Air"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 15:26:14 UTC
From: John Davidson
Topic: 41968 Message: 41993

I need to find a can of "Nevada air" hot and dry.

From: Joe <k1ike_mail@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 1, 2013 10:43 AM
Subject: Re: [TS-520_820_530_830] Re: Use of "Canned Air"

You should have bought the ham "Lots of hot air" option. Joe

On 5/1/2013 10:35 AM, John Davidson wrote:
> I bought a "Rig Blaster" from the internet. I can't figger out how to blow the dust out of my chassis with it yet !!!
> I guess I wasted my money !!.
>
>
> ---
> From: Terry Wagoner <wagstw46@yahoo.com>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, May 1, 2013 7:16 AM
> Subject: [TS-520_820_530_830] Re: Use of "Canned Air"
>
>
>
>
> Here is about as cheap a compressed air dryer as I have seen. Have to work the math of how many Walmart cans for break even (not counting power to run it). Just be aware it is Harbor Freight quality level and not Devilbiss. I probably wont be getting one any time soon.
>
> http://www.harborfreight.com/compressed-air-dryer-40211.html
>
> Terry K9TW
>>
>> There are couple of ways to dry the air from a compressor so that is is essentially moisture free. A Desiccant unit with replaceable cartridges will run you about $600 from Northern Tool and a Refrigerated Dryer will run $1500 to $2000 depending on CFM.
>>
>> >
>
>
>
> [Non-text portions of this message have been removed]
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[Non-text portions of this message have been removed]

41994. Re: TS-520 vfo to 25mhz

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 15:38:38 UTC
From: Rich Jones
Topic: 41973 Message: 41994

Moisture in the air? I took a recent purchase Drake AC4 power supply and hosed it off with water from my garden hosed, let it dry for a couple of days, Got all the years of critters and grime off and it works great. Rich K8UV

[Non-text portions of this message have been removed]

41995. Re: [TS-520_820_530_830] Re: TS-520 vfo to 25mhz

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 15:47:04 UTC
From: John Davidson
Topic: 41973 Message: 41995

In my early days on the job I knew a fellow tech who pulled filthy radio T/R units out of big trucks and excavator rigs and sprayed them with soapy water and rinsed and put them in his kitchen oven on warm heat, 200 degrees for a few hours and they worked fine !

From: Rich Jones <michjonezee@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wednesday, May 1, 2013 11:38 AM
Subject: [TS-520_820_530_830] Re: TS-520 vfo to 25mhz

Moisture in the air? I took a recent purchase Drake AC4 power supply and hosed it off with water from my garden hosed, let it dry for a couple of days, Got all the years of critters and grime off and it works great. Rich K8UV

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

41996. Re: Use of "Canned Air"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 15:49:57 UTC
From: Terry Wagoner
Topic: 41968 Message: 41996

I am not sure how the input air in Nevada helps the fellow in Canada or me in Michigan?

Actually there is another reason not to use your air compressor to blow off your rig and your boards and that is oil mist. Crankcase oil vapors are carried over into the air. You dont want to blow oily air on your rig.

As far as 10% humidity being a non-problem that is not entirely correct. It has been 40 years since I had Thermo so you may want to check my facts.

Your compressor will suck in 7 cu ft of Nevada air @ 0 psig and compress it to 1 cu ft @ 100 psig and at the same time elevate its temperature considerably. So the water vapor that was in 7 cu ft is now in 1 cu ft. As that air leaves your compressor and enters your tank it reaches its dew point and condenses in the tank.

Rough calcs show that there will be 0.40 lbs/1000 cu ft @ 100 degrees F and 10% RH. Water is approx 15oz/lb. So if your compressor is 10 scfm in about 1.5 hours it will produce about 6 oz of water. Not a lot of water, but how much water vapor is too much to apply to your rig and boards?

So I stand by recommendation it is not good practice to blow out your radio with compressed air from a common home/garage air compressor with no oil separator and no air dryer. Not to mention accidently hitting delicate components with 100 psi.

Sorry to bore the Scare Crow in Oz with so much Hot Air. Technical subjects like ham radio can be so boring.

73s Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Joe - W7RKN <w7rkn.7@...> wrote:
>
> I really think that it depends on where you live. When you only have a 10%
> relative humidity, high water content in your compressed air is NOT an
> issue.
>
> Joe - W7RKN
> Reno, Nevada
>
>
> ----- Original Message -----
> From: "Terry Wagoner" <wagstw46@...>
> Subject: [TS-520_820_530_830] Re: Use of "Canned Air"
>
>
> > No offense but you are not making "dry" air. Anytime you compress air you
> > have moisture in your tank. That is why they place a brass petcock on the
> > bottom of the tank so you can blow it out. I have nice air compressor in
> > my garage and it has the standard "moisture" separator on the output, but

> > it does not produce Dry or moisture free air. It is just a water trap with
> > a drain petcock on the bottom.
> >
> > I would never use my shop air to blow off my boards or my rig. I suppose
> > you could if you then placed in the oven?
> >
> > There are couple of ways to dry the air from a compressor so that is is
> > essentially moisture free. A Desiccant unit with replaceable cartridges
> > will run you about $600 from Northern Tool and a Refrigerated Dryer will
> > run $1500 to $2000 depending on CFM.
> >
> > This is the reason people are interested in moisture free canned air at
> > the service bench. They are looking for the ease of use. I dont want to
> > run a compressed air line from garage into house and cant justify buying a
> > air dryer. Take a look on You Tube and you will see a variety of home made
> > dryers. Not sure how they measure the output air moisture content to
> > confirm these things are working.
>

41997. Re: [TS-520_820_530_830] Re: TS-520 vfo to 25mhz

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 15:50:32 UTC
From: n6wk@...
Topic: 41973 Message: 41997

I have been doing that for years.
Never have had a problem except when the wife caught me using her oven
for radios hi hi
Now I make sure she isn't home when I cook a radio or two.

73,
Gordon
N6WK

On 5/1/2013 8:47 AM, John Davidson wrote:
>
> In my early days on the job I knew a fellow tech who pulled filthy
> radio T/R units out of big trucks and excavator rigs and sprayed them
> with soapy water and rinsed and put them in his kitchen oven on warm
> heat, 200 degrees for a few hours and they worked fine !
>
> _____
> From: Rich Jones <michjonezee@... <mailto:michjonezee%40yahoo.com>>
> To: "TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>"
> <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>>
> Sent: Wednesday, May 1, 2013 11:38 AM
> Subject: [TS-520_820_530_830] Re: TS-520 vfo to 25mhz
>
>
>
> Moisture in the air? I took a recent purchase Drake AC4 power supply
> and hosed it off with water from my garden hosed, let it dry for a
> couple of days, Got all the years of critters and grime off and it
> works great. Rich K8UV
>
> [Non-text portions of this message have been removed]
>
> [Non-text portions of this message have been removed]
>
>

41998. Re: TS-520 vfo to 25mhz

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 15:57:31 UTC
From: Terry Wagoner
Topic: 41973 Message: 41998

The primary use of the canned air is not to clean the rig or boards. That is secondary. It is to remove contact cleaner that was used on VFO rotor shaft wiper contact, or contact cleaner that was sprayed on dirty bandswitch contacts.

People have been using soap and water and dishwashers and garden hoses and drying in the sun and placing in the oven for years with no ill affects. Nothing to do with using canned air to remove contact cleaner residual spray.

This is a different subject. I confused the two when I discussed using the canned air propellent to remove flux and greasy dirt by tipping the can. We are talking about not using compressed air from home compressor to remove this residual contact cleaner.

Sorry for the confusion.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Rich Jones <michjonezee@...> wrote:
>
> Moisture in the air? I took a recent purchase Drake AC4 power supply and hosed it off with water from my garden hosed, let it dry for a couple of days, Got all the years of critters and grime off and it works great. Rich K8UV
>
> [Non-text portions of this message have been removed]
>

41999. Re: [TS-520_820_530_830] Re: Use of "Canned Air"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 16:13:24 UTC
From: Joe - W7RKN
Topic: 41968 Message: 41999

I have a water separator, air scrubber, (Cartridge filter based to remove any oil in the line) in the line running to my bench. The line that runs to my auto shop, has an oiler in line so I don't run my air tools 'dry'. I have been blowing out computers, servers, radios, etc. for years with no adverse affects. I can see an issue where one runs an 80% relative humidity, but not here in the desert..your figures may be accurate, but the amount of moisture that is 'blown into' my air line from the shop compressor, is so small as to be inconsequential. As per 100 PS, there are such things as pressure restricting nozzles, you know! My shop is not a commercial clean room, so I don't sweat the small stuff. <<GRIN>>

You will probably have an issue with this...If have a radio that comes out of a smoker's house, and is encased with yellow sticky, stinky slime, I strip the tubes, VFO, meters and anything else water can damage, and then put the parts in the dishwasher and run it through a clean cycle. (Of course, I have to do it when the wife isn't watching, or I will have to listen to her give me hell!) Everything comes out like it came from the factory. I then 'bath' the parts in an alcohol bath for 30 minutes, take it out, blow it out and let it sit in the open air for a day or five. Never had a problem. (Got the dishwasher idea from some friends that were radiomen in the Navy aboard ships...that's how they cleaned their gear...great idea.

Joe - W7RKN

----- Original Message -----
From: Terry Wagoner
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 01, 2013 8:49 AM
Subject: [TS-520_820_530_830] Re: Use of "Canned Air"

I am not sure how the input air in Nevada helps the fellow in Canada or me in Michigan?

Actually there is another reason not to use your air compressor to blow off your rig and your boards and that is oil mist. Crankcase oil vapors are carried over into the air. You dont want to blow oily air on your rig.

As far as 10% humidity being a non-problem that is not entirely correct. It has been 40 years since I had Thermo so you may want to check my facts.

Your compressor will suck in 7 cu ft of Nevada air @ 0 psig and compress it to 1 cu ft @ 100 psig and at the same time elevate its temperature considerably. So the water vapor that was in 7 cu ft is now in 1 cu ft. As that air leaves your compressor and enters your tank it reaches its dew point and condenses in the tank.

Rough calcs show that there will be 0.40 lbs/1000 cu ft @ 100 degrees F and 10% RH. Water is approx 15oz/lb. So if your compressor is 10 scfm in about 1.5 hours it will produce about 6 oz of water. Not a lot of water, but how much water vapor is too much to apply to your rig and boards?

So I stand by recommendation it is not good practice to blow out your radio with compressed air from a common home/garage air compressor with no oil separator and no air dryer. Not to mention accidently hitting delicate components with 100 psi.

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73s Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Joe - W7RKN <w7rkn.7@...> wrote:
>
> I really think that it depends on where you live. When you only have a 10%
> relative humidity, high water content in your compressed air is NOT an
> issue.
>
> Joe - W7RKN
> Reno, Nevada
>
>
> ----- Original Message -----
> From: "Terry Wagoner" <wagstw46@...>
> Subject: [TS-520_820_530_830] Re: Use of "Canned Air"
>
>
> > No offense but you are not making "dry" air. Anytime you compress air you
> > have moisture in your tank. That is why they place a brass petcock on the
> > bottom of the tank so you can blow it out. I have nice air compressor in
> > my garage and it has the standard "moisture" separator on the output, but
> > it does not produce Dry or moisture free air. It is just a water trap with
> > a drain petcock on the bottom.
> >
> > I would never use my shop air to blow off my boards or my rig. I suppose
> > you could if you then placed in the oven?
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> > There are couple of ways to dry the air from a compressor so that is is
> > essentially moisture free. A Desiccant unit with replaceable cartridges
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> >
> > This is the reason people are interested in moisture free canned air at
> > the service bench. They are looking for the ease of use. I dont want to
> > run a compressed air line from garage into house and cant justify buying a
> > air dryer. Take a look on You Tube and you will see a variety of home made
> > dryers. Not sure how they measure the output air moisture content to
> > confirm these things are working.
>

[Non-text portions of this message have been removed]

42000. Re: [TS-520_820_530_830] Re: Use of "Canned Air"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 16:14:25 UTC
From: John Davidson
Topic: 41968 Message: 42000

I only used air compressor to blow dust out of heatsink fins on big rack mount power supplies, solid state amps.and .high power transmitter antenna combiners !
The heavy duty commercial stuff could take it.
The receivers, exciters, modems, digital multiplexers, switches and routers got the little dry air spray cans used on them.

I should have elaborated on "Nevada air" being canned and shipped to your home location for a nominal postage and handling charge !

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 1, 2013 11:49 AM
Subject: [TS-520_820_530_830] Re: Use of "Canned Air"

I am not sure how the input air in Nevada helps the fellow in Canada or me in Michigan?

Actually there is another reason not to use your air compressor to blow off your rig and your boards and that is oil mist. Crankcase oil vapors are carried over into the air. You dont want to blow oily air on your rig.

As far as 10% humidity being a non-problem that is not entirely correct. It has been 40 years since I had Thermo so you may want to check my facts.

Your compressor will suck in 7 cu ft of Nevada air @ 0 psig and compress it to 1 cu ft @ 100 psig and at the same time elevate its temperature considerably. So the water vapor that was in 7 cu ft is now in 1 cu ft. As that air leaves your compressor and enters your tank it reaches its dew point and condenses in the tank.

Rough calcs show that there will be 0.40 lbs/1000 cu ft @ 100 degrees F and 10% RH. Water is approx 15oz/lb. So if your compressor is 10 scfm in about 1.5 hours it will produce about 6 oz of water. Not a lot of water, but how much water vapor is too much to apply to your rig and boards?

So I stand by recommendation it is not good practice to blow out your radio with compressed air from a common home/garage air compressor with no oil separator and no air dryer. Not to mention accidently hitting delicate components with 100 psi.

Sorry to bore the Scare Crow in Oz with so much Hot Air. Technical subjects like ham radio can be so boring.

73s Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Joe - W7RKN <w7rkn.7@...> wrote:
>
> I really think that it depends on where you live. When you only have a 10%
> relative humidity, high water content in your compressed air is NOT an
> issue.

>
> Joe - W7RKN
> Reno, Nevada
>
>
> ----- Original Message -----
> From: "Terry Wagoner" <wagstw46@...>
> Subject: [TS-520_820_530_830] Re: Use of "Canned Air"
>
>
> > No offense but you are not making "dry" air. Anytime you compress air you
> > have moisture in your tank. That is why they place a brass petcock on the
> > bottom of the tank so you can blow it out. I have nice air compressor in
> > my garage and it has the standard "moisture" separator on the output, but
> > it does not produce Dry or moisture free air. It is just a water trap with
> > a drain petcock on the bottom.
> >
> > I would never use my shop air to blow off my boards or my rig. I suppose
> > you could if you then placed in the oven?
> >
> > There are couple of ways to dry the air from a compressor so that is is
> > essentially moisture free. A Desiccant unit with replaceable cartridges
> > will run you about $600 from Northern Tool and a Refrigerated Dryer will
> > run $1500 to $2000 depending on CFM.
> >
> > This is the reason people are interested in moisture free canned air at
> > the service bench. They are looking for the ease of use. I dont want to
> > run a compressed air line from garage into house and cant justify buying a
> > air dryer. Take a look on You Tube and you will see a variety of home made
> > dryers. Not sure how they measure the output air moisture content to
> > confirm these things are working.
>

[Non-text portions of this message have been removed]

42001. RE: [TS-520_820_530_830] Re: Use of "Canned Air"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 16:33:31 UTC
From: R Oler
Topic: 41968 Message: 42001

Joe...WKRN

The dishwasher idea is a good one, I've used it for well a long long time.

About two years ago a friend of my wifes mother knew of a guy who had gone silent key and the relatives were simply tossing the "old junk". By the time I got there I had to spend most of the afternoon diving in the specially rented dumpster...and I got everything but wow was some nice gear a mess.

We have on our farm a "egg washer" which is really a old dishwasher which has been modified to allow "no hot water" for washing the 200 or so eggs we get a day! I followed exactly what you did either strip wash and then alcohol...and everything stabilized nicely.

I have started to restore a lot of it and its going good.

BTW on a totally different subject; my company is going to manage some flight operations in both Bangladesh and India and I am going to spend sometime in both countries...so you should be hearing from me as SL2 and VU

Robert WB5MZO

[Non-text portions of this message have been removed]

42002. Re: [TS-520_820_530_830] Re: Use of "Canned Air"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 16:55:59 UTC
From: John Davidson
Topic: 41968 Message: 42002

Just for curiosity,
 I looked in the FCC database for Broadcast stations, there is no W K R N

From: R Oler <orbitjet@...>
To: "TS-520_820_530_830@yahoogroups.com" <ts-520_820_530_830@yahoogroups.com>
Sent: Wednesday, May 1, 2013 12:33 PM
Subject: RE: [TS-520_820_530_830] Re: Use of "Canned Air"

Joe...WKRN

[Non-text portions of this message have been removed]

42003. Re: [TS-520_820_530_830] Re: Use of "Canned Air"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 17:02:44 UTC
From: n6wk@...
Topic: 41968 Message: 42003

Yes there is it is ABC Nashville !!

On 5/1/2013 9:55 AM, John Davidson wrote:
>
>
>
> Just for curiosity,
> I looked in the FCC database for Broadcast stations, there is no W K R N
>
> _____
> From: R Oler <orbitjet@... <mailto:orbitjet%40hotmail.com>>
> To: "TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>"
> <ts-520_820_530_830@yahoogroups.com
> <mailto:ts-520_820_530_830%40yahoogroups.com>>
> Sent: Wednesday, May 1, 2013 12:33 PM
> Subject: RE: [TS-520_820_530_830] Re: Use of "Canned Air"
>
>
>
> Joe...WKRN
>
> [Non-text portions of this message have been removed]
>
>

42004. RE: [TS-520_820_530_830] Re: Use of "Canned Air"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 17:32:42 UTC
From: R Oler
Topic: 41968 Message: 42004

My apologies to Joe I got his call wrong...sorry to many days of test flying.

Joe I am sorry Robert WB5MZO

To: ts-520_820_530_830@yahoogroups.com
From: orbitjet@...
Date: Wed, 1 May 2013 11:33:31 -0500
Subject: RE: [TS-520_820_530_830] Re: Use of "Canned Air"

Joe...WKRN

The dishwasher idea is a good one, I've used it for well a long long time.

About two years ago a friend of my wifes mother knew of a guy who had gone silent key and the relatives were simply tossing the "old junk". By the time I got there I had to spend most of the afternoon diving in the specially rented dumpster...and I got everything but wow was some nice gear a mess.

We have on our farm a "egg washer" which is really a old dishwasher which has been modified to allow "no hot water" for washing the 200 or so eggs we get a day! I followed exactly what you did either strip wash and then alcohol...and everything stabilized nicely.

I have started to restore a lot of it and its going good.

BTW on a totally different subject; my company is going to manage some flight operations in both Bangladesh and India and I am going to spend sometime in both countries...so you should be hearing from me as SL2 and VU

Robert WB5MZO

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

42005. Re: PSK31 and TS-830S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 19:56:32 UTC
From: miltschreiber
Topic: 41947 Message: 42005

Gentlemen: I appreciate all the info you have given me. 73's to all.

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> Milton,
>
> Before you start operating PSK31, I recommend you take some time and
> watch the video at the link below FIRST. I think the video will answer a
> lot of your questions about PSK31.
>
> http://www.howtomakeonline.org/QEMR9MoneyhGBpQj/Introduction-to-PSK31-Receiving.html
>
> If you have any questions about the video come back here and ask, don't
> "assume" anything, you could be making a wrong assumption.
>
> 73
> Mike W5RKL
>
> On 4/29/2013 1:08 PM, miltschreiber wrote:
> >
> > Greetings, I am new to the Yahoo KENWOOD TS-520_820_530_830
> > group. I have a TS-830S. I recently became interested in digital
> > modes, and I've done a bit of searching here, but I'm still pretty
> > confused. I'm receiving PSK31 just fine. I've run an audio cable from
> > from the SP-230 to my sound card. Fldigi does a fine job of decoding.
> >
> > It's on the transmitting side that my confusion starts. Since PSK31
> > has a very narrow bandwidth, how do I tune my 830 to be dead on the
> > receiving frequency so that I can transmit and be heard at the other end?
> >
> > I haven't made any hookup yet from the sound card line out to the mic
> > on the TS-830S yet, but it looks like a gadget like the Signalink can
> > handle this pretty well. Before I spend $, I just wanted to get a
> > handle on how successfully PSK31 can be managed with the TS-830S.
> >
> > Thanks and 73's,
> > KK4MZZ
> > Milton
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

42006. Re: [TS-520_820_530_830] Re: TS-520 vfo to 25mhz

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 21:36:52 UTC
From: Joe
Topic: 41973 Message: 42006

I had heard of a guy that would take a GE MASTRII chassis, put them in a dishwasher (no soap) and they would come out clean and dry (heat cycle ON in the dishwasher).

73, Joe, K1ike

On 5/1/2013 11:50 AM, n6wk@... wrote:
> I have been doing that for years.
> Never have had a problem except when the wife caught me using her oven
> for radios hi hi

42007. Millivac MV-828A RF millivolt meter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-01 23:34:29 UTC
From: k5hfg
Topic: 42007 Message: 42007

What I have is a spare 'G' probe body with a broken plug. I can not find a pin out to rewire it. I have taken my good probe body and removed the plug but it is an older meter and the wire colors are not the same. Does anyone have the info? My wiring diagram does not show the colors on the plug and it is all pcb wired and I can not trace it.
I have one spare meter and the G probe body without the diode cartridge that I have no use for but would like to fix the plug before offering it to anyone who could use it. I do not wish to sell it but would give it to a needy ham, who may be able to use it, for just the mailing cost. You would need to find or make a diode cartridge for it. I would like to have the pin info for my notes even if you take the meter and probe as is. The 828A works fine for me although I do not know of anyone else who uses one. They can still be serviced by several places found on the internet. I would like to have a HP 410C but can not justify the cost since I have this 828 and a Fluke DMM. The Fluke is nice but the digital is a pain. So, is anyone familiar with the millivac?

Don K5HFG

42008. Re: Millivac MV-828A RF millivolt meter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-02 00:20:34 UTC
From: Terry Wagoner
Topic: 42007 Message: 42008

You cannot substitute the HP-410C for your Millivac 828. I have a 410C and would not be without it but not for measuring RF voltages. For that I use my Boonton 92E or O-scope.

The HP-410C ac probes lowest rf (ac)range is .5v rms or 500 mv. It just doesnt go low enough. You cannot measure Hybrid TIF signal levels with it very accurately as it puts the readings very far down on left hand end of the meter scale. Your Millivac is much more sensitive and has a low range of 1 mv. It is better to have a 30 mv and/or 100 mv range to measure TIF signals which ranges from approx 15 mv to 40 mv depending on model of Hybrid.

I very seldom use the AC probe with my 410C. Its 100meg plus input impedance on DC voltage ranges allows you to directly measure AGC and ALC bus voltage. This is where it shines.

So I recommend you keep a functional and calibrated Millivac 828 and acquire a HP-410C if you are going to do much service work. If I had to keep only one it would be the Millivac or change to Boonton which seem to be plentiful.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "k5hfg" <dlbowders@...> wrote:
>
> What I have is a spare 'G' probe body with a broken plug. I can not find a pin out to rewire it. I have taken my good probe body and removed the plug but it is an older meter and the wire colors are not the same. Does anyone have the info? My wiring diagram does not show the colors on the plug and it is all pcb wired and I can not trace it.
> I have one spare meter and the G probe body without the diode cartridge that I have no use for but would like to fix the plug before offering it to anyone who could use it. I do not wish to sell it but would give it to a needy ham, who may be able to use it, for just the mailing cost. You would need to find or make a diode cartridge for it. I would like to have the pin info for my notes even if you take the meter and probe as is. The 828A works fine for me although I do not know of anyone else who uses one. They can still be serviced by several places found on the internet. I would like to have a HP 410C but can not justify the cost since I have this 828 and a Fluke DMM. The Fluke is nice but the digital is a pain. So, is anyone familiar with the millivac?
>
> Don K5HFG
>

42009. Re: Millivac MV-828A RF millivolt meter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-02 00:32:10 UTC
From: Terry Wagoner
Topic: 42007 Message: 42009

Here is the military manual. It has the schematic for the Diode cartridge but no wire colors. Looks like you could ring thru it?

http://www.liberatedmanuals.com/TM-11-6625-524-14-4.pdf

Terry K9TW

>
>

42010. Re: Millivac MV-828A RF millivolt meter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-02 01:31:11 UTC
From: k5hfg
Topic: 42007 Message: 42010

Thanks Terry, I have the same manual but the schematic is so small I could not make much out of it. This copy will print out fairly larger than the one I have. I have looked for the schematic but could not find a better until now. I said I could not justify the cost of a good 410C since I have the Millivac and you have confirmed it. I also do not like good equipment lying around broke even tho I do not need it. I must fix this probe and I will take a look at the schematic over the weekend. I do like the millivac and I got a fairly good deal on the new one. The fellow said it did not work so he took 60 bucks for it. It did not work so I put my probe on it and viola. I took the old probe apart and the wires were twisted off. So, I gotta fix it. Just thought someone in the group could use it. Thanks for your kind attention and 73.

Don K5HFG

42011. Re: Millivac MV-828A RF millivolt meter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-02 10:55:38 UTC
From: Terry Wagoner
Topic: 42007 Message: 42011

Yes $60 was a steal. I would like to have it but really dont need it as I have nice 92E so lets get it to someone who understands why they need it and will really use it.

Occasionally on ebay you find a Boonton probe going reasonably priced. Most likely could remove end connector and even hard wire to the Millivac if had too. I suspect diodes in Millivac, Boonton, and Ballantine are all very similar. They all use pair of series diodes in shunt and dc output feeds a chopper.

Here is schematic of the Boonton probe.

http://www.repeater-builder.com/test-equipment/boonton/boonton92bd-probe-info.pdf

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "k5hfg" <dlbowders@...> wrote:
>
>
>
> Thanks Terry, I have the same manual but the schematic is so small I could not make much out of it. This copy will print out fairly larger than the one I have. I have looked for the schematic but could not find a better until now. I said I could not justify the cost of a good 410C since I have the Millivac and you have confirmed it. I also do not like good equipment lying around broke even tho I do not need it. I must fix this probe and I will take a look at the schematic over the weekend. I do like the millivac and I got a fairly good deal on the new one. The fellow said it did not work so he took 60 bucks for it. It did not work so I put my probe on it and viola. I took the old probe apart and the wires were twisted off. So, I gotta fix it. Just thought someone in the group could use it. Thanks for your kind attention and 73.
>
> Don K5HFG
>

42012. Re: Millivac MV-828A RF millivolt meter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-02 11:09:59 UTC
From: Terry Wagoner
Topic: 42007 Message: 42012

I forgot this site. Very good info on the detector diodes and probe design and diode subs.

http://members.shaw.ca/novotill/RfProbeSensorMvUw/index.htm

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Yes $60 was a steal. I would like to have it but really dont need it as I have nice 92E so lets get it to someone who understands why they need it and will really use it.
>
> Occasionally on ebay you find a Boonton probe going reasonably priced. Most likely could remove end connector and even hard wire to the Millivac if had too. I suspect diodes in Millivac, Boonton, and Ballantine are all very similar. They all use pair of series diodes in shunt and dc output feeds a chopper.
>
> Here is schematic of the Boonton probe.
>
> http://www.repeater-builder.com/test-equipment/boonton/boonton92bd-probe-info.pdf
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "k5hfg" <dlbowders@> wrote:
> >
> >
> >
> > Thanks Terry, I have the same manual but the schematic is so small I could not make much out of it. This copy will print out fairly larger than the one I have. I have looked for the schematic but could not find a better until now. I said I could not justify the cost of a good 410C since I have the Millivac and you have confirmed it. I also do not like good equipment lying around broke even tho I do not need it. I must fix this probe and I will take a look at the schematic over the weekend. I do like the millivac and I got a fairly good deal on the new one. The fellow said it did not work so he took 60 bucks for it. It did not work so I put my probe on it and viola. I took the old probe apart and the wires were twisted off. So, I gotta fix it. Just thought someone in the group could use it. Thanks for your kind attention and 73.
> >
> > Don K5HFG
> >
>

42013. Re: Millivac MV-828A RF millivolt meter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-02 11:38:58 UTC
From: Terry Wagoner
Topic: 42007 Message: 42013

There is a Millivac RF Probe listed on Ebay now with no bids and a Buy It Now price of $40.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> I forgot this site. Very good info on the detector diodes and probe design and diode subs.
>
> http://members.shaw.ca/novotill/RfProbeSensorMvUw/index.htm
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Yes $60 was a steal. I would like to have it but really dont need it as I have nice 92E so lets get it to someone who understands why they need it and will really use it.
> >
> > Occasionally on ebay you find a Boonton probe going reasonably priced. Most likely could remove end connector and even hard wire to the Millivac if had too. I suspect diodes in Millivac, Boonton, and Ballantine are all very similar. They all use pair of series diodes in shunt and dc output feeds a chopper.
> >
> > Here is schematic of the Boonton probe.
> >
> > http://www.repeater-builder.com/test-equipment/boonton/boonton92bd-probe-info.pdf
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "k5hfg" <dlbowders@> wrote:
> > >
> > >
> > >
> > > Thanks Terry, I have the same manual but the schematic is so small I could not make much out of it. This copy will print out fairly larger than the one I have. I have looked for the schematic but could not find a better until now. I said I could not justify the cost of a good 410C since I have the Millivac and you have confirmed it. I also do not like good equipment lying around broke even tho I do not need it. I must fix this probe and I will take a look at the schematic over the weekend. I do like the millivac and I got a fairly good deal on the new one. The fellow said it did not work so he took 60 bucks for it. It did not work so I put my probe on it and viola. I took the old probe apart and the wires were twisted off. So, I gotta fix it. Just thought someone in the group could use it. Thanks for your kind attention and 73.
> > >
> > > Don K5HFG
> > >
> >

>

42014. Re: Millivac MV-828A RF millivolt meter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-02 11:59:33 UTC
From: k5hfg
Topic: 42007 Message: 42014

Thanks Terry, I got it. Must have been put up late yesterday. It was not there when I looked. At work right now and can not talk. Will get back to this later this afternoon. I checked the schematic out last nite but did not get it done. I can not tell where the wires go without looking inside the probe itself. Not as good at it as you. I will get it done tho.
73, Don

42015. OMRON MH4P 12VDC/300 ohm

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-02 18:29:14 UTC
From: Behiels JeanPierre
Topic: 42015 Message: 42015

Hi members;

I look for the pin connection datasheet of this above relay from a old Kenwood TS515
I have some contact failures on one of two of the same type of relays in this transceiver.
After measure both relays,they give the same failures on the same contacts !!!
Could not be possible that both have same failures on same contacts ?
But in extreamly case,it always could be possible (two broken relays at same time) ?

Thanks es regards Jean ON4AEF.

[Non-text portions of this message have been removed]

42016. Re: OMRON MH4P 12VDC/300 ohm

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-02 21:36:17 UTC
From: Terry Wagoner
Topic: 42015 Message: 42016

If you do not have the owners manual with Schematic can obtain it here on WB4HFN Rons website. I do not have a MH4P data sheet. The schematic will show you what functions the relay contacts perform. One relay is the Aux relay and it switches the AGC, the meter, RX/TX bias etc. The other relay is the Antenna T/R relay. After literally thousands of operations over all these years not unusual to have dirty or high resistance contacts.

Have you tried cleaning by pulling paper wetted with contact cleaner thru the contacts with light pressure applied to the armature? If this is not successful then go ahead and lightly burnish the contacts. You have nothing to lose at this point.

Substitute relays are available from Hybridrestore and Kens Electronics in Kalamazoo Michigan. These substitutes are NOS relays.

http://afu-df3iq.de/Hersteller/Kenwood/TR-515S_operating%20manual.pdf

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Behiels JeanPierre" <on4aef@...> wrote:
>
> Hi members;
>
>
> I look for the pin connection datasheet of this above relay from a old Kenwood TS515
> I have some contact failures on one of two of the same type of relays in this transceiver.
> After measure both relays,they give the same failures on the same contacts !!!
> Could not be possible that both have same failures on same contacts ?
> But in extreamly case,it always could be possible (two broken relays at same time) ?
>
>
> Thanks es regards Jean ON4AEF.
>
>
> [Non-text portions of this message have been removed]
>

42017. Re: OMRON MH4P 12VDC/300 ohm

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-03 15:40:54 UTC
From: kb9wwq
Topic: 42015 Message: 42017

Jean, I have seen failures with these relays at the junctions of the base pins with the reeds/armatures. Check the continuity of the base to each corresponding reed. GL
+jay, kb9wwq

--- In TS-520_820_530_830@...m, "Behiels JeanPierre" <on4aef@...> wrote:
>
> Hi members;
>
>
> I look for the pin connection datasheet of this above relay from a old Kenwood TS515
> I have some contact failures on one of two of the same type of relays in this transceiver.
> After measure both relays,they give the same failures on the same contacts !!!
> Could not be possible that both have same failures on same contacts ?
> But in extreamly case,it always could be possible (two broken relays at same time) ?
>
>
> Thanks es regards Jean ON4AEF.
>
>
> [Non-text portions of this message have been removed]
>

42018. Re: Re; TS830 Frequency Stability

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-03 19:04:48 UTC
From: N4TIS
Topic: 41927 Message: 42018

What did you do about the drifting.

--- In TS-520_820_530_830@yahoogroups.com, Mark Gilger <mgilger@...> wrote:
>
> Adding a VFO stabilizer is what's required. There
> are two main units available. One is from Cumbria
> Designs: http://www.cumbriadesigns.co.uk/ The
> second is from K4DPK http://home.comcast.net/~k4dpk/
>
> I have both units and they do as advertised.
>
> Regards,
> Mark
>
> At 10:17 AM 4/27/2013, hpdd709 wrote:
> >
> >
> >
> >I have refurbished two TS830s and love both.
> >Have received many fine compliments on audio
> >quality and received signallevel. I don't have
> >an external VFO to minimize the VFO drift. Both
> >my radios drift 60 to 100 hz, even after a 45
> >minute warm up. But I must say, after the 45
> >minute warm up, the drift is at a minimum.
> >
> >I was told that a modification can be done to
> >the TS830 VFO to help eliminate the drift and
> >bring the stability to the degree of the newer
> >digital VFOs of the radios on the market today.
> >
> >Does anyone know if there is any information out there?
> >
> >Tnx,
> >
> >Enjoy the hobby as I do.
> >
> >73,
> >
> >Mike/K3MG
> >
> >
>
>
>

> [Non-text portions of this message have been removed]
>

42019. Re: [TS-520_820_530_830] Re: Re; TS830 Frequency Stability

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-03 23:31:34 UTC
From: Mark Gilger
Topic: 41927 Message: 42019

Installed the VFO Stabilizer.

Mark

At 03:04 PM 5/3/2013, N4TIS wrote:
>
>
>What did you do about the drifting.
>
>--- In
><mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com,
>Mark Gilger <mgilger@...> wrote:
> >
> > Adding a VFO stabilizer is what's required. There
> > are two main units available. One is from Cumbria
> > Designs:
> <http://www.cumbriadesigns.co.uk/>http://www.cumbriadesigns.co.uk/ The
> > second is from K4DPK
> <http://home.comcast.net/~k4dpk/>http://home.comcast.net/~k4dpk/
> >
> > I have both units and they do as advertised.
> >
> > Regards,
> > Mark
> >
> > At 10:17 AM 4/27/2013, hpdd709 wrote:
> > >
> > >
> > >
> > >I have refurbished two TS830s and love both.
> > >Have received many fine compliments on audio
> > >quality and received signallevel. I don't have
> > >an external VFO to minimize the VFO drift. Both
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> > >minute warm up, the drift is at a minimum.
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> > >I was told that a modification can be done to
> > >the TS830 VFO to help eliminate the drift and
> > >bring the stability to the degree of the newer
> > >digital VFOs of the radios on the market today.
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> > >Does anyone know if there is any information out there?
> > >
> > >Tnx,

> > >
> > >Enjoy the hobby as I do.
> > >
> > >73,
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> > >Mike/K3MG
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> >
> > [Non-text portions of this message have been removed]
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[Non-text portions of this message have been removed]

42020. Re: [TS-520_820_530_830] Re: TS-820S "Send" button question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-04 15:19:32 UTC
From: Mark L. Hammond
Topic: 41825 Message: 42020

Okay, now for the happily ever after ending hybrid story...

I bought a 5-pack of new button covers from John, KF7QGU. Having struggled with re-insertion while swapping the originals around, it was clear to me that taking the faceplate off was worth the small effort as a means of not damaging the new ones.

I pulled off the originals, and plugged on the new replacements. Each went on with a very nice feeling "click." Perfect fit, perfect feel!

The faceplate went back on without a hint of clearance issues, and the new switch covers are awesome. Now the switches match the excellent condition of the rest of the radio. No fiddly-loose SEND button anymore.

Am hoping to check-in to the Hybrid net this afternoon (we'll have to see-it's prom night so who knows how the afternoon will play out...heh).

Thanks John KF7QGU for providing an excellent new source for these parts!

73,

Mark N8MH

At 08:38 PM 4/22/2013 -0700, you wrote:
>
>
>Mark,Â Â glad I could help
>
>Â
>73Â Joe
>WB7UQU
>
>_____
>From: Mark L. Hammond <<mailto:marklhammond%40gmail.com>marklhammond@gmail.com>
>To: <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>Sent: Monday, April 22, 2013 6:03 PM
>Subject: Re: [TS-520_820_530_830] Re: TS-820S "Send" button question
>
>
>Â
>Thanks Bob and Joe.
>
>Joe, confirming that I could pull it off was a great tip. I was SOOo tempted, but resisted until I asked here :) I hated to break something.
>
>I did pull the paddle off, and it has only 1 of the long tabs. I actually swapped with the NB paddle, since the SEND button gets used a whole lot more. They come off easier than they go back on (with front panel in place), that's for sure!

>
>Thanks, Bob, for stocking such parts. I'll contact you off list sometime soon and order a few...
>
>73,
>
>Mark N8MH
>
>At 12:11 AM 4/23/2013 +0000, you wrote:
>>
>>
>>The paddle has the 2 long fingers but seldom break...
>>The paddle also has two small keeper tabs inside that tend to break off or crack, thus a loose paddle...
>>If you can remove with padded pliers then gently touch the small keeper tabs, they should be stiff... If one side moves then put a dab of JB-Weld Quick from the small tab to the button body...
>>I sell the paddles for $6.00 each plus my cost to mail ($2.00)...
>>Hope this helps...
>>Bob
>>********
>>
>>--- In <mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>>>
>>> Mark,
>>>
>>> Ã☐ Welcome to another common problem of the KW hybrids. The "paddles" have two long fingers on them that go into the front of the switch.
>>> When one gets broken, for what ever reason...the "paddle" will do just what you describe. There is a guy who is selling replacements on ebay.
>>> They are not exact copies of the originals...but very close and very functional replacements., or Bob Mankser...ke5ftf..may have some Ã☐ It is possible to remove the "paddle" from the front by grasping with padded pliers and pulling straight out. I doubt the the switch is "loose" inside...but by removing the "paddle" from the front...you can check the switch without going through the whole front panel removal
>>>
>>>
>>> Ã☐
>>> 73Ã☐ Joe
>>> WB7UQU
>>>
>>>
>>>
>>> _____
>>> From: Mark L. Hammond <marklhammond@...>
>>> To: <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>>> Sent: Monday, April 22, 2013 1:04 PM
>>> Subject: [TS-520_820_530_830] TS-820S "Send" button question
>>>
>>>
>>>

>>> Ã□
>>> Hello all,
>>>
>>> A few weeks ago I bought an amazingly clean TS-820S. The knobs and front
>>> panel were so clean I didn't even have to clean them, and the inside was
>>> equally clean. Score!
>>>
>>> Now, the non-technical question of the day :)
>>>
>>> The only thing I can find wrong with it is the "Send" button is "loose."
>>> It's like the plastic toggle cover is no longer seating on the actual
>>> switch--but I can't say for sure whether it's just the plastic
>>> toggle/cover, or if the actual switch underneath is actually bad.
>>>
>>> I can press it "in" and it works better, and wiggles less, but it's clearly
>>> not right. The switch functions, which leads me to believe it's just the
>>> press on plastic cover...
>>>
>>> Does anybody have any "tricks" in figuring out if I need to replace just
>>> the cover or the cover+switch? Of course, removing the front panel is the
>>> obvious way--but I'd like to have the actual replacement part(s) on hand
>>> before taking it apart...
>>>
>>> Neither part is what I could consider to be "cheap" and I don't have any
>>> spare covers or switches!
>>>
>>> Thanks,
>>>
>>> --
>>> Mark L. Hammond [N8MH]
>>>
>>> [Non-text portions of this message have been removed]
>>>
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>>> [Non-text portions of this message have been removed]
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42021. Re: TS-820S "Send" button question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-04 15:30:36 UTC
From: Terry Wagoner
Topic: 41825 Message: 42021

I agree. Recently bought a set from John and installed on a TS-520. A little effort but allows you to clean all the knobs and front panel. Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Mark L. Hammond" <marklhammond@...> wrote:
>
> Okay, now for the happily ever after ending hybrid story...
>
> I bought a 5-pack of new button covers from John, KF7QGU. Having struggled with re-insertion while swapping the originals around, it was clear to me that taking the faceplate off was worth the small effort as a means of not damaging the new ones.
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> I pulled off the originals, and plugged on the new replacements. Each went on with a very nice feeling "click." Perfect fit, perfect feel!
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> The faceplate went back on without a hint of clearance issues, and the new switch covers are awesome. Now the switches match the excellent condition of the rest of the radio. No fiddly-loose SEND button anymore.
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> Am hoping to check-in to the Hybrid net this afternoon (we'll have to see-it's prom night so who knows how the afternoon will play out...heh).
>
> Thanks John KF7QGU for providing an excellent new source for these parts!
>
> 73,
>
> Mark N8MH
>
>
>
>
> At 08:38 PM 4/22/2013 -0700, you wrote:
> >
> >
> >Mark,Â Â glad I could help
> >
> >Â
> >73Â Joe
> >WB7UQU
> >
> >_____
> >From: Mark L. Hammond <<mailto:marklhammond%40gmail.com>marklhammond@...>
> >To: <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
> >Sent: Monday, April 22, 2013 6:03 PM
> >Subject: Re: [TS-520_820_530_830] Re: TS-820S "Send" button question
> >

> >
> >Â
> >Thanks Bob and Joe.
> >
> >Joe, confirming that I could pull it off was a great tip. I was SOOo tempted, but resisted until I asked here :) I hated to break something.
> >
> >I did pull the paddle off, and it has only 1 of the long tabs. I actually swapped with the NB paddle, since the SEND button gets used a whole lot more. They come off easier than they go back on (with front panel in place), that's for sure!
> >
> >Thanks, Bob, for stocking such parts. I'll contact you off list sometime soon and order a few...
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> >73,
> >
> >Mark N8MH
> >
> >At 12:11 AM 4/23/2013 +0000, you wrote:
> >>
> >>
> >>The paddle has the 2 long fingers but seldom break...
> >>The paddle also has two small keeper tabs inside that tend to break off or crack, thus a loose paddle...
> >>If you can remove with padded pliers then gently touch the small keeper tabs, they should be stiff... If one side moves then put a dab of JB-Weld Quick from the small tab to the button body...
> >>I sell the paddles for $6.00 each plus my cost to mail ($2.00)...
> >>Hope this helps...
> >>Bob
> >>********
> >>
> >>--- In <mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%40yahoogroups.com> TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@> wrote:
> >>>
> >>> Mark,
> >>>
> >>> Ã☐ Welcome to another common problem of the KW hybrids. The "paddles" have two long fingers on them that go into the front of the switch.
> >>> When one gets broken, for what ever reason...the "paddle" will do just what you describe. There is a guy who is selling replacements on ebay.
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> >>>
> >>>
> >>> Ã☐
> >>> 73Ã☐ Joe
> >>> WB7UQU
> >>>
> >>>

> >>>
> >>> _____
> >>> From: Mark L. Hammond <marklhammond@>
> >>> To: <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
> >>> Sent: Monday, April 22, 2013 1:04 PM
> >>> Subject: [TS-520_820_530_830] TS-820S "Send" button question
> >>>
> >>>
> >>>
> >>> Ã□
> >>> Hello all,
> >>>
> >>> A few weeks ago I bought an amazingly clean TS-820S. The knobs and front
> >>> panel were so clean I didn't even have to clean them, and the inside was
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> >>>
> >>> Now, the non-technical question of the day :)
> >>>
> >>> The only thing I can find wrong with it is the "Send" button is "loose."
> >>> It's like the plastic toggle cover is no longer seating on the actual
> >>> switch--but I can't say for sure whether it's just the plastic
> >>> toggle/cover, or if the actual switch underneath is actually bad.
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> >>> I can press it "in" and it works better, and wiggles less, but it's clearly
> >>> not right. The switch functions, which leads me to believe it's just the
> >>> press on plastic cover...
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> >>> Does anybody have any "tricks" in figuring out if I need to replace just
> >>> the cover or the cover+switch? Of course, removing the front panel is the
> >>> obvious way--but I'd like to have the actual replacement part(s) on hand
> >>> before taking it apart...
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> >>> Neither part is what I could consider to be "cheap" and I don't have any
> >>> spare covers or switches!
> >>>
> >>> Thanks,
> >>>
> >>> --
> >>> Mark L. Hammond [N8MH]
> >>>
> >>> [Non-text portions of this message have been removed]
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42022. Re: [TS-520_820_530_830] Re: TS-820S "Send" button question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-04 18:22:41 UTC
From: John Krause
Topic: 41825 Message: 42022

I appreciate Mark's good comments. I also am using these replacement handles on my own two rigs and they look really sharp.

As some of you may know, I've had these on eBay and I think everyone familiar with eBay knows that there additional fees for ebay sales and use of Paypal.

I'd be happy to sell direct and not have to deal or charge back for Ebay/Paypal's piece of the action. I've gone even a bit lower on the pricing just to be price competitive.

Contact me if anyone is interested, though I think Mark got a set of five black, I can mix black and gray to match the original factory color configuration as needed.

Best wishes and '73's

John / KF7QGU

[Non-text portions of this message have been removed]

42023. OT - TS-930S Info

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-04 18:54:56 UTC
From: WalterT
Topic: 42015 Message: 42023

Know this is OT but maybe someone here can assist us.
your group was reccommended to us for a problem we're having.
Our ARC is helping with the estate of a SK member and we're stumped. There is a Kenwood TS-930SAT in it. It has a filter marked (either) 2H8 or 2H9 on the side (chrome, about 1.5" x 1/2" in size) (hard to tell the marking using a flashlight against the shiny metal. No other marking can be seen.
By any chance, could anyone tell us what the freq of it might be. We know it will be either for CW or SSB.

Tks in advance

73

Walt (N4GL)

42024. KENWOOD HYBRID USER NET (May 5th, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-05 19:09:56 UTC
From: mvgilger
Topic: 42024 Message: 42024

The Saturday's net on 40 meter we had 12 stations checking with good band conditions. Out of the stations checking in, there was:

1 running TS-520(x)
1 running TS-530(x)
5 running TS-820(x)
1 running TS-830S

I was running my TS-940s. The rest were running non hybrids of one model or another.

The Sunday's net on 20 meter we had 16 stations checking in under very poor band conditions. We had 4 new check-in, W5AMU, WA7ITZ, KL7IBY and WB7VNL.

Out of those, there was:

3 running TS-520(x)
0 running TS-530(x)
2 running TS-820(x)
4 running TS-830S

I was running my TS-940s. The rest were running non hybrids of one model or another.

We have been having several people checking in regularly with their TS-430, TS-440, and TS-940's, which of course is not a hybrid, although over 30+ years old. Everyone is welcome as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a net control station, please send me an email. Currently it's just myself, WB2KNR and WB0SGA. I would like to get several more. If we do, we can alternate so everyone might be on a 3-4 week rotation. It's a lot of fun and a good way to make sure you station is optimized.

For anyone that has not heard, we have a new web site that WB4HFN is hosting. He currently has a very nice site for Drake, Collins and Heathkit and now Kenwood Hybrids. Good quality manuals plus sale flyers and brochures will be found here, along with user supplied information for all Hybrids.

His URL is:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754 check-ins, Sunday total 563 check-ins

November 2012, Saturday's, net total = 47, Sundays total = 20
December 2012, Saturday's, net total = 74, Sunday's total = 70
January 2013, Saturday's, net total = 93, Sunday's total = 87
February 2013, Saturday's net total = 103, Sundays total = 87
March 2013, Saturday's, net total = 112, Sunday's total =39

April 2013, Saturday's net total = 52, Sunday's total = 29
May 2013, Saturday's net total = 12, Sunday's total = 16 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

42025. Guidance on making a test probe for IM-18 VTVM?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-06 17:44:38 UTC
From: paul.nussbaum
Topic: 42025 Message: 42025

The IM-18 has arrived, but no test probe.

Looking around the internet I see some advising to use a pen body, others saying that won't stand high voltage, some saying use musical instrument cable, others warning the impedance will be incorrect unless it is RG58, some advising installing the megohm resistor inside the IM-18 case (!), others reminding that the resistor is properly positioned in the probe body so the lead does not load... apart from some remarks by Terry Wagoner here lately, I have not found instructions I trust.

I know from past experience that building something goes much better when I have experience with what I'm building. I have not used a VTVM or this kind of probe before so I don't know much of what to look out for in the build process.
Plug, cable, resistor, switch, body... the IM-18 document illustration of the exploded probe assembly is not clear to me. Pictures in other places show a separate lead with the alligator clip, but the exploded view does not indicate that... also not clear why the resistor leads make a "U" shaped bend in the body.

If someone knows a proper method on the internet that they could link, or if they would be so kind as to present a method here, or even if someone has a spare and would be happy to part with it, I would be very appreciative.

Thanks,
Paul
AD5FT

42026. Re: [TS-520_820_530_830] Guidance on making a test probe for IM-18 VTVM?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-06 18:28:11 UTC
From: Mike
Topic: 42025 Message: 42026

Paul,

You can use small diameter PVC pipe with end caps available at your local hardware store, a screw with 2 nuts installed through and held securely in one end cap, then file the tip into a point, then use coax cable connect the tip to the VTVM 1/4" plug that plugs into the VTVM socket. The ground can be made from coax cable braid and an alligator clip. The 1Meg resistor in series with the probe's tip is necessary for measuring DC voltage. The switch simply bypasses the 1 meg resistor when measuring AC voltage (resistor is not required when measuring AC voltage). I do NOT recommend installing the 1 meg resistor inside the IM-18 as you may have read on the web. A SPDT slide switch can be used as the switch, simply follow the schematic wiring diagram that shows how the switch and resistor are connected to the probe cable's center conductor.

Before you attempt to use your VTVM, I highly recommend you spend some time reading theIM-18's manual's section on page 26 titled "Using Your VTVM". This section will help you understand how to use the IM-18, how to read the meter scales, and how to take simple learning measurement of resistance and voltage (AC and DC). Using a VTVM is not difficult.

73
Mike W5RKL

On 5/6/2013 12:44 PM, paul.nussbaum wrote:
>
> The IM-18 has arrived, but no test probe.
>
> Looking around the internet I see some advising to use a pen body,
> others saying that won't stand high voltage, some saying use musical
> instrument cable, others warning the impedance will be incorrect
> unless it is RG58, some advising installing the megohm resistor inside
> the IM-18 case (!), others reminding that the resistor is properly
> positioned in the probe body so the lead does not load... apart from
> some remarks by Terry Wagoner here lately, I have not found
> instructions I trust.
>
> I know from past experience that building something goes much better
> when I have experience with what I'm building. I have not used a VTVM
> or this kind of probe before so I don't know much of what to look out
> for in the build process.
> Plug, cable, resistor, switch, body... the IM-18 document illustration
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> places show a separate lead with the alligator clip, but the exploded

> view does not indicate that... also not clear why the resistor leads
> make a "U" shaped bend in the body.
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> or if they would be so kind as to present a method here, or even if
> someone has a spare and would be happy to part with it, I would be
> very appreciative.
>
> Thanks,
> Paul
> AD5FT
>
>

[Non-text portions of this message have been removed]

42027. Adding basic CAT frequency functionality to the 820?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-06 18:43:03 UTC
From: Jeff Blaine
Topic: 42027 Message: 42027

Has anyone seen a basic CAT interface function added to the 820s?

When I?m logging QSO, plugging in the frequency to the log program is a (small) hassle and I thought it would be cool if my logger could read the 820s frequency same as it does with my modern rigs.

I don?t think this would be very difficult if a guy uses a small uP and serial I/O. But I wondered given the popularity of the rig if anyone had done this in the past already?

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

[Non-text portions of this message have been removed]

42028. Re: Guidance on making a test probe for IM-18 VTVM?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-06 18:47:19 UTC
From: k5hfg
Topic: 42025 Message: 42028

Paul,
I have some spare probes. Do you need RF or std. ac/dc probe or both? I can send some pictures of what I have if you are interested. They are original Heathkit. Send me a reply off group to dlbowders at nepower dot com. 73, Don K5HFG

42029. AGC on 520 not working

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-06 19:22:35 UTC
From: Lars Kvant
Topic: 42029 Message: 42029

Hi everybody
Have a question, a friend of mine just got ahold of a 520, he asked me to look over it, since I too have a 520..
Now, when AGC switch is turned on, fast or slow, nothing happens...
All other switches works fine, and all voltages on AVR board are correct.
Any ideas?
Rig is in good condx, only other thing, it's missing the cover on PA cage though...
Thanks in advance

Lars KB3WBT

42030. Re: [TS-520_820_530_830] Adding basic CAT frequency functionality to the 820?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-06 19:23:27 UTC
From: Mike
Topic: 42027 Message: 42030

Jeff,

This question has been asked numerous times over the years and the answer is "No".

You say it wouldn't be very difficult. I don't think you see the whole picture here Jeff. It's not as simple as you think it is! Circuits will have to be designed, built and thoroughly tested that sample power output, S meter, the operating frequency, band and any other feature you would like. Additional circuits have to be designed that communicate this information to and from the microprocessor, including the serial interface (USB or older RS-232). Firmware code has to be written and debugged that controls all functions including being able to understand any/all commands sent to the microprocessor from the computer's CAT software. This is NOT an easy and simple project to tackle!

73
Mike W5RKL

On 5/6/2013 1:43 PM, Jeff Blaine wrote:
> Has anyone seen a basic CAT interface function added to the 820s?
>
> When I'm logging QSO, plugging in the frequency to the log program is a (small) hassle and I thought it would be cool if my logger could read the 820s frequency same as it does with my modern rigs.
>
> I don't think this would be very difficult if a guy uses a small uP and serial I/O. But I wondered given the popularity of the rig if anyone had done this in the past already?
>
> 73/jeff/ac0c
> www.ac0c.com
> alpha-charlie-zero-charlie
>
>
>
> [Non-text portions of this message have been removed]
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> ------------------------------------
>
> Yahoo! Groups Links
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>

>

[Non-text portions of this message have been removed]

42031. Re: [TS-520_820_530_830] AGC on 520 not working

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-06 19:31:00 UTC
From: Mike
Topic: 42029 Message: 42031

Lars,

What did you expect to happen when the AGC switch is set to FAST or SLOW?

73
Mike W5RKL

On 5/6/2013 2:22 PM, Lars Kvant wrote:
>
> Hi everybody
> Have a question, a friend of mine just got ahold of a 520, he asked me
> to look over it, since I too have a 520..
> Now, when AGC switch is turned on, fast or slow, nothing happens...
> All other switches works fine, and all voltages on AVR board are correct.
> Any ideas?
> Rig is in good condx, only other thing, it's missing the cover on PA
> cage though...
> Thanks in advance
>
> Lars KB3WBT
>
>

[Non-text portions of this message have been removed]

42032. RE: [TS-520_820_530_830] AGC on 520 not working

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-06 20:12:45 UTC
From: Lars Kvant
Topic: 42029 Message: 42032

Hello MikeSame thing, as happens on my own 520, the s-meter would calm downand sound be "regulated" smooth... in slow position, right? ☐But, it looks like if agc is off, even in fast and slow Lars
To: TS-520_820_530_830@yahoogroups.com
From: w5rkl@...
Date: Mon, 6 May 2013 14:31:00 -0500
Subject: Re: [TS-520_820_530_830] AGC on 520 not working

Lars,

What did you expect to happen when the AGC switch is set to FAST or SLOW?

73

Mike W5RKL

On 5/6/2013 2:22 PM, Lars Kvant wrote:

>

> Hi everybody

> Have a question, a friend of mine just got ahold of a 520, he asked me

> to look over it, since I too have a 520..

> Now, when AGC switch is turned on, fast or slow, nothing happens...

> All other switches works fine, and all voltages on AVR board are correct.

> Any ideas?

> Rig is in good condx, only other thing, it's missing the cover on PA

> cage though...

> Thanks in advance

>

> Lars KB3WBT

>

>

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[Non-text portions of this message have been removed]

42033. Re: [TS-520_820_530_830] Adding basic CAT frequency functionality to the 820?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-06 20:59:59 UTC
From: Jeff Blaine
Topic: 42027 Message: 42033

Mike,

Thanks for the comment. You are right, but that depends very greatly on how deluxe a guy wants to make it.

Let me give you a super simple example. You can read the frequency on transmit with the uP - and respond to a single cat interrogation providing the frequency and any dummy data to make the logger query not error out. Would not even need to get inside the rig to do that.

In my case, I only use the rig for CW so I could hard code the mode. But the next step from that would be to dig the mode out somehow. If you are willing to say that the modes are limited to SSB and CW, then I think you could probably guess that from reading a signal strength over time and assuming that with a high duty cycle, it’s CW, and with a low one, it’s SSB.

For me, that info (the TX freq) and a reply on the mode would be enough.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: Mike
Sent: Monday, May 06, 2013 2:23 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Adding basic CAT frequency functionality to the 820?

Jeff,

This question has been asked numerous times over the years and the
answer is "No".

You say it wouldn't be very difficult. I don't think you see the whole
picture here Jeff. It's not as simple as you think it is! Circuits will
have to be designed, built and thoroughly tested that sample power
output, S meter, the operating frequency, band and any other feature you
would like. Additional circuits have to be designed that communicate
this information to and from the microprocessor, including the serial
interface (USB or older RS-232). Firmware code has to be written and
debugged that controls all functions including being able to understand
any/all commands sent to the microprocessor from the computer's CAT
software. This is NOT an easy and simple project to tackle!

73
Mike W5RKL

On 5/6/2013 1:43 PM, Jeff Blaine wrote:
> Has anyone seen a basic CAT interface function added to the 820s?
>
> When I'm logging QSO, plugging in the frequency to the log program is a (small) hassle and I thought it would be cool if my logger could read the 820s frequency same as it does with my modern rigs.
>
> I don't think this would be very difficult if a guy uses a small uP and serial I/O. But I wondered given the popularity of the rig if anyone had done this in the past already?
>
> 73/jeff/ac0c
> www.ac0c.com
> alpha-charlie-zero-charlie
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42034. TS-820S Station

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-07 14:41:17 UTC
From: km5rv
Topic: 42034 Message: 42034

I'm thinking of selling my TS-820S Station, and was wondering what it might go for. Thought this might be the best place to find it's worth. I have the following:
TS-820S
SP-820
VFO-820
SM220 with pan adapter
MC-50
I have owned these since 1980. The radio just came back from AK4AA, did a restoration on it. Any help would be appreciated.

Thanks
KM5RV
Robert

42035. Anybody parting out some 599 twins?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-07 18:09:27 UTC
From: dmir2001
Topic: 42035 Message: 42035

Hello group:

Have a nice set of 599 twins here... The XMTR is missing those push pin closers, or what ever they are called, on the top lid ... Anybody have a pair of these? Thanks, and very 73 ... John ... KB9PBM ...

42036. Re: [TS-520_820_530_830] Anybody parting out some 599 twins?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-07 18:21:37 UTC
From: Mark Gilger
Topic: 42035 Message: 42036

You can order them from Ken, K4EAA .

http://www.k4eaa.com/parts.htm

Mark

At 02:09 PM 5/7/2013, dmir2001 wrote:
>
>
>Hello group:
>
>Have a nice set of 599 twins here... The XMTR is
>missing those push pin closers, or what ever
>they are called, on the top lid ... Anybody have
>a pair of these? Thanks, and very 73 ... John ... KB9PBM ...
>
>

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42037. Re: Guidance on making a test probe for IM-18 VTVM?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-07 20:18:27 UTC
From: paul.nussbaum
Topic: 42025 Message: 42037

Don, my email to you failed to deliver... can you check that it is correct?
Thx,
Paul

--- In TS-520_820_530_830@yahoogroups.com, "k5hfg" <dlbowders@...> wrote:
>
> Paul,
> I have some spare probes. Do you need RF or std. ac/dc probe or both? I can send some pictures of what I have if you are interested. They are original Heathkit. Send me a reply off group to dlbowders at nepower dot com. 73, Don K5HFG
>

42038. Re: Guidance on making a test probe for IM-18 VTVM?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-07 21:05:46 UTC
From: k5hfg
Topic: 42025 Message: 42038

Paul, I am sorry. Don't know why I said dot com. It is dot coop. you will just have to look over this old man. Try it again with dot coop
--- In TS-520_820_530_830@yahoogroups.com, "paul.nussbaum" <paul.nussbaum@...> wrote:
>
> Don, my email to you failed to deliver... can you check that it is correct?
> Thx,
> Paul
>
> --- In TS-520_820_530_830@yahoogroups.com, "k5hfg" <dlbowders@> wrote:
> >
> > Paul,
> > I have some spare probes. Do you need RF or std. ac/dc probe or both? I can send some pictures of what I have if you are interested. They are original Heathkit. Send me a reply off group to dlbowders at nepower dot com. 73, Don K5HFG
> >
>

42039. Re: AGC on 520 not working

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-07 21:33:02 UTC
From: Lars Kvant
Topic: 42029 Message: 42039

Well all, AGC now working, dirty toggle switch at fault!

Thank you all!

Lars KB3WBT

--- In TS-520_820_530_830@yahoogroups.com, Lars Kvant <sm7fyw@...> wrote:
>
> Hello MikeSame thing, as happens on my own 520, the s-meter would calm downand sound be "regulated" smooth... in slow position, right? But, it looks like if agc is off, even in fast and slow Lars
> To: TS-520_820_530_830@yahoogroups.com
> From: w5rkl@...
> Date: Mon, 6 May 2013 14:31:00 -0500
> Subject: Re: [TS-520_820_530_830] AGC on 520 not working
>
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>

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>
>
> 73
>
> Mike W5RKL
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> On 5/6/2013 2:22 PM, Lars Kvant wrote:
>
> >
>
> > Hi everybody
>
> > Have a question, a friend of mine just got ahold of a 520, he asked me
>
> > to look over it, since I too have a 520..
>
> > Now, when AGC switch is turned on, fast or slow, nothing happens...
>
> > All other switches works fine, and all voltages on AVR board are correct.
>
> > Any ideas?
>
> > Rig is in good condx, only other thing, it's missing the cover on PA
>
> > cage though...
>
> > Thanks in advance
>
> >
>
> > Lars KB3WBT
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42040. Re: Anybody parting out some 599 twins?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-07 21:52:36 UTC
From: M. J. Synowiec
Topic: 42035 Message: 42040

Hello John and all,

I hope this finds you well. In addition to Ken Kemski (K4EAA.com) I have found them at Lowe's and Home Depot in the pull out parts drawers. Lots of other nifty fasteners and hardware for a Maker-Fair DIY type person too!

Vy 73,
mjsyn
K8SYN

[Non-text portions of this message have been removed]

42041. TS 520 CW Filter Switch

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-07 23:47:25 UTC
From: tfrugia81
Topic: 42041 Message: 42041

Hello Group,

I acquired a TS-520 yesterday as a project to restore (backup to my 520SE). It came with a CW filter, but of course no switch! I have searched the group and the web and found the most common way is to utilize the FIX CH switch, and I like that solution.

However, the mod says to 'bridge' FIX CH 4 to CW, and FIX CH 3 to SSB. That part makes sense, but where does the brown wire go (that usually attaches to CW)?

The only schematics I have handy (in a viewable format) are for the 520SE (the 520s schematics look to be the same for this section of the FIX CH board). Looking through that, it appears I should move the brown wire that's currently attached to CW over to the C pin on the FIX CH AVR board. Is this correct (using my VM it looks like it would do the trick)? I'd appreciate someone verifying this for me before I make the change. I'm still new at this stuff but I'm learning!

Thanks all, 73

-Tyler
K7FRU

42042. Re: TS 520 CW Filter Switch

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-08 00:25:15 UTC
From: tfrugia81
Topic: 42041 Message: 42042

I was able to figure this out. There are two versions of the mod floating around.

I got it figured out and it's working great.

73 all,

-Tyler
K7FRU

--- In TS-520_820_530_830@yahoogroups.com, "tfrugia81" <tfrugia@...> wrote:
>
> Hello Group,
>
> I acquired a TS-520 yesterday as a project to restore (backup to my 520SE). It came with a CW filter, but of course no switch! I have searched the group and the web and found the most common way is to utilize the FIX CH switch, and I like that solution.
>
> However, the mod says to 'bridge' FIX CH 4 to CW, and FIX CH 3 to SSB. That part makes sense, but where does the brown wire go (that usually attaches to CW)?
>
> The only schematics I have handy (in a viewable format) are for the 520SE (the 520s schematics look to be the same for this section of the FIX CH board). Looking through that, it appears I should move the brown wire that's currently attached to CW over to the C pin on the FIX CH AVR board. Is this correct (using my VM it looks like it would do the trick)? I'd appreciate someone verifying this for me before I make the change. I'm still new at this stuff but I'm learning!
>
>
> Thanks all, 73
>
> -Tyler
> K7FRU
>

42043. Using hex/allen keys on tuning slugs

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-08 13:05:15 UTC
From: adrian.langford@ymail.com
Topic: 42043 Message: 42043

Hi all,

Good to meet everyone! I'm picking up a 520SE at weekend which looks in fine business condition. Looking forward to learning lots from people here.

Have the manual and it's good to see receiver alignment is straightforward with the calibration signal and coil board. I ordered a suitable plastic hex alignment tool to minimise danger of slugs cracking (I hope not too many already cracked...), but I was curious why there are so many warnings about using a metal allen wrench of the correct size?

Obviously metal would affect the inductance so be unsuitable as material on that score, but why would a metal rather than plastic allen wrench be more likely to crack the slug, if both are correct size?

73 de Adrian G4IQW

42044. Re: Using hex/allen keys on tuning slugs

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-08 15:29:53 UTC
From: paul.nussbaum
Topic: 42043 Message: 42044

Whichever material is softer will deform slightly relative to the other when you apply torque. With a plastic tool, it is the plastic which will deform so as to present more surface contact area to the planes of the slug slot giving a more even distribution pressure.
A metal tool will make less contact to the slug slot planes and will tend to try to deform the slug where it makes local contact - smaller area of surface contact means more local pressure on the slug slot planes to apply the same overall torque to the slug.
If the slug cracks, it will respond to either a plastic or metal tool by trying to expand in its housing when you try to rotate it, acting like a drum brake. Cracks are often invisible even under close inspection with a light and magnifying glass.

Also, many people have initiated an adventure in trouble shooting after releasing a metal tool into the chassis.

--- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@..." <adrian@...> wrote:
>
> Hi all,
>
> Good to meet everyone! I'm picking up a 520SE at weekend which looks in fine business condition. Looking forward to learning lots from people here.
>
> Have the manual and it's good to see receiver alignment is straightforward with the calibration signal and coil board. I ordered a suitable plastic hex alignment tool to minimise danger of slugs cracking (I hope not too many already cracked...), but I was curious why there are so many warnings about using a metal allen wrench of the correct size?
>
> Obviously metal would affect the inductance so be unsuitable as material on that score, but why would a metal rather than plastic allen wrench be more likely to crack the slug, if both are correct size?
>
> 73 de Adrian G4IQW
>

42045. Re: Using hex/allen keys on tuning slugs

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-08 17:20:04 UTC
From: Terry Wagoner
Topic: 42043 Message: 42045

Great answer! Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "paul.nussbaum" <paul.nussbaum@...> wrote:
>
> Whichever material is softer will deform slightly relative to the other when you apply torque. With a plastic tool, it is the plastic which will deform so as to present more surface contact area to the planes of the slug slot giving a more even distribution pressure.
> A metal tool will make less contact to the slug slot planes and will tend to try to deform the slug where it makes local contact - smaller area of surface contact means more local pressure on the slug slot planes to apply the same overall torque to the slug.
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>
> Also, many people have initiated an adventure in trouble shooting after releasing a metal tool into the chassis.
>
> --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> >
> > Hi all,
> >
> > Good to meet everyone! I'm picking up a 520SE at weekend which looks in fine business condition. Looking forward to learning lots from people here.
> >
> > Have the manual and it's good to see receiver alignment is straightforward with the calibration signal and coil board. I ordered a suitable plastic hex alignment tool to minimise danger of slugs cracking (I hope not too many already cracked...), but I was curious why there are so many warnings about using a metal allen wrench of the correct size?
> >
> > Obviously metal would affect the inductance so be unsuitable as material on that score, but why would a metal rather than plastic allen wrench be more likely to crack the slug, if both are correct size?
> >
> > 73 de Adrian G4IQW
> >
>

42046. Re: [TS-520_820_530_830] Re: Using hex/allen keys on tuning slugs

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-08 19:46:31 UTC
From: Joseph Stiles
Topic: 42043 Message: 42046

Greetings Group,

I totally agree with Terry. DO NOT GET METAL TUNING WANDS...etc...near "tuning slugs," as you will be very sorry...and then you post a question here, as to how to remove "stuck/broken" slugs. When getting a "new" radio/rig...I always take a very bright light and a magnifing lens and inspect all the tuning slugs...especially the 520/520s rigs...BEFORE I even attempt to adjust/tune them. IF you find broken/cracked slugs, mostly it is because a "previous owner" did what you may be thinking of doing...but has already done it...and now it's your problem. IF, you attempt to tune/adjust a tuning slug and it does not move...STOP...and investigate...In my short history of "fixing" these fine old rigs...I have found that applying a SMALL drop of non-petroleum based lube on the affected piece...and letting it sit for a bit...and then trying to turn it again...has yielded very good results. Petroleum based oils/lubes....will swell some of the plastic that the "cans" contain...and make it even more difficult...to turn/remove.

More than likely...I have opened a BIG can of worms as to this topic...but...it's (due to inflation) my 25cents worth

73 Joe
WB7UQU

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 8, 2013 10:20 AM
Subject: [TS-520_820_530_830] Re: Using hex/allen keys on tuning slugs

Great answer! Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "paul.nussbaum" <paul.nussbaum@...> wrote:
>
> Whichever material is softer will deform slightly relative to the other when you apply torque. With a plastic tool, it is the plastic which will deform so as to present more surface contact area to the planes of the slug slot giving a more even distribution pressure.
> A metal tool will make less contact to the slug slot planes and will tend to try to deform the slug where it makes local contact - smaller area of surface contact means more local pressure on the slug slot planes to apply the same overall torque to the slug.
> If the slug cracks, it will respond to either a plastic or metal tool by trying to expand in its housing when you try to rotate it, acting like a drum brake. Cracks are often invisible even under close inspection with a light and magnifying glass.
>
> Also, many people have initiated an adventure in trouble shooting after releasing a metal tool into the chassis.

>
> --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> >
> > Hi all,
> >
> > Good to meet everyone! I'm picking up a 520SE at weekend which looks in fine business condition. Looking forward to learning lots from people here.
> >
> > Have the manual and it's good to see receiver alignment is straightforward with the calibration signal and coil board. I ordered a suitable plastic hex alignment tool to minimise danger of slugs cracking (I hope not too many already cracked...), but I was curious why there are so many warnings about using a metal allen wrench of the correct size?
> >
> > Obviously metal would affect the inductance so be unsuitable as material on that score, but why would a metal rather than plastic allen wrench be more likely to crack the slug, if both are correct size?
> >
> > 73 de Adrian G4IQW
> >
>

[Non-text portions of this message have been removed]

42047. Re: [TS-520_820_530_830] Re: Using hex/allen keys on tuning slugs

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-08 20:20:15 UTC
From: Jim S
Topic: 42043 Message: 42047

I see no reason why this should be a "can of worms", Joe. Pure and simple, two reasons allen keys should NOT be used. One, the metal will detune the circuit you are trying to tune, making the results unpredictable, and much more difficult to achieve the desirable ones. And Two, as has been mentioned, the likelyhood of breaking a slug is MUCH MORE possible.

Just DON'T DO IT !

Jim AG3Y

On 5/8/2013 3:46 PM, Joseph Stiles wrote:
>
> Greetings Group,
>
> I totally agree with Terry. DO NOT GET METAL TUNING
> WANDS...etc...near "tuning slugs," as you will be very sorry...and
> then you
> post a question here, as to how to remove "stuck/broken" slugs.
>
> More than likely...I have opened a BIG can of worms as to this
> topic....but...it's (due to inflation) my 25cents worth
>
>
> 73 Joe
> WB7UQU
>

[Non-text portions of this message have been removed]

42048. Re: [TS-520_820_530_830] Re: Using hex/allen keys on tuning slugs

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-08 21:00:28 UTC
From: Joseph Stiles
Topic: 42043 Message: 42048

Jim,

as per my "can of worms" comment...I was talking about using "non-petroleum based" oil/lube. Some swear
by WD-40...and other "lubes"...which I find totally contaminating and damaging to certain parts of these old gems.
That's why I usually do not mention any brands...except for DEOXIT

73 Joe
WB7UQU

From: Jim S <jimstan@...>
To: TS-520_820_530_830@yahoogroups.com
Cc: Joseph Stiles <stilesjoseph@...>
Sent: Wednesday, May 8, 2013 1:20 PM
Subject: Re: [TS-520_820_530_830] Re: Using hex/allen keys on tuning slugs

I see no reason why this should be a "can of worms", Joe. Pure and
simple, two reasons allen keys should NOT be used. One, the metal will
detune the circuit you are trying to tune, making the results
unpredictable, and much more difficult to achieve the desirable ones.
And Two, as has been mentioned, the likelyhood of breaking a slug is
MUCH MORE possible.

Just DON'T DO IT !

Jim AG3Y

On 5/8/2013 3:46 PM, Joseph Stiles wrote:
>
> Greetings Group,
>
> I totally agree with Terry. DO NOT GET METAL TUNING
> WANDS...etc...near "tuning slugs," as you will be very sorry...and
> then you
> post a question here, as to how to remove "stuck/broken" slugs.
>
> More than likely...I have opened a BIG can of worms as to this
> topic....but...it's (due to inflation) my 25cents worth
>
>
> 73 Joe
> WB7UQU
>

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[Non-text portions of this message have been removed]

42049. Heathkit AC/DC probe

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-08 21:27:00 UTC
From: k5hfg
Topic: 42049 Message: 42049

Someone sent me an email about availability of an AC/DC probe for a Heath VTVM and I have mistakenly deleted it(of course it was a mistake, I would not have done it intentionally)Could that person be so kind as to Email me again? I promise I will not delete it until I answer it.
73, K5HFG

42050. RE: [TS-520_820_530_830] Using hex/allen keys on tuning slugs

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-08 22:26:16 UTC
From: fpath fpath
Topic: 42043 Message: 42050

Adrian,

This is all good advice, from experience if you do have a slug that doesnt want to move, you can use a clean soldering iron and heat the slug and then turn the slug straight away, this usually breaks the seal and you can then go on your merry way tuning the radio.

73s
Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: adrian@...
Date: Wed, 8 May 2013 13:05:15 +0000
Subject: [TS-520_820_530_830] Using hex/allen keys on tuning slugs

Hi all,

Good to meet everyone! I'm picking up a 520SE at weekend which looks in fine business condition. Looking forward to learning lots from people here.

Have the manual and it's good to see receiver alignment is straightforward with the calibration signal and coil board. I ordered a suitable plastic hex alignment tool to minimise danger of slugs cracking (I hope not too many already cracked...), but I was curious why there are so many warnings about using a metal allen wrench of the correct size?

Obviously metal would affect the inductance so be unsuitable as material on that score, but why would a metal rather than plastic allen wrench be more likely to crack the slug, if both are correct size?

73 de Adrian G4IQW

[Non-text portions of this message have been removed]

42051. Re: kenwood TS-830S, VFO-230, SM-220 repair

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-08 21:24:48 UTC
From: Glen
Topic: 41949 Message: 42051

Might you be thinking of
TS-830 service
David Lyndon, 85 Woody Farm Road,
Hot Springs, NC 28743
off I-40. ???

Website is http://www.oldhamdave.com/

--- In TS-520_820_530_830@yahoogroups.com, "Fred" <ve3pie@...> wrote:
>
> I know there is someone who is the "guru" of repairing this line of
> equipment(kenwood TS-830S, VFO-230, SM-220), but I cannot remember his name and how to contact him.
> can anyone help ?
> thanks, Fred
>

42052. Erratic IP on TS-530S during tune up

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-08 21:33:05 UTC
From: Louis Wilen
Topic: 42052 Message: 42052

I have a TS-530S, original owner, never been serviced by anyone except myself, and the only service that I've done is occasional cleaning with compressed air, tightening PCB screws, and re-centering the RIT. Also changed the driver tube about 15 years ago.

During operation (except as explained below), everything works fine, acts fine, output power is about 120W CW, HV is 900V, idle IP is set correctly and is stable, and it checks out good on all tests that Ken (K4EAA) suggests in his "Tech question mailbag." For what it's worth, I checked the ESR of the large power supply capacitors and it was well under 1 ohm.

But it has one problem that has developed recently. During initial tune-up after power on, the IP jumps around erratically while adjusting the plate control. It dips but it jerks around, not a smooth dip. It settles down and acts normal after a keying and adjusting the plate control several times, and then the rig tunes up fine. If I tune up again on the same band or a different band, it tunes up fine without acting erratic. But if go away and come back another day, the erratic IP during tune up comes back.

Any ideas?

Louis
W3LMW

42053. Re: Low Power

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-08 21:35:42 UTC
From: Glen
Topic: 41958 Message: 42053

--- In TS-520_820_530_830@yahoogroups.com, "bnorman37" <bnorman@...> wrote:
>
> Hello to the group! I have an 830 that had been putting out full power until recently. One day fine the next day 25W output only. The pre-select/drive peaks like normal. Tune/load controls behave normally. Tune/load control shafts are in alignment and rotate normally. HV is normal. Everything seems completely normal except for low power. This condition exists on all bands and all antennas. I've also checked all jumper cables. I put in my spare finals this evening and no change. Any ideas will be very much appreciated.
73...Barry KF4WGR
>

Barry,
I also have an 830.
With mine, I turn on filaments,
and then it outputs 1 W when cold and 3 W after 30 minutes of warmup.
Other controls function normally, similar to yours.
Have adjusted the "grid drive" on the back panel, for 60mA as the manual describes.

Wrote to
http://www.oldhamdave.com/
and Dave responded with a repair time frame of 10 weeks off.
TS-830 service , David Lyndon, 85 Woody Farm Road,
Hot Springs, NC 28743, off I-40

42054. TS-830 Power Adjustments and Repair Process

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-08 22:06:54 UTC
From: Glen
Topic: 42054 Message: 42054

Terry, K9TW,
I'm an old ham, set in my ways. I regularly use an HW-8 at 1 W QRP, on 20M, CW only. So, I am used to those things.
I also own an TS-830S Cadillac, and I agree it is "nice".
My 830 requires some repair, EPO is usually ONE Watt !!! and I am gathering insight into that repair process. I have stopped using the 830 over concerns of damaging something.

Question: Are you guys saying that the S2001A is a replacement for the 6146B originals ? Sounds like it.
Question:
Can I expect to run the 830 at 10 Watts or 40 Watts or 70 Watts, in the CW mode ?
Would setting the "grid drive" on the back panel achieve this lower power safely ?
Would running lesser power extend the life of the final tubes ?
I have contacted David LyndonTS-830 service David Lyndon, 85 Woody Farm Road, Hot Springs, NC 28743 off I-40 via http://www.oldhamdave.com/ Any comments on this?

So, Terry K9TW you sound like you have lots of the right kind of careful experience. I liked your response to another topic.
Glen Ellis, KK4LPG. bio on QRZ.com web: www.GeoCities.WS/glene77is

[Non-text portions of this message have been removed]

42055. Re: [TS-520_820_530_830] Re: kenwood TS-830S, VFO-230, SM-220 repair

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-08 23:52:48 UTC
From: Cliff White
Topic: 41949 Message: 42055

Try k4eaa.com

Respectfully,
Cliff White, W5CNW
w5cnw@... <mailto:w5cnw@...>
On 05/08/2013 04:24 PM, Glen wrote:
> Might you be thinking of
> TS-830 service
> David Lyndon, 85 Woody Farm Road,
> Hot Springs, NC 28743
> off I-40. ???
>
> Website is http://www.oldhamdave.com/
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Fred" <ve3pie@...> wrote:
>> I know there is someone who is the "guru" of repairing this line of
>> equipment(kenwood TS-830S, VFO-230, SM-220), but I cannot remember his name and how to
contact him.
>> can anyone help ?
>> thanks, Fred
>>
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> ------------------------------------
>
> Yahoo! Groups Links
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[Non-text portions of this message have been removed]

42056. RE: [TS-520_820_530_830] Re: kenwood TS-830S, VFO-230, SM-220 repair

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-09 01:03:44 UTC
From: fpath fpath
Topic: 41949 Message: 42056

Unfortunately Ken isn't accepting any new repairs due to pernal circumstances, try Terry, K9TW, what he doesn't know isn't worth knowing. 5c inc GST

Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: cn.white@sunbelt-plb.com
Date: Wed, 8 May 2013 18:52:48 -0500
Subject: Re: [TS-520_820_530_830] Re: kenwood TS-830S, VFO-230, SM-220 repair

Try k4eaa.com

Respectfully,
Cliff White, W5CNW
w5cnw@... <mailto:w5cnw@...>
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42057. Re: Erratic IP on TS-530S during tune up

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-09 01:29:50 UTC
From: Terry Wagoner
Topic: 42052 Message: 42057

Louis:

When you set the resting plate current by adjusting the bias voltage pot on rear of rig is the plate current steady then?

Also, do you hear any arcing or frying sounds from the PA cage when the IP is jumping around?

You can measure and monitor the operating bias voltage and the Screen Grid voltage at the 6146 tube socket pins as you load the rig to make sure neither one of those voltages are moving around. Both should be stable key down.

Be very careful monitoring these voltage. Personal safety issue from inadvertent contact and dont want any arc or sparks.

If resting plate current is stable then bias pot is probably clean and not the problem. If operating bias and Screen grid voltages are stable then I would open up the PA cage and visually inspect the Plate choke and bypass capacitor at its base for signs of overheating/discoloration. While there I would clean the rotor shaft wiper contacts on both the tank capacitor and load capacitor with De-oxit and blow off residual with canned air.

Lastly could be a dirty contact on the 4PDT flat pack Aux relay on the IF board. I have not had much success cleaning this relay. I would suggest replacing it.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Louis Wilen" <louis.wilen@...> wrote:
>
> I have a TS-530S, original owner, never been serviced by anyone except myself, and the only service that I've done is occasional cleaning with compressed air, tightening PCB screws, and re-centering the RIT. Also changed the driver tube about 15 years ago.
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> During operation (except as explained below), everything works fine, acts fine, output power is about 120W CW, HV is 900V, idle IP is set correctly and is stable, and it checks out good on all tests that Ken (K4EAA) suggests in his "Tech question mailbag." For what it's worth, I checked the ESR of the large power supply capacitors and it was well under 1 ohm.
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> But it has one problem that has developed recently. During initial tune-up after power on, the IP jumps around erratically while adjusting the plate control. It dips but it jerks around, not a smooth dip. It settles down and acts normal after a keying and adjusting the plate control several times, and then the rig tunes up fine. If I tune up again on the same band or a different band, it tunes up fine without acting erratic. But if go away and come back another day, the erratic IP during tune up comes back.
>
> Any ideas?
>

> Louis
> W3LMW
>

42058. Re: Low PowerTerr

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-09 01:31:42 UTC
From: Terry Wagoner
Topic: 41958 Message: 42058

What indicated Ip are you loading to for 25 watts output? Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Glen" <glene77is@...> wrote:
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "bnorman37" <bnorman@> wrote:
> >
> > Hello to the group! I have an 830 that had been putting out full power until recently. One day fine the next day 25W output only. The pre-select/drive peaks like normal. Tune/load controls behave normally. Tune/load control shafts are in alignment and rotate normally. HV is normal. Everything seems completely normal except for low power. This condition exists on all bands and all antennas. I've also checked all jumper cables. I put in my spare finals this evening and no change. Any ideas will be very much appreciated. 73...Barry KF4WGR
> >
>
> Barry,
> I also have an 830.
> With mine, I turn on filaments,
> and then it outputs 1 W when cold and 3 W after 30 minutes of warmup.
> Other controls function normally, similar to yours.
> Have adjusted the "grid drive" on the back panel, for 60mA as the manual describes.
>
> Wrote to
> http://www.oldhamdave.com/
> and Dave responded with a repair time frame of 10 weeks off.
> TS-830 service , David Lyndon, 85 Woody Farm Road,
> Hot Springs, NC 28743, off I-40
>

42059. Re: Low Power

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-09 01:35:10 UTC
From: Terry Wagoner
Topic: 41958 Message: 42059

I would also measure the Screen grid voltage at the 6146 finals tube socket Pin 3 key down CW mode at 25 watts output power. Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Glen" <glene77is@...> wrote:
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "bnorman37" <bnorman@> wrote:
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> http://www.oldhamdave.com/
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> Hot Springs, NC 28743, off I-40
>

42060. Re: TS-830 Power Adjustments and Repair Process

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-09 01:50:13 UTC
From: Terry Wagoner
Topic: 42054 Message: 42060

1. I still see some rigs with S2001 finals, but I would not go out of my way to find any. I have never seen a data sheet for one. I usually run RCA 6146Bs when I can and/or Sylvania 6146W (JAN).

2. There is no "grid drive" on the rear panel. There is a bias voltage adjust pot on rear panel that allows you to set the resting or idle or quiescent (no signal) plate current. Adjusting this voltage to approx -60 vdc will result in a resting plate current of approx 60 ma. You are setting the operating class at AB1 when you do this. You would not vary the rf output power with this pot.

3. The way to get any power level you want including QRP level is to use a pot and 9vdc battery connected to the ALC jack on rear panel. There is a schematic in the Files section to show you how to build and install this very simple negative voltage power source. You adjust the pot to adjust the ALC control voltage that is applied to the TIF amp dual gate mosfet on the IF board. The TIF amp provides RF drive to the Transmit Mixer on the RF board.

4. Any time you run lower dc input power you have lower final plate current which means lower plate dissipation which means lower heat. So assuming you do not have long off resonance key down times or use high duty cycle modes in theory should get longer tube life. However I think this will be one of these anecdotal things as very hard to measure and quantify.

5. Are you saying your 830 currently only has 1 watt rf output? If so at what HV and IP levels?

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Glen" <glene77is@...> wrote:
>
> Terry, K9TW,
> I'm an old ham, set in my ways. I regularly use an HW-8 at 1 W QRP,
> on 20M, CW only. So, I am used to those things.
> I also own an TS-830S Cadillac, and I agree it is "nice".
> My 830 requires some repair, EPO is usually ONE Watt !!! and I am
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>
>
>
> [Non-text portions of this message have been removed]
>

42061. Re: [TS-520_820_530_830] Re: Erratic IP on TS-530S during tune up

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-09 03:51:28 UTC
From: Louis Wilen
Topic: 42052 Message: 42061

Terry:

Thanks for the quick reply.

Please see my answers below.

From: Terry Wagoner
Sent: Wednesday, May 08, 2013 9:29 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Erratic IP on TS-530S during tune up

Louis:

When you set the resting plate current by adjusting the bias voltage pot on rear of rig is the plate current steady then?

Yes, perfectly steady at 60 ma on CW or 50 ma on USB/LSB.

Also, do you hear any arcing or frying sounds from the PA cage when the IP is jumping around?

No arcing or frying sounds whatsoever. (I am familiar with what you are talking about, as I've heard those sounds from my transmatch when I try to load up too short of a wire on 160 M -- which is not something that I normally do.) By the way, I'm tuning up into a 50 ohm dummy load.

You can measure and monitor the operating bias voltage and the Screen Grid voltage at the 6146 tube socket pins as you load the rig to make sure neither one of those voltages are moving around. Both should be stable key down.

Be very careful monitoring these voltage. Personal safety issue from inadvertent contact and dont want any arc or sparks.

I'll check that out if the deoxit fix that you suggest below doesn't cure the problem. I have the right equipment to measure these voltages, but I avoid that area whenever possible.

If resting plate current is stable then bias pot is probably clean and not the problem. If operating bias and Screen grid voltages are stable then I would open up the PA cage and visually inspect the Plate choke and bypass capacitor at its base for signs of overheating/discoloration. While there I would clean the rotor shaft wiper contacts on both the tank capacitor and load capacitor with De-oxit and blow off residual with canned air.

The Plate choke and bypass capacitor look like new. I'll clean the rotor shaft wiper contacts and load cap as your suggested.

Lastly could be a dirty contact on the 4PDT flat pack Aux relay on the IF board. I have not had much success cleaning this relay. I would suggest replacing it.

Thanks for the tips. Actually, I think that I'll try a different dummy load, too. It's the dummy load built into an ancient MFJ-949B tuner. Might as well eliminate that as a possible cause of the problem.

Louis

--- In TS-520_820_530_830@yahoogroups.com, "Louis Wilen" <louis.wilen@...> wrote:
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> Any ideas?
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> Louis
> W3LMW
>

[Non-text portions of this message have been removed]

42062. Re: Erratic IP on TS-530S during tune up

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-09 10:26:16 UTC
From: Terry Wagoner
Topic: 42052 Message: 42062

Yes I did not say anything about the external load coming and going.

Good idea to check dummy load and any coax jumpers PL-259 connectors from rig to dummy load (any cable/connection combination from rig to the dummy load). Do that before anything in the rig. On rare occasions the lead at the SO-239 inside the pa cage can have a poor solder connection. Also the Antenna T/R relay NO contacts could be dirty.

Should have told you to look at external load stuff first. Pulled the trigger too quick. Sorry about that.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Louis Wilen" <louis.wilen@...> wrote:
>
> Terry:
>
> Thanks for the quick reply.
>
> Please see my answers below.
>
>
> From: Terry Wagoner
> Sent: Wednesday, May 08, 2013 9:29 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: Erratic IP on TS-530S during tune up
>
>
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> Also, do you hear any arcing or frying sounds from the PA cage when the IP is jumping around?
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> Louis
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>
> [Non-text portions of this message have been removed]
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42063. Re: kenwood TS-830S, VFO-230, SM-220 repair

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-09 11:34:45 UTC
From: Terry Wagoner
Topic: 41949 Message: 42063

Dave:

You are far too kind. I am going to have to send you a discount coupon!

I do not repair the VFO-230. Have had the covers off sum total of one. Didnt see any tubes/valves! Never took the time to sit down and figure out how they work.

If anyone is interested in hybrid repair can contact me off list for my repair policy and rates. I have a TS520 on bench about complete and nothing in the que. I no longer just do repairs. Only will do repairs followed by alignment. Will no longer accept hacked radios.

Might try Jim at HybridRestore. Also could try Old Dave or Cliff Holland. I have no personal knowledge or experience with either of these two gentlemen.

73s Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
> Unfortunately Ken isn't accepting any new repairs due to pernal circumstances, try Terry, K9TW, what he doesn't know isn't worth knowing. 5c inc GST
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> Dave
> VK5PDL
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>
> To: TS-520_820_530_830@yahoogroups.com
> From: cn.white@...
> Date: Wed, 8 May 2013 18:52:48 -0500
> Subject: Re: [TS-520_820_530_830] Re: kenwood TS-830S, VFO-230, SM-220 repair
>
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> Try k4eaa.com
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> Respectfully,
> Cliff White, W5CNW
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> > Yahoo! Groups Links
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42064. Looking for a non-working DG-5

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-09 12:06:54 UTC
From: tjb813
Topic: 41886 Message: 42064

I am looking for a Dg-5 display. I need only the case and display board (that holds the 7 segment LEDs). The case should be in reasonable condition. PLease contact me off-line.

Thanks

KD8CN

42065. TX Level Testing - Level Diagram questions

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-09 23:17:13 UTC
From: paul.nussbaum
Topic: 42065 Message: 42065

I am preparing to run TX level tests on my TS-820S. I have some questions about the level diagram:

1] MIC TP2

I'm not clear what "MIC" means here because the MODE for TX level testing is specified to be set to CW.

Is TP2 measuring the audio amp transistors without an audio signal present? I find TP2 on the IF board and looks like it is between the audio amp stages and the ring mod.

2] "These levels are measured at 14.175MHz"

Which "these levels"? Is it indicating the "DC voltage at reception" levels and/or all subsequent levels in the diagram?

If referring to the "DC voltage at reception" levels", how does one measure the other bands at 14.175? Is it just calling for the MIC control to be set to measure .25V at 14.175 as reference and confirm the other values for the other frequency selections at that setting?

Or is it indicating the expected values measured there for each band selection with MIC at full CCW?

Or is "MIC" just referring to the IF board pin called "MIC"? Nothing to do with the microphone input, the MIC knob, just indicating the entry into the IF board in front of the audio stage?

3] CAR Level 0.88V

I'm guessing this is a "setting" to establish the expected subsequent measures?
Is it calling to turn the CAR control to get a measure of .88V here?
Does this mean all my questions about "MIC" don't make sense? That would be a relief if it was clear to me what is supposed to be going on when measuring TP2.

That's what's confusing me so far; the rest looks straight forward, but we shall see... looking forward to it.

Paul

42066. Re: TX Level Testing - Level Diagram questions

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-10 03:36:59 UTC
From: Terry Wagoner
Topic: 42065 Message: 42066

" Mic TP2" is TP2 on the IF board. It is the output of the microphone amp and one of two input signals required for the Balanced Modulator to produce a DSBSC signal (double side band suppressed carrier signal). Unfortunately Mic amp and mic gain pot have nothing to do with TX Level Diagrams.

Yes TX Level Diagrams are run in CW mode so there will be no mic input. Like so many things in the TS820 Service Manual it is flawed. Just ignore it and ignore the Dc voltage levels at "reception".

Yes you do need the other input signal to the Balanced modulator and that will be the Carrier Oscillator output of Q17 which will be approx .88v. This level will be there if you have properly adjusted the output level from the Carrier Osc board at CA2 to approx 300mv. The service manual says 50 mv so ignore that. Some say they meant 500 mv and that is wrong and not achievable.

The other thing you need is the Car Level Pot advanced to provide a DC voltage to turn on ring diodes to produce a carrier at the output of the Balanced Modulator.

Here is how you run TX Level Diagrams:
1. If you have rf drive and can load the rig go ahead and load normally in CW mode into a dummy load to approx 100 watts output on 14.275 mhz. If 14.275 is a problem can run first pass on 7.200 mhz to get a feel for the test. Then repeat on 14.175 to see where level is low or missing.

2. If you cannot load to full rf output then just peak the Drive control on receiver background noise or use the Marker signal. Set the Car Level Pot to at least 1200. Ok to just set it full CW if unsure.

3. Leave heaters on and turn off the SG switch

4. Start measuring RF drive levels at the output of the TIF amp Q1 at Diode D44 on the IF board. Easier access than the molex connector.

5. Connect your rf probe ground lead as close as possible to the point you are going to touch probe tip. Usually just get it to nearby chassis ground will be good enough.

6. Flip to Send and touch or connect probe tip with a short mini grabber test lead to Diode D44. Should read approx 250 mv rms. Note:If using a single germanium diode probe may have very little or no VTVM meter indication as the diode barrier junction voltage will be around .250v. It is better to use RF millivolt meter or O-scope to measure TIF signal level. If using O-scope will read approx 700mv peak to peak assuming scope has sufficient bandwidth.

7. Unkey rig and move RF probe to RF Board Conn RF-1 Pin 10.

8. Flip to Send and should read approx 38mv rms. Same note as above cant read this level with standard germanium diode probe. O-scope will read approx 106 mv peak to peak.

9. Unkey rig and move RF probe to RF Board at output of Transmit Mixer Q1/Q8 at MD terminal.

10. Flip to Send and should read approx 1.5 rms volts. This is first place you will read actual transmit output frequency. If you obtain a very high reading here (3.0 rms volts or more) it indicates that the Mixer is not seeing the tuned circuits which are switched in by the bandswitch (bad bandswitch contact is common problem) or not seeing the control grid input of the driver tube. Could be due to bad solder connection at driver tube socket.

11. Unkey the rig and move RF probe to the plate of the Driver tube at DP terminal. Caution: High DC anode voltage here. If using homemade RF probe make sure the input coupling cap has minimum of 500 wvdc rating.

12. Flip to Send and should read approx 65 rms volts. Caution: DO NOT USE single germanium point contact diode RF probe here as the levels will exceed the PIV of the diode. PIV will be approx 2.8 times the rf voltage or approx 182 volts. Single 1N34A can handle approx 50 to 60 piv. Need 3 diode probe or Rf millivolt meter or O-scope. If using O-scope reading will be approx 182 volts peak to peak if you have scope with sufficient bandwidth.

13. Unkey the rig and move RF probe to the control grids Pin 5 of the 6146 finals tube socket.

14. Flip to send and should read approx 47 rms volts. Again do not use single diode probe as PIV will be approx 131 volts.

15. Unkey the rig and evaluate your as found levels. Of course if you have low or missing RF drive levels prior to the grids of the 6146 finals you will have aborted the testing and would commence troubleshooting the stage where drive levels are first noted to be low or missing.

Now there is another trick you can try if you are limited to a single diode probe and that is to reduce the Car Level Pot which will lower the RF drive levels. Have to be careful with this and make sure you have set drive levels below PIV of your particular diode. Will have to scale the results you get due to the reduced TIF level.

Many years ago I had to do this when I built and ran Heath gear and has only fundamental test gear.

I have a TS-820 here and my original 309c probe and IM-18 so could help you figure out a Car Pot Level that will allow you to measure Plate of driver tube and grids of finals if you need that.

You should be able to read the output of the Transmit Mixer at MD no problem and if it is approx 1.5 rms volt then you know all preceeding stages are working properly.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "paul.nussbaum" <paul.nussbaum@...> wrote:
>
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>

42067. Re: TX Level Testing - Level Diagram questions

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-10 13:15:43 UTC
From: roberteleazer@rocketmail.com
Topic: 42065 Message: 42067

Paul:

First, let me say I am indebted to Terry for explaining the level diagram. I tried to use it some years ago when I was troubleshooting my TS-820S and did not get very far.

Also, the FIRST thing to do is what Terry describes relative to the carrier unit. And that incluces making sure it is on the right frequencies as well as producing a high enough output signal. This is not only because it is important but also because problems in terms of output and frequency are very common with 820's that have not been aligned and adjusted in a while.

But I would like to know what you are really trying to do? I presume you are not trying to read those various levels because it is fun.

What I would do, after making sure the carrier module is properly adjusted and all connectors are properly seated, is to measure the SSB transmit output of the IF board, all the way in the back, where that shielded wire comes out to go to the RF Driver board. The best way to do this is with an oscilloscope, and since you are only talking about 8MHZ a pretty modest scope with do the job.

Measure the output in both the USB and LSB modes. It should be a complex waveform with significant amplitude.

In my case I was trying to figure out why my TS-820S would only produce USB, with no LSB. This test showed me that the USB signal was fine and the LSB one missing. Checking the input to the SSB filter showed a signal, so the LSB side of the filter was bad.

That was not the only thing wrong with my TS-820S, but simply measuring the transmit IF board output told me a great deal.

Good luck!

Robert
WB5WSV

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42068. Re: TX Level Testing - Level Diagram questions

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-10 14:02:35 UTC
From: Terry Wagoner
Topic: 42065 Message: 42068

Robert/Paul:

The only time you should need to measure the output levels of the Xtal filter is if your TIF level at IF board is low or missing. In my experience this is not very frequent. Almost all low or no RF output occurs due to problems on the RF board. This is especially true if you have band specific rf output problems. The Xtal filter and Carrier Osc do not know what band you are on.

Robert is correct O-scope will be needed if you want to look at rf voltage levels at the output of Balanced Mod or input/output of the Xtal filter. Same for TIF as I previously mentioned. Fortunately a bad Xtal filter is rare and seldom reason for low or no RF output, but certainly possible as in Roberts case.

Keep in mind it depends on what you are trying to do. If you are trying to take and record accurate base line readings for future you need to understand the voltage limitations of O-scope bandwidth. If you are just interested in relative readings or comparing output of Xtal filter on LSB vs USB then a common 20 mhz BW scope will be just fine.

For accurate readings a 20 mhz BW scope measuring 8.830mhz will read peak to peak (P-P) voltages approx 7% low. So at output of Xtal filter instead of approx 55mv P-P you will read approx 50mv P-P. At 14.175 the readings will be approx 15% low and at 20mhz will be -3dB low or only 70.7% of the actual voltage level. This is why it is always best to buy a scope with as much bandwidth as you can afford. Most all of us started with 15mhz to 20mhz BW or less scope and progressed as we got more serious about troubleshooting. For Kenwood work a 100mhz is good and a 200mhz to 250mhz (like a Tek475/475A) is just about right.

Of course if your scope is out of cal readings can be even lower than the affect of BW limitation. As long as you understand this you will not be confused or think that you have bad readings. I have a point paper and a calibration chart if you are interested. All of this is available in Tektronix O-scope Primers on the web.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
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> What I would do, after making sure the carrier module is properly adjusted and all connectors are properly seated, is to measure the SSB transmit output of the IF board, all the way in the back, where that shielded wire comes out to go to the RF Driver board. The best way to do this is with an oscilloscope, and since you are only talking about 8MHZ a pretty modest scope with do the job.
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> That was not the only thing wrong with my TS-820S, but simply measuring the transmit IF board output told me a great deal.
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> Good luck!
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> WB5WSV
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42069. ALC Circuit for TS-830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-10 12:29:00 UTC
From: bnorman37
Topic: 42069 Message: 42069

Greetings to the group! I was wondering if anyone has used the ALC circuit that is posted in the 'files" section to reduce power out?? I have an amp with a lot of headroom and have to turn the mic gain very low. It makes more sense to me to use the ALC to reduce drive power and then I can adjust mic gain to a normal level. Thanks in advance for your replies....Barry KF4WGR

42070. Re: TX Level Testing - Level Diagram questions

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-10 16:10:46 UTC
From: paul.nussbaum
Topic: 42065 Message: 42070

Terry, Thanks for the help. Sounds like I will need to build an RF probe. I don't have a scope.

(Robert, the reason I'm doing this is to trouble shoot a problem - I'm not getting an indication of ALC level during tune up and if I tune up in CW mode the output is just a few watts. This problem appeared suddenly while I was aligning the coils - before that everything was fine, good ALC, strong power output.)

I see plans using 1N34A diode, 4.7Mohm resistor, and 0.01uF capacitor for VTVMs with Zin 11Meg like the IM-18.

Putting three diodes in parallel, they will each still see the same voltage right? I don't need to add a switch to take them out when measuring low levels?

Does the rf probe need to be an independent self contained probe or can it be an "extension" to the combined AC/DC multi-probe?
If so, do I need to alter the rf probe resistor value or make other adjustments?

Thanks,
Paul
AD5FT

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Robert/Paul:
>
> The only time you should need to measure the output levels of the Xtal filter is if your TIF level at IF board is low or missing. In my experience this is not very frequent. Almost all low or no RF output occurs due to problems on the RF board. This is especially true if you have band specific rf output problems. The Xtal filter and Carrier Osc do not know what band you are on.
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> Robert is correct O-scope will be needed if you want to look at rf voltage levels at the output of Balanced Mod or input/output of the Xtal filter. Same for TIF as I previously mentioned. Fortunately a bad Xtal filter is rare and seldom reason for low or no RF output, but certainly possible as in Roberts case.
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-3dB low or only 70.7% of the actual voltage level. This is why it is always best to buy a scope with as much bandwidth as you can afford. Most all of us started with 15mhz to 20mhz BW or less scope and progressed as we got more serious about troubleshooting. For Kenwood work a 100mhz is good and a 200mhz to 250mhz (like a Tek475/475A) is just about right.
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42071. Re: TX Level Testing - Level Diagram questions

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-10 16:46:00 UTC
From: Terry Wagoner
Topic: 42065 Message: 42071

Paul:

I am sure I previously told you that you will need to buy or make two RF probes for Kenwood work. Probably lost in all the details? Neither of which will allow you to measure the TIF signal level or Balanced Mod output or output from your Xtal filters. As I said most cases of low or missing RF output and no ALC indication are not due to missing or low TIF, but it is certainly possible.

Here are some TIF RF voltage readings for a good 100 watt TS-820 with ability to peg the ALC indication full scale with Car Level Pot advanced to approx #2 to #3 position. These are taken at the IF board at molex Conn IF 3 Pin 2 TIF at 14.175mhz in CW mode with SG off.

When you first connect a RF millivolt meter or O-scope you will see a signal. With a single germanium diode rf probe you may see slight deflection on the 1.5vdc range of your IM-18 VTVM. This is the 23 Mhz VCO signal coupling back from the RF board. It is approx 18mv rms level.

As Robert told you the TIF signal is a complex waveform due to the presence of the 8.830 carrier and 23mhz VCO signal and if not familiar with O-scope triggering can present a problem.

Not a problem if using a RF Millivolt meter.

Flip to Send TIF voltages:
Boonton 92E = 48 rms rf volts
Heath 309C RF probe (1 diode) = approx 0.10 to 0.20 rms volts
Heath PK-3 RF probe (3 diodes) = may see very slight meter flick
Rigol 100 Mhz O-scope = 48 rms volts (with 10x low capacity probe and no 50 ohm terminator)

ROBERT: Please pass your TIF level readings on to Paul.

Paul: No the diodes in a 3 diode probe are not in parallel. They need to be in series to measure the high peak level at Driver tube plate and Finals control grids. I will post a separate RF probe primer as this thread will get too long and cause heartburn.

73s Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "paul.nussbaum" <paul.nussbaum@...> wrote:
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> > > Also, the FIRST thing to do is what Terry describes relative to the carrier unit. And that incluces making sure it is on the right frequencies as well as producing a high enough output signal. This is not only because it is important but also because problems in terms of output and frequency are very common with 820's that have not been aligned and adjusted in a while.
> > >
> > > But I would like to know what you are really trying to do? I presume you are not trying to read those various levels because it is fun.
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> > > What I would do, after making sure the carrier module is properly adjusted and all connectors are properly seated, is to measure the SSB transmit output of the IF board, all the way in the back, where that shielded wire comes out to go to the RF Driver board. The best way to do this is with an oscilloscope, and since you are only talking about 8MHZ a pretty modest scope with do the job.
> > >
> > > Measure the output in both the USB and LSB modes. It should be a complex waveform with significant amplitude.
> > >
> > > In my case I was trying to figure out why my TS-820S would only produce USB, with no LSB. This test showed me that the USB signal was fine and the LSB one missing. Checking the input to the SSB filter showed a signal, so the LSB side of the filter was bad.
> > >
> > > That was not the only thing wrong with my TS-820S, but simply measuring the transmit IF board output told me a great deal.
> > >
> > > Good luck!
> > >
> > > Robert
> > > WB5WSV
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "paul.nussbaum" <paul.nussbaum@> wrote:
> > > >
> > > > I am preparing to run TX level tests on my TS-820S. I have some questions about the level diagram:
> > > >
> > > > 1] MIC TP2
> > > >
> > > > I'm not clear what "MIC" means here because the MODE for TX level testing is specified to be set to CW.

> > > >
> > > > Is TP2 measuring the audio amp transistors without an audio signal present? I find TP2 on the IF board and looks like it is between the audio amp stages and the ring mod.
> > > >
> > > > 2] "These levels are measured at 14.175MHz"
> > > >
> > > > Which "these levels"? Is it indicating the "DC voltage at reception" levels and/or all subsequent levels in the diagram?
> > > >
> > > > If referring to the "DC voltage at reception" levels", how does one measure the other bands at 14.175? Is it just calling for the MIC control to be set to measure .25V at 14.175 as reference and confirm the other values for the other frequency selections at that setting?
> > > >
> > > > Or is it indicating the expected values measured there for each band selection with MIC at full CCW?
> > > >
> > > > Or is "MIC" just referring to the IF board pin called "MIC"? Nothing to do with the microphone input, the MIC knob, just indicating the entry into the IF board in front of the audio stage?
> > > >
> > > > 3] CAR Level 0.88V
> > > >
> > > > I'm guessing this is a "setting" to establish the expected subsequent measures?
> > > > Is it calling to turn the CAR control to get a measure of .88V here?
> > > > Does this mean all my questions about "MIC" don't make sense? That would be a relief if it was clear to me what is supposed to be going on when measuring TP2.
> > > >
> > > > That's what's confusing me so far; the rest looks straight forward, but we shall see... looking forward to it.
> > > >
> > > > Paul
> > > >
> > >
> >
>

42072. RF Probe Primer

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-10 17:29:05 UTC
From: Terry Wagoner
Topic: 42072 Message: 42072

Paul:

Here is RF probe primer. Suggest you look on web and start with N5ESE classic probe. Also, if you do not own a ARRL Handbook it is a must. I would get a mid to late 70s version. The Test & Measuring Chapters will explain RF probe construction and use.

You will make or buy a probe(s) that takes the place of your Heath AC/DC probe. It will have a 1/4 phone plug on it and be plugged into your IM-18 VTVM and you will set the Range switch to 1.5volt DC minus.

Any diode will rectify RF but not any diode will make a good RF probe. It depends on what you are trying to measure. In the Kenwoods you need to be able to measure and adjust things like Carrier Oscillator level, Hetrodyne Oscillator level, VCO level. You will use a single diode probe for these. You will also want to measure RF drive levels at the 12BY7A Driver tube plate and 6146 final control grids. You will use a probe that has 3 diodes in series for this application.

The best diode for these probes is a germanium point contact signal diode that has low forward voltage and high reverse voltage. A germanium signal diode will have a barrier junction of approx .250 volts. It will read lower than this, but not accurately.

Good diodes include:
1N34A
1N270
OA91

The maximum rf voltage you will want to measure with these diodes is approx 30 to 35 rms volts. Heath always recommended no more than 30 volts.

You can also use a Schottky like a 1N5711 which will have flatter freqency response, but will not be as sensitive as they have approx 0.400 forward voltage.

Some say OK to use a 1N914 or 1N4148 fast switcher. DO NOT do this. These are silicon diodes with 0.6 to 0.7 barrier voltage.

You can build very simple probe with a series diode, but I do not recommend that as the probe then is fooled by the offset voltage of its junction. A better design is like Heath or N5ESE that uses a shunt diode. The probes will read negative voltage. This is no problem for your IM-18 VTVM.

Now this is important: Remember the diode is seeing the peak of the rf voltage you are trying to measure so the reverse voltage will be approx 2 times that voltage level. So when measuring the approx 65 rf rms drive level at plate of 12BY7A the diode must be able to withstand approx 65 X 2.83 = 184 reverse volts! This is why you cannot use a single diode probe. You will burn it out. The germanium signal diodes I have listed have a peak reverse voltage rating from approx 50 to 100 vdc. You should pull up the data sheets and look at the specs before you use any diode. Placing 3 diodes in series for your second probe

ensures that you wont blow it up. Just have to realize that this probe will have a barrier of approx .9vdc so it cannot be used for low level testing. Just make sure you clearly label each probe so you dont reach for the wrong one. You wont hurt the 3 diode probe, but can hurt the 1 diode in an instant.

The resistors in these probes are selected to ensure proper scaling with your 11meg ohm VTVM. If you use a DMM may want to change value for 10meg input for best accuracy.

Make sure that you use a blocking/coupling cap that has a minimum WVDC of 500 volts as you will be touching this probe to the plate of the 12BY7A which has over 300vdc on it.

Heath used a 1N191 diodes in their probes. It is a gold bond point contact diode and no longer available. Can find them on Ebay but go for a premium around $5.00 each! Nice diode but not necessary.

By the way an old single edge razor blade and a safety pin with a piece of pencil lead makes a fine point contact signal diode. Ok for your crystal radio, but a little hard to package in your RF probe!

73s Terry K9TW

42073. Heath RF Probes on Ebay

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-10 18:27:34 UTC
From: Terry Wagoner
Topic: 42073 Message: 42073

Paul: There is a Heath 309C and 337 probe listed on Ebay right now. The nice thing about these probes is you get a very nice tube/body and probe tip. The 309C is a single diode ready to go. The 337 is a Demodulator probe that would be easy to re-configure to a RF probe and install a 1/4 phone plug instead of the spade lugs. Something to think about. Not as much fun as building your own, but depending on what kind of junk box you have may be just about as cheap to buy the Heath probes?

Might also give WB2KNR Jimmy Lamanteer an email and see if he has any extra Heath probes. He has upgraded to Boonton RF millivolt meters and may have Heath probes he is willing to sell?

Terry K9TW

42074. Re: TX Level Testing - Level Diagram questions

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-10 19:42:23 UTC
From: roberteleazer@rocketmail.com
Topic: 42065 Message: 42074

Paul:

Low power and no ALC after a session of adjusting coils says one thing to me: Bad 12BY7A.

I once killed a good strong used 12BY7A in the space of about an hour as a result of doing lots of transmits during adjustments.

Good luck!

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "paul.nussbaum" <paul.nussbaum@...> wrote:
>
> Terry, Thanks for the help. Sounds like I will need to build an RF probe. I don't have a scope.
>
> (Robert, the reason I'm doing this is to trouble shoot a problem - I'm not getting an indication of ALC level during tune up and if I tune up in CW mode the output is just a few watts. This problem appeared suddenly while I was aligning the coils - before that everything was fine, good ALC, strong power output.)
>
> I see plans using 1N34A diode, 4.7Mohm resistor, and 0.01uF capacitor for VTVMs with Zin 11Meg like the IM-18.
>
> Putting three diodes in parallel, they will each still see the same voltage right? I don't need to add a switch to take them out when measuring low levels?
>
> Does the rf probe need to be an independent self contained probe or can it be an "extension" to the combined AC/DC multi-probe?
> If so, do I need to alter the rf probe resistor value or make other adjustments?
>
> Thanks,
> Paul
> AD5FT
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Robert/Paul:
> >
> > The only time you should need to measure the output levels of the Xtal filter is if your TIF level at IF board is low or missing. In my experience this is not very frequent. Almost all low or no RF output occurs due to problems on the RF board. This is especially true if you have band specific rf output problems. The Xtal filter and Carrier Osc do not

know what band you are on.
> >
> > Robert is correct O-scope will be needed if you want to look at rf voltage levels at the output of Balanced Mod or input/output of the Xtal filter. Same for TIF as I previously mentioned. Fortunately a bad Xtal filter is rare and seldom reason for low or no RF output, but certainly possible as in Roberts case.
> >
> > Keep in mind it depends on what you are trying to do. If you are trying to take and record accurate base line readings for future you need to understand the voltage limitations of O-scope bandwidth. If you are just interested in relative readings or comparing output of Xtal filter on LSB vs USB then a common 20 mhz BW scope will be just fine.
> >
> > For accurate readings a 20 mhz BW scope measuring 8.830mhz will read peak to peak (P-P) voltages approx 7% low. So at output of Xtal filter instead of approx 55mv P-P you will read approx 50mv P-P. At 14.175 the readings will be approx 15% low and at 20mhz will be -3dB low or only 70.7% of the actual voltage level. This is why it is always best to buy a scope with as much bandwidth as you can afford. Most all of us started with 15mhz to 20mhz BW or less scope and progressed as we got more serious about troubleshooting. For Kenwood work a 100mhz is good and a 200mhz to 250mhz (like a Tek475/475A) is just about right.
> >
> > Of course if your scope is out of cal readings can be even lower than the affect of BW limitation. As long as you understand this you will not be confused or think that you have bad readings. I have a point paper and a calibration chart if you are interested. All of this is available in Tektronix O-scope Primers on the web.
> >
> > Terry K9TW
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> > >
> > > Paul:
> > >
> > > First, let me say I am indebted to Terry for explaining the level diagram. I tried to use it some years ago when I was troubleshooting my TS-820S and did not get very far.
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> > > Also, the FIRST thing to do is what Terry describes relative to the carrier unit. And that incluces making sure it is on the right frequencies as well as producing a high enough output signal. This is not only because it is important but also because problems in terms of output and frequency are very common with 820's that have not been aligned and adjusted in a while.
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> > >
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> > > That was not the only thing wrong with my TS-820S, but simply measuring the transmit IF board output told me a great deal.
> > >
> > > Good luck!
> > >
> > > Robert
> > > WB5WSV
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "paul.nussbaum" <paul.nussbaum@> wrote:
> > > >
> > > > I am preparing to run TX level tests on my TS-820S. I have some questions about the level diagram:
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> > > > 1] MIC TP2
> > > >
> > > > I'm not clear what "MIC" means here because the MODE for TX level testing is specified to be set to CW.
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> > > > Or is it indicating the expected values measured there for each band selection with MIC at full CCW?
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> > > > Or is "MIC" just referring to the IF board pin called "MIC"? Nothing to do with the microphone input, the MIC knob, just indicating the entry into the IF board in front of the audio stage?
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> > > > 3] CAR Level 0.88V
> > > >
> > > > I'm guessing this is a "setting" to establish the expected subsequent measures?
> > > > Is it calling to turn the CAR control to get a measure of .88V here?

> > > > Does this mean all my questions about "MIC" don't make sense? That would be a relief if it was clear to me what is supposed to be going on when measuring TP2.
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> > > > That's what's confusing me so far; the rest looks straight forward, but we shall see... looking forward to it.
> > > >
> > > > Paul
> > > >
> > >
> >
>

42075. Re: ALC Circuit for TS-830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-10 23:31:45 UTC
From: Joe
Topic: 42069 Message: 42075

--- In TS-520_820_530_830@yahoogroups.com, "bnorman37" <bnorman@...> wrote:
>
> Greetings to the group! I was wondering if anyone has used the ALC circuit that is posted in the 'files" section to reduce power out?? I have an amp with a lot of headroom and have to turn the mic gain very low. It makes more sense to me to use the ALC to reduce drive power and then I can adjust mic gain to a normal level. Thanks in advance for your replies....Barry KF4WGR
>

Yes i use the alc to reduce power. It works but take in considerations the over shoots. You will find that at very first syllab there will be a spike at full power. Easily to be seen by an oscilloscope or on a true peack wattmeter.

It depends upon your Amp it this a problem or not.

73's i8vye/0 joe

42076. Re: TX Level Testing - Level Diagram questions

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-11 11:46:24 UTC
From: Terry Wagoner
Topic: 42065 Message: 42076

Paul: I was under impression you tried another driver tube?

If not, Roberts advice is spot on. Always reach for the simple "experiential" stuff first like molex connectors, tubes, relay contacts etc.

The 12BY7A runs class A and runs at its max plate current and gets pretty hot. Normally you can do a lot of key down testing/tuning without hurting it, but if you have loss of RF drive and ALC indication on all bands after peaking the Drive and Mix coils on just one band reaching for another 12BY7A is a good first step as Robert suggests.

If you did try another 12BY7A and no improvement then running TX Level Diagram will pinpoint where you are losing RF drive in a matter of minutes. Finding out what is wrong at that stage will take a little longer. Need to make sure you have the necessary "goes ins" and "goes outs" and if you have them then need to take CBE and/or DSG dc voltages at the involved active device.

If you are building a modest Kenwood service bench you have a good start with the IM-18 VTVM. As you know you need the rf probes to complement it. After that I would add a Frequency Counter and a RF Signal Generator. A LC type RF Sig Gen is OK to start with as it allows signal injection testing. Not good for alignment because they lack calibrated output level. After those key 3 pieces of test gear I would add a Scope and a 20 mhz BW unit will be ok to start. An Audio or Function generator is also nice for troubleshooting the Audio output and Speech amps and driving rig for TX LSB/USB Carrier osc adjustments. With Lap-top PC in the shack today you can download free tone generator software and use your sound card for audio work.

Terry K9TW

>
>
>
> Low power and no ALC after a session of adjusting coils says one thing to me: Bad 12BY7A.
>
> >
> Robert
> WB5WSV
>
> > >
> > > > >
> > > >
> >
>

42077. Re: ALC Circuit for TS-830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-11 20:55:01 UTC
From: k5hfg
Topic: 42069 Message: 42077

Barry,Joe, et al,
I use a 150K pot in the screen grid voltage line to the 12BY7A. I run a 811A amp and use 50-70 watts drive from my 830S. A much simpler mod to install and/or remove. It works fine on my 811A and I notice no irregularity with a bird 43P meter. I can run normal input from the 830 with no adjustment to mic gain. Works as tho no amp was in line and signal reports are good with no distortion reported. Worth consideration. It just seemed simpler to me.

P.S. I experimented with my test rig first (TS-530 and it takes a lot of abuse, bless it's heart) Not much that could go wrong with this mod but you just never know.

73, Don K5hfg

42078. RE: [TS-520_820_530_830] Heath RF Probes on Ebay

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-11 21:27:52 UTC
From: Robert Herendeen
Topic: 42073 Message: 42078

I have a Heath VTVM model IM-5218. I think it is from 1979 and it has a pair of solid state tube replacements instead of the 6AL5 and the12AU7.

More relevant to this discussion, there is an unmarked RF probe, but the instruction sheet calls it a "PKW-3" and it has 3, 1N191 diodes. The specs say that it is good to 90V RF, 1khz-100MHZ, and 1000VDC.

You might want to look for one of these for HV measurements.

Bob/W6JZR

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
Sent: Friday, May 10, 2013 11:28 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Heath RF Probes on Ebay

Paul: There is a Heath 309C and 337 probe listed on Ebay right now. The nice thing about these probes is you get a very nice tube/body and probe tip. The 309C is a single diode ready to go. The 337 is a Demodulator probe that would be easy to re-configure to a RF probe and install a 1/4 phone plug instead of the spade lugs. Something to think about. Not as much fun as building your own, but depending on what kind of junk box you have may be just about as cheap to buy the Heath probes?

Might also give WB2KNR Jimmy Lamanteer an email and see if he has any extra Heath probes. He has upgraded to Boonton RF millivolt meters and may have Heath probes he is willing to sell?

Terry K9TW

[Non-text portions of this message have been removed]

42079. Re: ALC Circuit for TS-830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-11 23:55:02 UTC
From: Terry Wagoner
Topic: 42069 Message: 42079

Hi Don:

I have always wished Kenwood would have copied the old boat anchor radios of the 60s and 70s like the Heathkit DX-100B and TX-1 Apache and others. They had two front panel driver controls. The same air variable like Kenwoods to tune driver tuned circuit to resonance and a 25K 4 watt pot in series in the 5763 driver tube screen grid supply that controlled the amount of output power from the driver tube by varying screen grid voltage as you are doing.

Of course no room on the Kenwood front panel unless you used a concentric pot and I still dont know where it would go. Heath did have problems with their pot and I think the wattage rating was too low as I recall. I remember having to replace one in my Apache.

I have thought about mounting a driver tube SG pot on rear panel of my TS-830, but hate to drill holes in any of my rigs.

Today a much simpler and easier mod is to install a T-pad Attenuator in the coax jumper between the TS-830 and the Linear Amp. No need to remove rig covers or make any wiring changes. T-pad attenuators are very easy and cheap to make using Caddock Thick Film Resistors. These are readily available from Mouser.

For a 2dB attenuator pad that will result in approx 65 watts output you need two 5 ohm 30 watt resistors and one 200 ohm resistor and a bud box to mount them in. Can use a slide switch to by pass them or get fancy and use a relay to by pass them.

For a 3dB attenuator pad that will result in approx 50 watts output need two 10 ohm 30 watt resistors and one 150 ohm resistor.

It doesnt get much easier than this and you have not modified your hybrid.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "k5hfg" <dlbowders@...> wrote:
>
> Barry,Joe, et al,
> I use a 150K pot in the screen grid voltage line to the 12BY7A. I run a 811A amp and use 50-70 watts drive from my 830S. A much simpler mod to install and/or remove. It works fine on my 811A and I notice no irregularity with a bird 43P meter. I can run normal input from the 830 with no adjustment to mic gain. Works as tho no amp was in line and signal reports are good with no distortion reported. Worth consideration. It just seemed simpler to me.
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> P.S. I experimented with my test rig first (TS-530 and it takes a lot of abuse, bless it's heart) Not much that could go wrong with this mod but you just never know.
>
> 73, Don K5hfg
>

42080. Re: ALC Circuit for TS-830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-12 00:27:09 UTC
From: k5hfg
Topic: 42069 Message: 42080

Hello Terry,

Thanks for the reminder. I had recently aquired this 811A amp from a ham buddy. I have never used an amp but the guys talked me into it after they heard enough of my complaining about getting cut out of good CW DX contacts in pile ups. You know how frustrating that is after waiting patiently for an oppertunity and unkeying and hearing a needle bending signal who evidently put me out of contact. Anyway, I got the amp and for the last month have been trying to figure a way to tone the exciter down without detuning. When I saw your post a week or so ago I remembered all about the old days When we used real boatanchors. Anyway I got to work on a couple experiments and I am convinced it is the best way to go. I used an existing hole in the rear panel and rerouted the 210A line. I am still searching Mouser for a more suitable pot. I pulled some from my junk box but they are not stout enough for my taste. I did have an old 250K pot from some old Kenwood so I put that in my trusty experimental rig and It works fine down to no out put. I think I am going to have to spend some real money for the correct part. I did not realize how much they cost nowadays. Now you come up with an idea that is worth pursuing. I usually keep this stuff on file and I love to build so I will give it some attention during this summer when it is to hot to go outside here in Mississippi. I am a hobbiest and I do love this hobby. Thanks for being here. I have learned a great deal more from just reading.
73, Don K5HFG PS Sorry for the long post. It is what it is. I will let you know how I fare with this project.

42081. Re: [TS-520_820_530_830] Re: ALC Circuit for TS-830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-12 03:33:39 UTC
From: pmarkavage@...
Topic: 42069 Message: 42081

The DRIVE control on rigs like the Apache or DX-100 series was designed
to set the proper grid current for the final tubes to achieve proper
operating parameters. It was not designed to control output power.
Adjusting grid drive to a lower value just results in distortion to the
AM signal; too much grid drive results in premature failure of the final
tubes. On many boatanchor rigs, pad attenuators are still used to drop
power when driving a linear amplifier.

Pete, wa2cwa

On Sat, 11 May 2013 23:55:02 -0000 "Terry Wagoner" <wagstw46@...>
writes:
> Hi Don:
>
> I have always wished Kenwood would have copied the old boat anchor
> radios of the 60s and 70s like the Heathkit DX-100B and TX-1 Apache
> and others. They had two front panel driver controls. The same air
> variable like Kenwoods to tune driver tuned circuit to resonance and
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> have problems with their pot and I think the wattage rating was too
> low as I recall. I remember having to replace one in my Apache.
>
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> my TS-830, but hate to drill holes in any of my rigs.
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> in the coax jumper between the TS-830 and the Linear Amp. No need to
> remove rig covers or make any wiring changes. T-pad attenuators are
> very easy and cheap to make using Caddock Thick Film Resistors.
> These are readily available from Mouser.
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> For a 2dB attenuator pad that will result in approx 65 watts output
> you need two 5 ohm 30 watt resistors and one 200 ohm resistor and a
> bud box to mount them in. Can use a slide switch to by pass them or
> get fancy and use a relay to by pass them.
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> need two 10 ohm 30 watt resistors and one 150 ohm resistor.
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> It doesnt get much easier than this and you have not modified your

> hybrid.
>
> Terry K9TW

42082. Re: ALC Circuit for TS-830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-12 12:19:15 UTC
From: Terry Wagoner
Topic: 42069 Message: 42082

Yes Pete you are correct it was not intended to be used to reduce output power. My mistake. Should not go by 40 year ago memory.

I agree with use of pad attenuator. Could never afford a Bird or Weinchel or Collins. The new thick film resistors make it easy and affordable. Although some would balk at $10 for a resistor.

Will get all kinds of opinions about use of ALC with amps. Strong opinions on both sides. I know if you reduce power too low say around 10 watts it is possible to get 100 watts spikes on first syllables and first cw character. Some recommend not reducing output power below about 50%. I guess it depends on your exciter.

Some are proponents of using Audio Peak Limiter in the exciter mic line. I think common in broadcast studios but not so much for ham applications?

Some dont like the T-pad attenuator if the RX signal has to pass thru it. I think Kenwoods are hot enough that it is not a problem, but easy to key a relay to jumper out the attenuator in RX mode. I suppose at VHF could be measurable difference.

Thanks for keeping me straight. I do remember those cautions about not exceeding grid drive in the old Class C grid leak bias days. Fun times.

73s Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, pmarkavage@... wrote:
>
> The DRIVE control on rigs like the Apache or DX-100 series was designed
> to set the proper grid current for the final tubes to achieve proper
> operating parameters. It was not designed to control output power.
> Adjusting grid drive to a lower value just results in distortion to the
> AM signal; too much grid drive results in premature failure of the final
> tubes. On many boatanchor rigs, pad attenuators are still used to drop
> power when driving a linear amplifier.
>
> Pete, wa2cwa
>
> On Sat, 11 May 2013 23:55:02 -0000 "Terry Wagoner" <wagstw46@...>
> writes:
> > Hi Don:
> >
> > I have always wished Kenwood would have copied the old boat anchor
> > radios of the 60s and 70s like the Heathkit DX-100B and TX-1 Apache
> > and others. They had two front panel driver controls. The same air
> > variable like Kenwoods to tune driver tuned circuit to resonance and
> > a 25K 4 watt pot in series in the 5763 driver tube screen grid
> > supply that controlled the amount of output power from the driver
> > tube by varying screen grid voltage as you are doing.

> >
> > Of course no room on the Kenwood front panel unless you used a
> > concentric pot and I still dont know where it would go. Heath did
> > have problems with their pot and I think the wattage rating was too
> > low as I recall. I remember having to replace one in my Apache.
> >
> > I have thought about mounting a driver tube SG pot on rear panel of
> > my TS-830, but hate to drill holes in any of my rigs.
> >
> > Today a much simpler and easier mod is to install a T-pad Attenuator
> > in the coax jumper between the TS-830 and the Linear Amp. No need to
> > remove rig covers or make any wiring changes. T-pad attenuators are
> > very easy and cheap to make using Caddock Thick Film Resistors.
> > These are readily available from Mouser.
> >
> > For a 2dB attenuator pad that will result in approx 65 watts output
> > you need two 5 ohm 30 watt resistors and one 200 ohm resistor and a
> > bud box to mount them in. Can use a slide switch to by pass them or
> > get fancy and use a relay to by pass them.
> >
> > For a 3dB attenuator pad that will result in approx 50 watts output
> > need two 10 ohm 30 watt resistors and one 150 ohm resistor.
> >
> > It doesnt get much easier than this and you have not modified your
> > hybrid.
> >
> > Terry K9TW
>

42083. Re: ALC Circuit for TS-830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-12 13:07:14 UTC
From: k5hfg
Topic: 42069 Message: 42083

Good Morning All,

Have been reading up on the Attenuator Pads. I do not wish to buy a commercial device so I am going to build my own (more fun). Since I am not sure how much attenuation I need and I am using fixed value components, I may go the deluxe route and build a multiple pad with selector switch. That should keep me busy for the summer. I will have to get a part time job to pay for all the resistors. As I told Terry, I have received good reports with the drive reducer but do not have a Oscope so I can not tell anything as far as wave form but the P-P signal does not seem to spike. I have only reduced voltage slightly for 70 watts out of exciter. I have found a quick calculator on the web so that makes it easy to come up with some starting values. So, I am off to church. Will start with this project planning this afternoon. Thanks for the advice and opinions. 73, Don K5HFG

42084. Re: ALC Circuit for TS-830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-12 14:30:10 UTC
From: Terry Wagoner
Topic: 42069 Message: 42084

Yes Don it would be good to have a spectrum analyzer to evaluate the affects of various methods used to reduce rf output.

Kenwood ALC does it by varying the DC control voltage applied back at the TIF amp dual gate mosfet on the IF board. This results in lower rf drive being applied to the Transmit Mixer on the RF board which in turn lowers the rf drive applied to the Driver tube control grid.

Linearity is not degraded via this method and normal 2:1 to 3:1 average to peak power ratio is maintained with modulation. So talk power remains good and no splatter. It is always best to first load Kenwood finals to full RF output within max plate current limits and then reduce RF output by reducing rf drive at a very early stage. That is what using the 9v battery and pot applied to ALC jack does.

I suspect that if you are loading rig to full 100 watts out and then reducing Driver tube screen grid voltage to get your 60 to 70 watts you are probably OK but dont know that for sure without looking at it on spectrum analyzer. Absent that you can ask the boys running L-pan displays to take a look at your on air signal for you.

Here is a place to start studying T-pad attenuators. Phil Salas is a good engineer. I have purchased some of the units he builds and they are first class. Make sure you read to the end of his article.

http://www.ad5x.com/images/Articles/HiPwr%20Pad%20RevA.pdf

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "k5hfg" <dlbowders@...> wrote:
>
>
> Good Morning All,
>
> Have been reading up on the Attenuator Pads. I do not wish to buy a commercial device so I am going to build my own (more fun). Since I am not sure how much attenuation I need and I am using fixed value components, I may go the deluxe route and build a multiple pad with selector switch. That should keep me busy for the summer. I will have to get a part time job to pay for all the resistors. As I told Terry, I have received good reports with the drive reducer but do not have a Oscope so I can not tell anything as far as wave form but the P-P signal does not seem to spike. I have only reduced voltage slightly for 70 watts out of exciter. I have found a quick calculator on the web so that makes it easy to come up with some starting values. So, I am off to church. Will start with this project planning this afternoon. Thanks for the advice and opinions. 73, Don K5HFG
>

42085. TS 530SP

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-12 16:25:09 UTC
From: C A
Topic: 42085 Message: 42085

I recently purchased a mint 530SP. Sometimes when I turn on power, the meter needle will peg out and will take a second or so to drop back to normal, other times it only comes up to what ever the signal or noise level is. Suggestions?

Thanks,
C A
W5CAP

42086. Re: [TS-520_820_530_830] Re: ALC Circuit for TS-830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-12 05:11:21 UTC
From: Louis Wilen
Topic: 42069 Message: 42086

Terry,

You mentioned Caddock Thick Film Resistors. I had not heard of this product until now.

Are these really what they appear to be? A 100 Watt, 50 ohm resistor for about $10 in quantity 1 ?

http://www.mouser.com/ProductDetail/Caddock/MP9100-500-1/?qs=YqNA2qefETASdLVDRoPxoQ==

Seems that by adding a heat sink and the appropriate RF connector, it would be easy to make an inexpensive dummy load. Am I on the right path here?

Louis
W3LMW

On Sat, 11 May 2013 23:55:02 -0000 "Terry Wagoner" <mailto:wagstw46%40yahoo.com> wrote:

> Today a much simpler and easier mod is to install a T-pad Attenuator
> in the coax jumper between the TS-830 and the Linear Amp. No need to
> remove rig covers or make any wiring changes. T-pad attenuators are
> very easy and cheap to make using Caddock Thick Film Resistors.
> These are readily available from Mouser.

[other stuff removed]
>

> Terry K9TW

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.3336 / Virus Database: 3162/6317 - Release Date: 05/11/13

[Non-text portions of this message have been removed]

42087. Re: ALC Circuit for TS-830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-12 18:48:17 UTC
From: k5hfg
Topic: 42069 Message: 42087

Thanks for the heads up article. Looks like I am probly spiking and just do not have the proper equipment to see it. I think Phil's pad is what I need to work on. I like his idea of cascading several in the box, maybe 1,2and 3dB using a rotary switch. I am wary of sliding switches with RF. Just a throwback to the old days. I have set my mind to it and it will be a good learning experience. Will let all know the outcome. My old experimental 530 will be glad to hear I am not going to put her thru any more of this.
73, Don K5HFG

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Yes Don it would be good to have a spectrum analyzer to evaluate the affects of various methods used to reduce rf output.
>
> Kenwood ALC does it by varying the DC control voltage applied back at the TIF amp dual gate mosfet on the IF board. This results in lower rf drive being applied to the Transmit Mixer on the RF board which in turn lowers the rf drive applied to the Driver tube control grid.
>
> Linearity is not degraded via this method and normal 2:1 to 3:1 average to peak power ratio is maintained with modulation. So talk power remains good and no splatter. It is always best to first load Kenwood finals to full RF output within max plate current limits and then reduce RF output by reducing rf drive at a very early stage. That is what using the 9v battery and pot applied to ALC jack does.
>
> I suspect that if you are loading rig to full 100 watts out and then reducing Driver tube screen grid voltage to get your 60 to 70 watts you are probably OK but dont know that for sure without looking at it on spectrum analyzer. Absent that you can ask the boys running L-pan displays to take a look at your on air signal for you.
>
> Here is a place to start studying T-pad attenuators. Phil Salas is a good engineer. I have purchased some of the units he builds and they are first class. Make sure you read to the end of his article.
>
> http://www.ad5x.com/images/Articles/HiPwr%20Pad%20RevA.pdf
>
> Terry K9TW

42088. Re: TS 530SP

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-12 18:50:46 UTC
From: k5hfg
Topic: 42085 Message: 42088

Hello C A,
Set your AGC to FAST turn on the rig and watch the needle. Did it hang???

73, Don K5HFG

--- In TS-520_820_530_830@yahoogroups.com, "C A" <cphillips1@...> wrote:
>
> I recently purchased a mint 530SP. Sometimes when I turn on power, the meter needle will peg out and will take a second or so to drop back to normal, other times it only comes up to what ever the signal or noise level is. Suggestions?
>
> Thanks,
> C A
> W5CAP
>

42089. KENWOOD HYBRID USER NET (May 12th, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-12 19:08:49 UTC
From: mvgilger
Topic: 42089 Message: 42089

This coming weekend is Dayton Hamvention. I'll be unavailable Saturday to host the net because of this. The Sunday net will be unaffected.

The Saturday's net on 40 meter had 17 stations checking in with good band conditions. Out of the stations checking in, there was:

4 running TS-520(x)
0 running TS-530(x)
3 running TS-820(x)
2 running TS-830S

We had 7 new check-ins, VE3SHA, NY3R, K3CA, N4YNM, K3YUB, VE3BJR, and KB0CIG.

I was running my TS-940s. The rest were running non hybrids of one model or another.

The Sunday's net on 20 meter we had 19 stations checking in under very poor band conditions. We had 10 new check-in, AF5IB, KI6LQL, AD5ZO, VE4ZZ, KC0ZRV, KD0PQX, W3UWH, KE5APY, KB5T, and WA6EFT.

Out of those, there was:

2 running TS-520(x)
0 running TS-530(x)
1 running TS-820(x)
3 running TS-830S

I was running my TS-940s. The rest were running non hybrids of one model or another.

We have been having several people checking in regularly with their TS-430, TS-440, and TS-940's, which of course is not a hybrid, although over 30+ years old. Everyone is welcome as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a net control station, please send me an email. Currently it's just myself, WB2KNR and WB0SGA. I would like to get several more. If we do, we can alternate so everyone might be on a 3-4 week rotation. It's a lot of fun and a good way to make sure you station is optimized.

For anyone that has not heard, we have a new web site that WB4HFN is hosting. He currently has a very nice site for Drake, Collins and Heathkit and now Kenwood Hybrids. Good quality manuals plus sale flyers and brochures will be found here, along with user supplied information for all Hybrids.

His URL is:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754 check-ins, Sunday total 563 check-ins

November 2012, Saturday's, net total = 47, Sundays total = 20
December 2012, Saturday's, net total = 74, Sunday's total = 70
January 2013, Saturday's, net total = 93, Sunday's total = 87
February 2013, Saturday's net total = 103, Sundays total = 87
March 2013, Saturday's, net total = 112, Sunday's total =39
April 2013, Saturday's net total = 52, Sunday's total = 29
May 2013, Saturday's net total = 29, Sunday's total = 35(Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

42090. how are you?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-12 20:35:58 UTC
From: Jim Scott
Topic: 42090 Message: 42090

http://www.crosslifters.com/zzgavt.php

[Non-text portions of this message have been removed]

42091. Re: ALC Circuit for TS-830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-12 20:44:22 UTC
From: Terry Wagoner
Topic: 42069 Message: 42091

Yes you can make dummy loads or attenuators with them. They look like a audio power transistor with mounting hole, but only two leads on them. Here is an example. I have a commercial CelWave 250 watt dummy load at my bench that is built just like this one.

http://www.n0ss.net/dl_30w_hf-uhf.pdf

Terry K9TW
--- In TS-520_820_530_830@yahoogroups.com, "Louis Wilen" <louis.wilen@...> wrote:
>
> Terry,
>
> You mentioned Caddock Thick Film Resistors. I had not heard of this product until now.
>
> Are these really what they appear to be? A 100 Watt, 50 ohm resistor for about $10 in quantity 1 ?
>
> http://www.mouser.com/ProductDetail/Caddock/MP9100-500-1/?qs=YqNA2qefETASdLVDRoPxoQ==
>
> Seems that by adding a heat sink and the appropriate RF connector, it would be easy to make an inexpensive dummy load. Am I on the right path here?
>
> Louis
> W3LMW
>
>
> On Sat, 11 May 2013 23:55:02 -0000 "Terry Wagoner" <mailto:wagstw46%40yahoo.com>
> wrote:
>
>
> > Today a much simpler and easier mod is to install a T-pad Attenuator
> > in the coax jumper between the TS-830 and the Linear Amp. No need to
> > remove rig covers or make any wiring changes. T-pad attenuators are
> > very easy and cheap to make using Caddock Thick Film Resistors.
> > These are readily available from Mouser.
>
>
>
> [other stuff removed]
> >
>
> > Terry K9TW
>
>
> No virus found in this message.
> Checked by AVG - www.avg.com

> Version: 2013.0.3336 / Virus Database: 3162/6317 - Release Date: 05/11/13
>
>
> [Non-text portions of this message have been removed]
>

42092. RE: [TS-520_820_530_830] TS 530SP

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-12 21:30:13 UTC
From: fpath fpath
Topic: 42085 Message: 42092

G'DAY C.A.

In I use to have this problem not just with Hybird radios but all my radios, the fix I found was to have antenna siwtched to ground or disconnected when radio not in use so when turning radio on there was FSD of meter, then I switch antenna to radio on. A few of my friends have high end inline static\lightening protectors and they dont have this issue. It costs nothing to try and lots to gain. I also make it a habit of disconnecting antennas from radios when finished in the shack.

Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: cphillips1@...
Date: Sun, 12 May 2013 16:25:09 +0000
Subject: [TS-520_820_530_830] TS 530SP

I recently purchased a mint 530SP. Sometimes when I turn on power, the meter needle will peg out and will take a second or so to drop back to normal, other times it only comes up to what ever the signal or noise level is. Suggestions?

Thanks,
C A
W5CAP

[Non-text portions of this message have been removed]

42093. Re: TS 530SP

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-12 21:33:34 UTC
From: Terry Wagoner
Topic: 42085 Message: 42093

CA: It is normal for all Kenwood hybrids to have the S-meter peg hard full scale on power on. However, it should not stay there for extended time. If it is doing that come back for more help.

Here is why it is normal:

1. First how does the S-meter work? The S-meter is a FET based voltmeter that is monitoring your AGC bus line. The AGC bus is fed by 3.6vdc RF-1 reference voltage from the 9vdc regulator. With 3.6vdc on the bus the S-meter will read 0. Any lower voltage on the AGC bus will cause the meter to read up scale. When you receive an off air signal the AGC detector diodes turn on the AGC amp which pulls the AGC bus voltage down. The S-meter is reverse reading and when the FET sees the AGC bus voltage go down it drives the meter up scale. Same thing happens when you turn the RF gain pot CCW. You are lowering the AGC bus voltage and the FET meter sees this and drives the meter up scale.

2. So when the your radio is first turned on the AGC bus line is dead ie there is zero voltage on it. The Meter FET sees this and drives the meter full scale. The reason it slowly comes off the peg and back to zero is because it is charging the AGC bus timing capacitors that have discharged when rig was powered down.

3. The other thing that compounds it is that when you first turn on you will have off air signals immediately applied to the RF and IF amp chain and the AGC detector diodes will see this and quickly turn on the AGC amp and it presents a low Z load to the bus and pulls the AGC voltage down.

4. So you have dead AGC bus coming up to voltage and off air signals pulling it down ocuring at the same time.

5. It is best to leave your Antenna Switch to the ground or dummy load position with rig down powered. This should limit the S-meter upscale travel significantly with initial turn on. You will get some up scale deflection and slow decay, but greatly reduced. Try this and see if it improves.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "C A" <cphillips1@...> wrote:
>
> I recently purchased a mint 530SP. Sometimes when I turn on power, the meter needle will peg out and will take a second or so to drop back to normal, other times it only comes up to what ever the signal or noise level is. Suggestions?
>
> Thanks,
> C A
> W5CAP
>

42094. Re: TS 530SP

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-13 01:54:48 UTC
From: C A
Topic: 42085 Message: 42094

Tnx for your response Dave. I suspicioned possible static electricity discharge from the antenna. Just moved shack into the house from storage bldg. Just about finished. Will connect coax switch so I can ground antenna this week. Again tnx for response.

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
> G'DAY C.A.
>
> In I use to have this problem not just with Hybird radios but all my radios, the fix I found was to have antenna siwtched to ground or disconnected when radio not in use so when turning radio on there was FSD of meter, then I switch antenna to radio on. A few of my friends have high end inline static\lightening protectors and they dont have this issue. It costs nothing to try and lots to gain. I also make it a habit of disconnecting antennas from radios when finished in the shack.
>
> Dave
> VK5PDL
>
>
>
>
> To: TS-520_820_530_830@yahoogroups.com
> From: cphillips1@...
> Date: Sun, 12 May 2013 16:25:09 +0000
> Subject: [TS-520_820_530_830] TS 530SP
>
>
>
>
>
> I recently purchased a mint 530SP. Sometimes when I turn on power, the meter needle will peg out and will take a second or so to drop back to normal, other times it only comes up to what ever the signal or noise level is. Suggestions?
>
> Thanks,
> C A
> W5CAP
>
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

42095. Re: Anybody parting out some 599 twins?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-13 02:11:19 UTC
From: k0rs
Topic: 42035 Message: 42095

I just found some of these at our local Tru-Value hardware store. The "push pins" are actually Phillips screws, but they look great installed. They are stocked with the small parts in bin-boxes. Anyone interested can email me off the list and I will send you some photos installed.

Larry, K0RS

--- In TS-520_820_530_830@yahoogroups.com, Mark Gilger <mgilger@...> wrote:
>
> You can order them from Ken, K4EAA .
>
> http://www.k4eaa.com/parts.htm
>
> Mark
>
> At 02:09 PM 5/7/2013, dmir2001 wrote:
> >
> >
> >Hello group:
> >
> >Have a nice set of 599 twins here... The XMTR is
> >missing those push pin closers, or what ever
> >they are called, on the top lid ... Anybody have
> >a pair of these? Thanks, and very 73 ... John ... KB9PBM ...
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

42096. Re: TS 530SP

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-13 02:05:00 UTC
From: C A
Topic: 42085 Message: 42096

Terry, thanks so much for a wealth of info. I've just moved the rig into the house and am in process of tying the last knots. Running a Windom cut for 14.332 with twinlead coming directly into tuner. This week going to change feedline to ladder line. Will install so can ground antenna when not in use. Tnx again for your input....

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> CA: It is normal for all Kenwood hybrids to have the S-meter peg hard full scale on power on. However, it should not stay there for extended time. If it is doing that come back for more help.
>
> Here is why it is normal:
>
> 1. First how does the S-meter work? The S-meter is a FET based voltmeter that is monitoring your AGC bus line. The AGC bus is fed by 3.6vdc RF-1 reference voltage from the 9vdc regulator. With 3.6vdc on the bus the S-meter will read 0. Any lower voltage on the AGC bus will cause the meter to read up scale. When you receive an off air signal the AGC detector diodes turn on the AGC amp which pulls the AGC bus voltage down. The S-meter is reverse reading and when the FET sees the AGC bus voltage go down it drives the meter up scale. Same thing happens when you turn the RF gain pot CCW. You are lowering the AGC bus voltage and the FET meter sees this and drives the meter up scale.
>
> 2. So when the your radio is first turned on the AGC bus line is dead ie there is zero voltage on it. The Meter FET sees this and drives the meter full scale. The reason it slowly comes off the peg and back to zero is because it is charging the AGC bus timing capacitors that have discharged when rig was powered down.
>
> 3. The other thing that compounds it is that when you first turn on you will have off air signals immediately applied to the RF and IF amp chain and the AGC detector diodes will see this and quickly turn on the AGC amp and it presents a low Z load to the bus and pulls the AGC voltage down.
>
> 4. So you have dead AGC bus coming up to voltage and off air signals pulling it down ocuring at the same time.
>
> 5. It is best to leave your Antenna Switch to the ground or dummy load position with rig down powered. This should limit the S-meter upscale travel significantly with initial turn on. You will get some up scale deflection and slow decay, but greatly reduced. Try this and see if it improves.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "C A" <cphillips1@> wrote:
> >
> > I recently purchased a mint 530SP. Sometimes when I turn on power, the meter needle

will peg out and will take a second or so to drop back to normal, other times it only comes up to what ever the signal or noise level is. Suggestions?
> >
> > Thanks,
> > C A
> > W5CAP
> >
>

42097. Re: TS 530SP

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-13 06:45:29 UTC
From: ea4bl
Topic: 42085 Message: 42097

Hello all.
My approach to avoid this since I bought my TS 530 SP brand new in 1987 is as follows:
Always after turning it off I switch the AGC to -OFF-.
I became acostumed to do this from the very beginning.
So everytime I switch the radio on, I leave the AGC turned OFF so the S meter needle stays at its rest position.
Once the rig is turned on, you can switch the AGC to FAST or to SLOW and you¨ll see the needle doesn´t pegs to the right.
Hope this helps.

73 de Fernando, EA4BL.

42098. Re: TS 530SP

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-13 02:20:31 UTC
From: C A
Topic: 42085 Message: 42098

Don, it does not hang with AGC in fast position. Immediately goes back to the left in a split second. The strange thing is that it doesn't peg out in the slow position everytime I power up. Sometimes, it will just come up to whatever the noise/signal level is. Also it NEVER hangs when it pegs, it only takes a couple of second for it to return to normal reading. Going to begin grounding the antenna and see if that hels.

I absolutely love the 530SP. Receiver is quiet. VFO ratio is a little fast for a 75 year old Ole Codger but I'm getting there!! Sometimes drifts a 100 cycles during warm up but then stable as a rock. Using M60A and have been getting excellent reports. Thanks for your response...didn't mean to write a dissertation.

--- In TS-520_820_530_830@yahoogroups.com, "k5hfg" <dlbowders@...> wrote:
>
> Hello C A,
> Set your AGC to FAST turn on the rig and watch the needle. Did it hang???
>
> 73, Don K5HFG
>
> --- In TS-520_820_530_830@yahoogroups.com, "C A" <cphillips1@> wrote:
> >
> > I recently purchased a mint 530SP. Sometimes when I turn on power, the meter needle will peg out and will take a second or so to drop back to normal, other times it only comes up to what ever the signal or noise level is. Suggestions?
> >
> > Thanks,
> > C A
> > W5CAP
> >
>

42099. Re: [TS-520_820_530_830] Re: TS 530SP

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-13 10:26:41 UTC
From: C A Phillips
Topic: 42085 Message: 42099

Tnx Fernando. I had not thought of that. Easy solution. Also this morning prior to turning on the rig I shorted both sides of lead-in to ground. This worked also, at least this one time.

--- On Mon, 5/13/13, ea4bl <WATIMETRO@...> wrote:

From: ea4bl <WATIMETRO@...>
Subject: [TS-520_820_530_830] Re: TS 530SP
To: TS-520_820_530_830@yahoogroups.com
Date: Monday, May 13, 2013, 1:45 AM

Hello all.
My approach to avoid this since I bought my TS 530 SP brand new in 1987 is as follows:
Always after turning it off I switch the AGC to -OFF-.
I became acostumed to do this from the very beginning.
So everytime I switch the radio on, I leave the AGC turned OFF so the S meter needle stays at its rest position.
Once the rig is turned on, you can switch the AGC to FAST or to SLOW and you¨ll see the needle doesn´t pegs to the right.
Hope this helps.

73 de Fernando, EA4BL.

[Non-text portions of this message have been removed]

42100. AT-200 Meter Faulty?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-13 12:45:05 UTC
From: cl5ltd
Topic: 42100 Message: 42100

I have an AT-200 with an erratic and inaccurate meter.

Power output reading is considerably down on what I consider to be an accurate meter AT-200 shows a little over 50 watts - the other power meter shows closer to 100 watts. Same radio, frequency and settings (TS-520S)

When I attempt to measure SWR, when calibrating the needle swings around erratically - even when not touching the controls. Sometimes it will settle and operate as it should but it's touchy.

The SWR readings don't seem too far off my reference meter 1.5:1 showed closer to 2:1 on ATU-200

A visual inspection of the small circuit board components doesn't reveal any obvious faults or failed parts. Everything else is intact and appears complete

So I'm not confident in the readings I'm getting. What steps would group members suggest I take to further assess the unit?

Could a replacement Kenwood meter be sourced? Should I just look to salvage a similar size meter from simple SWR meter? There's plenty of low cost SWR meters around but how could I determine if the meter would suit - apart from physically fitting the ATU window

I hope there life left in this unit as tuner, SWR meter & antenna switch would be a handy addition to the station

Any advice appreciated
VK5LTD

42101. Re: [TS-520_820_530_830] AT-200 Meter Faulty?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-13 15:02:49 UTC
From: Mike
Topic: 42100 Message: 42101

It's quite possible that VR1, VR2 and VR3 pots are dirty. Try cleaning
them then perform the alignment again.

73
Mike W5RKL

On 5/13/2013 7:45 AM, cl5ltd wrote:
>
> I have an AT-200 with an erratic and inaccurate meter.
>
> Power output reading is considerably down on what I consider to be an
> accurate meter AT-200 shows a little over 50 watts - the other power
> meter shows closer to 100 watts. Same radio, frequency and settings
> (TS-520S)
>
> When I attempt to measure SWR, when calibrating the needle swings
> around erratically - even when not touching the controls. Sometimes it
> will settle and operate as it should but it's touchy.
>
> The SWR readings don't seem too far off my reference meter 1.5:1
> showed closer to 2:1 on ATU-200
>
> A visual inspection of the small circuit board components doesn't
> reveal any obvious faults or failed parts. Everything else is intact
> and appears complete
>
> So I'm not confident in the readings I'm getting. What steps would
> group members suggest I take to further assess the unit?
>
> Could a replacement Kenwood meter be sourced? Should I just look to
> salvage a similar size meter from simple SWR meter? There's plenty of
> low cost SWR meters around but how could I determine if the meter
> would suit - apart from physically fitting the ATU window
>
> I hope there life left in this unit as tuner, SWR meter & antenna
> switch would be a handy addition to the station
>
> Any advice appreciated
> VK5LTD
>
>

[Non-text portions of this message have been removed]

42102. Re: [TS-520_820_530_830] Re: Anybody parting out some 599 twins?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-13 15:46:46 UTC
From: Charles Rodecap
Topic: 42035 Message: 42102

Check on the Fox Tango Site, I have seen these listed there in the past. I think in the 1 to 2 $ range each.
Just an idea

Charlie

From: k0rs <k0rs@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, May 12, 2013 10:11 PM
Subject: [TS-520_820_530_830] Re: Anybody parting out some 599 twins?

I just found some of these at our local Tru-Value hardware store. The "push pins" are actually Phillips screws, but they look great installed. They are stocked with the small parts in bin-boxes. Anyone interested can email me off the list and I will send you some photos installed.

Larry, K0RS

--- In TS-520_820_530_830@yahoogroups.com, Mark Gilger <mgilger@...> wrote:
>
> You can order them from Ken, K4EAA .
>
> http://www.k4eaa.com/parts.htm
>
> Mark
>
> At 02:09 PM 5/7/2013, dmir2001 wrote:
> >
> >
> >Hello group:
> >
> >Have a nice set of 599 twins here... The XMTR is
> >missing those push pin closers, or what ever
> >they are called, on the top lid ... Anybody have
> >a pair of these? Thanks, and very 73 ... John ... KB9PBM ...
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

42103. Re: TS 530SP

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-13 17:20:55 UTC
From: Terry Wagoner
Topic: 42085 Message: 42103

I think you are focusing on a minor problem. Good practice dictates you get the antenna off the SO-239 or ground it. Far more potential for ESD to damage your prize TS-530SP than worrying about S-meter deflection on power on. Rewinding L41 and replacing Q1 is no fun.

If you are using open wire feeders or ladder line to a tuner you must transition to a piece of coax. If you have no switch in that coax jumper suggest you do so or unscrew the PL-259 off back of rig.

A good antenna switch will have a ground position so you dont have to constantly screw and unscrew the PL-259. Even if you have Polyphaser or similar protection on your feedline it is smart to ground or disconnect the coax from the rig.

I always place antenna switch (Alpha-Delta)in ground position and if I am home when there is near by thunderstorms I unscrew the Pl-259 and unplug rig from 120vac line.

In old days when I ran tuned feeders we would place a non-resistor spark plug on each leg of the open wire feeder to form a spark gap and we would install a 200k to 300k ohm static drain resistor on each leg to ground. Today they would probably use a more modern GDT.

If you want to place AGC to off position it is your radio and you can do as you want, but it wont protect your receiver front end from nearby lightning and ESD.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, C A Phillips <cphillips1@...> wrote:
>
> Tnx Fernando.Â I had not thought of that.Â Easy solution.Â Also this morning prior to turning on the rig I shorted both sides of lead-in to ground.Â This worked also, at least this one time.
>
> --- On Mon, 5/13/13, ea4bl <WATIMETRO@...> wrote:
>
>
> From: ea4bl <WATIMETRO@...>
> Subject: [TS-520_820_530_830] Re: TS 530SP
> To: TS-520_820_530_830@yahoogroups.com
> Date: Monday, May 13, 2013, 1:45 AM
>
>
>
> Â
>
>
>
> Hello all.
> My approach to avoid this since I bought my TS 530 SP brand new in 1987 is as follows:
> Always after turning it off I switch the AGC to -OFF-.

> I became acostumed to do this from the very beginning.
> So everytime I switch the radio on, I leave the AGC turned OFF so the S meter needle stays at its rest position.
> Once the rig is turned on, you can switch the AGC to FAST or to SLOW and youÂ¨ll see the needle doesnÂ´t pegs to the right.
> Hope this helps.
>
> 73 de Fernando, EA4BL.
>
>
>
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

42104. Re: TS 530SP

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-13 20:54:35 UTC
From: k5hfg
Topic: 42085 Message: 42104

Hello C A,
I was curious as to whether you had a problem or not and I did not explain my question. Now you know why they do that. Hope you enjoy your 530SP. Another fine piece from Kenwood. Take Terry's advice and protect it. I use the unplug method. Been doing for 40 years and it is good insurance. 73, Don K5HFG

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> I think you are focusing on a minor problem. Good practice dictates you get the antenna off the SO-239 or ground it. Far more potential for ESD to damage your prize TS-530SP than worrying about S-meter deflection on power on. Rewinding L41 and replacing Q1 is no fun.
>
> If you are using open wire feeders or ladder line to a tuner you must transition to a piece of coax. If you have no switch in that coax jumper suggest you do so or unscrew the PL-259 off back of rig.
>
> A good antenna switch will have a ground position so you dont have to constantly screw and unscrew the PL-259. Even if you have Polyphaser or similar protection on your feedline it is smart to ground or disconnect the coax from the rig.
>
> I always place antenna switch (Alpha-Delta)in ground position and if I am home when there is near by thunderstorms I unscrew the Pl-259 and unplug rig from 120vac line.
>
> In old days when I ran tuned feeders we would place a non-resistor spark plug on each leg of the open wire feeder to form a spark gap and we would install a 200k to 300k ohm static drain resistor on each leg to ground. Today they would probably use a more modern GDT.
>
> If you want to place AGC to off position it is your radio and you can do as you want, but it wont protect your receiver front end from nearby lightning and ESD.
>
> Terry K9TW

42105. Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-13 21:02:45 UTC
From: adrian.langford@ymail.com
Topic: 42105 Message: 42105

Picked up this weekend and absolutely love it. Such a pleasure to operate!

Dial calibration was out by about 25kHz so I reset this, and previous owner only used for listening which isprobably why bias current was way off but easy to set with the pot behind side panel.

Getting well over 100W on 40, 20 and 15 but no ALC signal whatsoever on 10m so presume the 12BY7 driver could be on way out?

Probably needs alignment when tool arrives (I was guy who asked about why metal hex key could crack slugs) as the Drive position is very different for peak ALC on Tx compared with peak signal receive. On the calibrator signal difference is around S7 to S2 so justifies aligning.

The receive audio is lovely- even my XYL commented on how great it sounds and she normally doesn't like sound of rigs!

I was also curious about the WWV 15MHz receive position and its use for calibrating the marker. If I tune very carefully I can sometimes hear the WWV second beeps but sometimes can't find them (maybe propagation)! Why does manual say rig must be in Tune position (with 25kHz Cal on) to adjust the marker frequency? Do you zero beat against the second beeps or a carrier tone? Is WWV actually transmitted as an AM signal?

Had some luck at a vintage radio rally I went to day after I got the 520SE. Found pair of new old stock RCA 6146Bs and a GE 12BY7A. I think the finals are ok but good to have "new" spares and the driver may be source of 10m problem. I was also on lookout for a suitable micropone - ideally MC50 - and there was one at show which had never been yout its box for same price average used ones go for on eBay. Honestly it looks brand new with shiny plugs and stand - real time capsule.

When I've finished fiddling with the rig Ihope to meet some of you on the air soon!

73 Adrian G4IQW

42106. Need TS-530 SP Front Panel

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-14 00:27:08 UTC
From: k5hfg
Topic: 42106 Message: 42106

Hello All,
I am looking everyplace for a front panel for a 530 SP rebuild. Finished except for Face. They are very hard to find and I would consider a parts rig if it is in good outside shape. But I do not want a transformer burn out. Been there done that. To hard to clean up and still some will not come out. I hate to pester the group but, I have no where else to go.............

Thanks, Don K5HFG

42107. Re: [TS-520_820_530_830] Need TS-530 SP Front Panel

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-14 01:10:02 UTC
From: Roger VE7LB
Topic: 42106 Message: 42107

Hi Don,
See eBay number 251088073936.

73
Roger VE7LB
----- Original Message -----
From: k5hfg
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, May 13, 2013 5:27 PM
Subject: [TS-520_820_530_830] Need TS-530 SP Front Panel

Hello All,
I am looking everyplace for a front panel for a 530 SP rebuild. Finished except for Face. They are very hard to find and I would consider a parts rig if it is in good outside shape. But I do not want a transformer burn out. Been there done that. To hard to clean up and still some will not come out. I hate to pester the group but, I have no where else to go.............

Thanks, Don K5HFG

[Non-text portions of this message have been removed]

42108. Re: Need TS-530 SP Front Panel

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-14 01:36:46 UTC
From: k5hfg
Topic: 42106 Message: 42108

Roger,
Thanks but that is a 530 panel and I need the 530 SP. See, I told you I have no where else to go.....Thanks for looking but I think this may be quite a wait.
73, Don K5HFG

--- In TS-520_820_530_830@yahoogroups.com, "Roger VE7LB" <Roger_VE7LB@...> wrote:
>
> Hi Don,
> See eBay number 251088073936.
>
> 73
> Roger VE7LB
> ----- Original Message -----
> From: k5hfg
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, May 13, 2013 5:27 PM
> Subject: [TS-520_820_530_830] Need TS-530 SP Front Panel
>
>
>
> Hello All,
> I am looking everyplace for a front panel for a 530 SP rebuild. Finished except for Face. They are very hard to find and I would consider a parts rig if it is in good outside shape. But I do not want a transformer burn out. Been there done that. To hard to clean up and still some will not come out. I hate to pester the group but, I have no where else to go.....
>
> Thanks, Don K5HFG
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

42109. RE: [TS-520_820_530_830] Re: Need TS-530 SP Front Panel

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-14 01:57:05 UTC
From: fpath fpath
Topic: 42106 Message: 42109

Don,

Have you tried Bob, KE5FTF, I have got some great things from him in the past. Can you advise on what is wrong with your fromnt panel that warrants a replacement? I maybe able to help you with some refurbishment techniques

73's
Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: dlbowders@...
Date: Tue, 14 May 2013 01:36:46 +0000
Subject: [TS-520_820_530_830] Re: Need TS-530 SP Front Panel

Roger,
Thanks but that is a 530 panel and I need the 530 SP. See, I told you I have no where else to go.....Thanks for looking but I think this may be quite a wait.
73, Don K5HFG

--- In TS-520_820_530_830@yahoogroups.com, "Roger VE7LB" <Roger_VE7LB@...> wrote:
>
> Hi Don,
> See eBay number 251088073936.
>
> 73
> Roger VE7LB
> ----- Original Message -----
> From: k5hfg
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, May 13, 2013 5:27 PM
> Subject: [TS-520_820_530_830] Need TS-530 SP Front Panel
>
>
>
> Hello All,
> I am looking everyplace for a front panel for a 530 SP rebuild. Finished except for Face. They are very hard to find and I would consider a parts rig if it is in good outside shape. But I do not want a transformer burn out. Been there done that. To hard to clean up and still some will not come out. I hate to pester the group but, I have no where else to go.....
>
> Thanks, Don K5HFG
>
>
>

>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

42110. sm 220 station monitor

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-14 04:07:21 UTC
From: yioutta_99
Topic: 42110 Message: 42110

Has anybody have any experience with the kenwood station monitor? As my 520s ages, it would nice to keep a better eye on things. Is there something out there newer better digital? I like the idea of getting the Kenwood accessories for a matching station, but if there is something better/cheaper/more functional..I'll consider it.

thanks

steve
N7LWF

42111. fw: hi

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-14 15:16:21 UTC
From: Steve Marriott
Topic: 42111 Message: 42111

http://www.countryboycreations.com/ovfdnrvoh.php

[Non-text portions of this message have been removed]

42112. Re: Need TS-530 SP Front Panel

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-14 20:56:54 UTC
From: k5hfg
Topic: 42106 Message: 42112

Hello Dave,
No, I did not contact Bob, I figured he would see the post and call out if he has one. I have a face panel that is damaged on the bezel. It is chipped and cracked and what looks like drag gouges on the top. The rig was beat up fairly well and was a wreck inside when I got it last fall. It looks and works FB now except for the face. Gess I will just keep looking.

73, Don K5HFG

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
> Don,
>
> Have you tried Bob, KE5FTF, I have got some great things from him in the past. Can you advise on what is wrong with your fromnt panel that warrants a replacement? I maybe able to help you with some refurbishment techniques
>
> 73's
> Dave
> VK5PDL

42113. RE: [TS-520_820_530_830] Re: Need TS-530 SP Front Panel

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-14 22:42:34 UTC
From: fpath fpath
Topic: 42106 Message: 42113

Hi Don,

This is a fairly easy fix, but what you need is time, patience and a good colour match. If you can take a couple of pictures and send, this might be able to be fixed.

73's

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: dlbowders@...
Date: Tue, 14 May 2013 20:56:54 +0000
Subject: [TS-520_820_530_830] Re: Need TS-530 SP Front Panel

Hello Dave,
No, I did not contact Bob, I figured he would see the post and call out if he has one. I have a face panel that is damaged on the bezel. It is chipped and cracked and what looks like drag gouges on the top. The rig was beat up fairly well and was a wreck inside when I got it last fall. It looks and works FB now except for the face. Gess I will just keep looking.

73, Don K5HFG

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
> Don,
>
> Have you tried Bob, KE5FTF, I have got some great things from him in the past. Can you advise on what is wrong with your fromnt panel that warrants a replacement? I maybe able to help you with some refurbishment techniques
>
> 73's
> Dave
> VK5PDL

[Non-text portions of this message have been removed]

42114. Re: Need TS-530 SP Front Panel

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-14 23:32:19 UTC
From: k5hfg
Topic: 42106 Message: 42114

No Dave, What I need is a new undamaged front panel. It is dented and nicked to a great degree and I do not care to try silk screening. I want a good condition face panel. I do not like body work on these Hybrids. A good eye can always pick it out if it is not done by a professional. I do not have that luxury in my hobby budget. That is why I repair myself. Not that there is anything wrong with that, I just do not care to engage in it. My XYL already hints about how much time I spend in the shack. This could start a war I will not win. Besides, I already have a project for the next few months building some attenuation pads and doing a little experimenting. That takes precedent over the panel, plus I will have time to find what I am looking for.

I appreciate your eagerness, I am to long in the tooth for it. I want to spend what time I have left doing real radio. Hi
73, Don K5HFG

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
> Hi Don,
>
>
>
> This is a fairly easy fix, but what you need is time, patience and a good colour match. If you can take a couple of pictures and send, this might be able to be fixed.
>
>
>
> 73's
>
> Dave
>
> VK5PDL

42115. TS-830S Bandswitch Coupler Replacement

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-14 23:09:50 UTC
From: sberman66
Topic: 42115 Message: 42115

Hello to the group,

The coupler on the bandswitch shaft on my TS-830S has broken/cracked inside of the PA compartment. I've got all of the covers removed and am in a bit of a quandry as how I should proceed. It almost looks like I need to disassemble the entire rf enclosure to get at the coupler. Does anyone have any experience with the proper procedure to follow to perform this type of repair? My experience is mainly on Collins S/Line and Drake gear, so any assistance would be much appreciated.

73,
Steve, N6HK

42116. Re: [TS-520_820_530_830] TS-830S Bandswitch Coupler Replacement

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-15 00:19:54 UTC
From: Mark L. Hammond
Topic: 42115 Message: 42116

Hi Steve,

We are lucky---it's well documented with photos in at least 2 places! Also, you can order the part from either place:

http://www.k4eaa.com/couplers.htm

http://www.hybridrestore.com/coupler-mounting/

I've done this in 2 radios thus far--the TS-530S and TS-830S. Take your time, and get a LONG Allen wrench or you'll wear out your fingers...heh. Results are great!

Also, take care when trying to break the old one to get it out. On one rig, it seemed like I had trouble staying out of the way of a coil, so keep a close eye on that. Don't want to damage one.

All the HIGH VOLTAGE IS PRESENT AND COULD KILL YOU warnings apply of course!!

73,

Mark N8MH

At 11:09 PM 5/14/2013 +0000, you wrote:
>
>
>Hello to the group,
>
>The coupler on the bandswitch shaft on my TS-830S has broken/cracked inside of the PA compartment. I've got all of the covers removed and am in a bit of a quandry as how I should proceed. It almost looks like I need to disassemble the entire rf enclosure to get at the coupler. Does anyone have any experience with the proper procedure to follow to perform this type of repair? My experience is mainly on Collins S/Line and Drake gear, so any assistance would be much appreciated.
>
>73,
>Steve, N6HK
>
>

[Non-text portions of this message have been removed]

42117. RE: [TS-520_820_530_830] TS-830S Bandswitch Coupler Replacement

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-15 01:06:35 UTC
From: fpath fpath
Topic: 42115 Message: 42117

Steve,

As Mark has stated, but make sure you get the alignment correct. Have a look in the file section and you will see photos of the correct alginment, you will only need this if you have turn band switch and shaft turned and switch didn't. Come back if you have any problems, long Tee allen key is the best.

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: marklhammond@...
Date: Tue, 14 May 2013 20:19:54 -0400
Subject: Re: [TS-520_820_530_830] TS-830S Bandswitch Coupler Replacement

Hi Steve,

We are lucky---it's well documented with photos in at least 2 places! Also, you can order the part from either place:

http://www.k4eaa.com/couplers.htm

http://www.hybridrestore.com/coupler-mounting/

I've done this in 2 radios thus far--the TS-530S and TS-830S. Take your time, and get a LONG Allen wrench or you'll wear out your fingers...heh. Results are great!

Also, take care when trying to break the old one to get it out. On one rig, it seemed like I had trouble staying out of the way of a coil, so keep a close eye on that. Don't want to damage one.

All the HIGH VOLTAGE IS PRESENT AND COULD KILL YOU warnings apply of course!!

73,

Mark N8MH

At 11:09 PM 5/14/2013 +0000, you wrote:
>
>
>Hello to the group,
>
>The coupler on the bandswitch shaft on my TS-830S has broken/cracked inside of the PA compartment. I've got all of the covers removed and am in a bit of a quandry as how I should proceed. It almost looks like I need to disassemble the entire rf enclosure to get at the coupler. Does anyone have any experience with the proper procedure to follow to perform this type of repair? My experience is mainly on Collins S/Line and Drake gear, so

any assistance would be much appreciated.
>
>73,
>Steve, N6HK
>
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

42118. Re: TS-830S Bandswitch Coupler Replacement

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-15 02:09:18 UTC
From: Terry Wagoner
Topic: 42115 Message: 42118

I agree with the use of a long T-handle allen wrench. I also use a fresh X-acto hobby knife (razor sharp blade) and I reach thru the window and cut the coupler flexible grid members. Makes for very easy removal then.

Strongly recommend you read Mike Waldrops W5RKL procedure for aligning the two band switch shafts over several times before you start. He has posted it here several times.

Be careful not to over torque the allen head (grub) screws on the replacement brass couplers. Easy to strip the threads.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
> Steve,
>
>
>
> As Mark has stated, but make sure you get the alignment correct. Have a look in the file section and you will see photos of the correct alginment, you will only need this if you have turn band switch and shaft turned and switch didn't. Come back if you have any problems, long Tee allen key is the best.
>
>
>
> Dave
>
> VK5PDL
>
>
>
>
> To: TS-520_820_530_830@yahoogroups.com
> From: marklhammond@...
> Date: Tue, 14 May 2013 20:19:54 -0400
> Subject: Re: [TS-520_820_530_830] TS-830S Bandswitch Coupler Replacement
>
>
>
>
>
>
> Hi Steve,
>
> We are lucky---it's well documented with photos in at least 2 places! Also, you can order the part from either place:
>

> http://www.k4eaa.com/couplers.htm
>
> http://www.hybridrestore.com/coupler-mounting/
>
> I've done this in 2 radios thus far--the TS-530S and TS-830S. Take your time, and get a LONG Allen wrench or you'll wear out your fingers...heh. Results are great!
>
> Also, take care when trying to break the old one to get it out. On one rig, it seemed like I had trouble staying out of the way of a coil, so keep a close eye on that. Don't want to damage one.
>
> All the HIGH VOLTAGE IS PRESENT AND COULD KILL YOU warnings apply of course!!
>
> 73,
>
> Mark N8MH
>
> At 11:09 PM 5/14/2013 +0000, you wrote:
> >
> >
> >Hello to the group,
> >
> >The coupler on the bandswitch shaft on my TS-830S has broken/cracked inside of the PA compartment. I've got all of the covers removed and am in a bit of a quandry as how I should proceed. It almost looks like I need to disassemble the entire rf enclosure to get at the coupler. Does anyone have any experience with the proper procedure to follow to perform this type of repair? My experience is mainly on Collins S/Line and Drake gear, so any assistance would be much appreciated.
> >
> >73,
> >Steve, N6HK
> >
> >
>
> [Non-text portions of this message have been removed]
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>
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> [Non-text portions of this message have been removed]
>

42119. TS-830S Bandswitch Coupler Removal/Replacement

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-15 03:55:14 UTC
From: sberman66
Topic: 42119 Message: 42119

Thanks to Mark, Dave and Terry for the good information regarding my problem with removing and replacing the bandswitch coupler on my '830.

I used a different procedure that I would like to share with the Group. What I did was to remove the plate tuning capacitor. This entailed unsoldering some components, but nothing too difficult. I did this as I didn't have access to a long arm metric key set. This enabled a clear shot to the coupler and shaft. I was able to use a standard set of metric keys that would've been too short otherwise to follow the more standard procedure. Anyway, I thought I would pass this on for what it's worth.

Again, thanks to this Group, for all of the great advice on the care and feeding of these classic rigs.

Steve, N6HK

42120. Re: [TS-520_820_530_830] TS-830S Bandswitch Coupler Removal/Replacement

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-15 10:39:15 UTC
From: Mark L. Hammond
Topic: 42119 Message: 42120

Steve,

Ha! More than one way to skin a cat. Nice work.

I didn't have a long Allen wrench, either---I got by with patience and using a small pair of needle nose pliers to turn it when my fat fingers wouldn't...delicate work, but got the job done.

Nice to have a firm bandswitch now, isn't it??

73,

Mark N8MH

At 03:55 AM 5/15/2013 +0000, you wrote:
>
>
>Thanks to Mark, Dave and Terry for the good information regarding my problem with removing and replacing the bandswitch coupler on my '830.
>
>I used a different procedure that I would like to share with the Group. What I did was to remove the plate tuning capacitor. This entailed unsoldering some components, but nothing too difficult. I did this as I didn't have access to a long arm metric key set. This enabled a clear shot to the coupler and shaft. I was able to use a standard set of metric keys that would've been too short otherwise to follow the more standard procedure. Anyway, I thought I would pass this on for what it's worth.
>
>Again, thanks to this Group, for all of the great advice on the care and feeding of these classic rigs.
>
>Steve, N6HK
>
>

[Non-text portions of this message have been removed]

42121. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-15 19:40:10 UTC
From: paul.nussbaum
Topic: 42105 Message: 42121

Sounds nice!

If you tune just below WWW frequency you will hear a side tone. When you set function to CAL25 the crystal's harmonic every 25KHz is inserted and makes side tones available, so there will be one for the WWW frequency.

If all is well, those two side tones will match, or be close enough to make a very slow beat frequency. It may help to use IF Shift to hear it.. If the WWW side tone is faint, it may help to switch the CAL25 on and off to hear and compare.

At some point in approaching a match in frequency (using the adjustment to the marker crystal to zero beat the WWW) you won't be able to hear the beat difference as audio, so you can switch to looking at the S meter - when the difference gets down to just a few Hz the meter's time base and dynamics will allow it to wiggle with the beat frequency, and as you adjust closer it will slow down and pump slowly... you can adjust to get that to slow down to as close to dead still as you feel inclined. It won't really stay there, but it will be close.

Not familiar with the SE, but the band for WWW may be either disabled or just not present in the transmit selection modes, so TUNE may be the only one that hears it for that rig.

--- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@..." <adrian@...> wrote:
>
> Picked up this weekend and absolutely love it. Such a pleasure to operate!
>
> Dial calibration was out by about 25kHz so I reset this, and previous owner only used for listening which isprobably why bias current was way off but easy to set with the pot behind side panel.
>
> Getting well over 100W on 40, 20 and 15 but no ALC signal whatsoever on 10m so presume the 12BY7 driver could be on way out?
>
> Probably needs alignment when tool arrives (I was guy who asked about why metal hex key could crack slugs) as the Drive position is very different for peak ALC on Tx compared with peak signal receive. On the calibrator signal difference is around S7 to S2 so justifies aligning.
>
> The receive audio is lovely- even my XYL commented on how great it sounds and she normally doesn't like sound of rigs!
>
> I was also curious about the WWV 15MHz receive position and its use for calibrating the marker. If I tune very carefully I can sometimes hear the WWV second beeps but sometimes can't find them (maybe propagation)! Why does manual say rig must be in Tune position (with 25kHz Cal on) to adjust the marker frequency? Do you zero beat against the second beeps or a carrier tone? Is WWV actually transmitted as an AM signal?
>

> Had some luck at a vintage radio rally I went to day after I got the 520SE. Found pair of new old stock RCA 6146Bs and a GE 12BY7A. I think the finals are ok but good to have "new" spares and the driver may be source of 10m problem. I was also on lookout for a suitable micropone - ideally MC50 - and there was one at show which had never been yout its box for same price average used ones go for on eBay. Honestly it looks brand new with shiny plugs and stand - real time capsule.
>
> When I've finished fiddling with the rig Ihope to meet some of you on the air soon!
>
> 73 Adrian G4IQW
>

42122. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-15 20:04:32 UTC
From: roberteleazer@rocketmail.com
Topic: 42105 Message: 42122

According to the TS-520 service bulletins, no ALC indication on 10M is "normal." And that is the way it is with my 520. I assume the 520SE is the same, although there are 520 owners who say they do get ALC on 10M.

So your driver tube probably is Okay, given the amount of RF output you are getting.

Good Luck!

Robert
WB5WSV
--- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@..." <adrian@...> wrote:
>
> Picked up this weekend and absolutely love it. Such a pleasure to operate!
>
> Dial calibration was out by about 25kHz so I reset this, and previous owner only used for listening which isprobably why bias current was way off but easy to set with the pot behind side panel.
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>
> Probably needs alignment when tool arrives (I was guy who asked about why metal hex key could crack slugs) as the Drive position is very different for peak ALC on Tx compared with peak signal receive. On the calibrator signal difference is around S7 to S2 so justifies aligning.
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> The receive audio is lovely- even my XYL commented on how great it sounds and she normally doesn't like sound of rigs!
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> I was also curious about the WWV 15MHz receive position and its use for calibrating the marker. If I tune very carefully I can sometimes hear the WWV second beeps but sometimes can't find them (maybe propagation)! Why does manual say rig must be in Tune position (with 25kHz Cal on) to adjust the marker frequency? Do you zero beat against the second beeps or a carrier tone? Is WWV actually transmitted as an AM signal?
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> 73 Adrian G4IQW
>

42123. Re: [TS-520_820_530_830] Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-15 22:12:43 UTC
From: Jerry Barr
Topic: 42105 Message: 42123

Hello all ,i am new to the group/ first post/ how is the wwv get disabled / mine doesnt work/never haas since i got it two yrs ago/now the vfo is getting intermittant so need to clean it or//gonna go take some photos before i get too deep into it hihi /helps me get it back the way it was /thanks

Jerry KJ6NTL

From: paul.nussbaum <paul.nussbaum@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 15, 2013 12:40 PM
Subject: [TS-520_820_530_830] Re: Progress report new 520SE acquisition

Sounds nice!

If you tune just below WWW frequency you will hear a side tone. When you set function to CAL25 the crystal's harmonic every 25KHz is inserted and makes side tones available, so there will be one for the WWW frequency.

If all is well, those two side tones will match, or be close enough to make a very slow beat frequency. It may help to use IF Shift to hear it.. If the WWW side tone is faint, it may help to switch the CAL25 on and off to hear and compare.

At some point in approaching a match in frequency (using the adjustment to the marker crystal to zero beat the WWW) you won't be able to hear the beat difference as audio, so you can switch to looking at the S meter - when the difference gets down to just a few Hz the meter's time base and dynamics will allow it to wiggle with the beat frequency, and as you adjust closer it will slow down and pump slowly... you can adjust to get that to slow down to as close to dead still as you feel inclined. It won't really stay there, but it will be close.

Not familiar with the SE, but the band for WWW may be either disabled or just not present in the transmit selection modes, so TUNE may be the only one that hears it for that rig.

--- In mailto:TS-520_820_530_830%40yahoogroups.com, "adrian.langford@..." <adrian@...> wrote:
>
> Picked up this weekend and absolutely love it. Such a pleasure to operate!
>
> Dial calibration was out by about 25kHz so I reset this, and previous owner only used for listening which isprobably why bias current was way off but easy to set with the pot behind side panel.
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> Getting well over 100W on 40, 20 and 15 but no ALC signal whatsoever on 10m so presume the 12BY7 driver could be on way out?
>
> Probably needs alignment when tool arrives (I was guy who asked about why metal hex key could crack slugs) as the Drive position is very different for peak ALC on Tx compared with

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>
> 73 Adrian G4IQW
>

[Non-text portions of this message have been removed]

42124. Re: [TS-520_820_530_830] Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-15 23:40:16 UTC
From: Mike
Topic: 42105 Message: 42124

Jerry,

When you select JJY/WWV on the band switch do you tune the VFO to zero
on the dial? Do you hear any signals with JJY/WWV selected on the band
switch?

JJY/WWV has it's own 23.895Mhz Heterodyne Oscillator crystal. If the
23.895Mhz crystal fails or it has been changed to some other crystal
frequency by some previous owner, for what ever reason, then JJY/WWV
will not work. The 520SE receives the 15Mhz WWV signal(23.895 - 8.895 = 15).

Mike W5RKL

On 5/15/2013 5:12 PM, Jerry Barr wrote:
>
> Hello all ,i am new to the group/ first post/ how is the wwv get
> disabled / mine doesnt work/never haas since i got it two yrs ago/now
> the vfo is getting intermittant so need to clean it or//gonna go take
> some photos before i get too deep into it hihi /helps me get it back
> the way it was /thanks
>
> Jerry KJ6NTL
>
> From: paul.nussbaum <paul.nussbaum@...
> <mailto:paul.nussbaum%40yahoo.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Wednesday, May 15, 2013 12:40 PM
> Subject: [TS-520_820_530_830] Re: Progress report new 520SE acquisition
>
>
> Sounds nice!
>
> If you tune just below WWW frequency you will hear a side tone. When
> you set function to CAL25 the crystal's harmonic every 25KHz is
> inserted and makes side tones available, so there will be one for the
> WWW frequency.
>
> If all is well, those two side tones will match, or be close enough to
> make a very slow beat frequency. It may help to use IF Shift to hear
> it.. If the WWW side tone is faint, it may help to switch the CAL25 on
> and off to hear and compare.
>
> At some point in approaching a match in frequency (using the
> adjustment to the marker crystal to zero beat the WWW) you won't be
> able to hear the beat difference as audio, so you can switch to

> looking at the S meter - when the difference gets down to just a few
> Hz the meter's time base and dynamics will allow it to wiggle with the
> beat frequency, and as you adjust closer it will slow down and pump
> slowly... you can adjust to get that to slow down to as close to dead
> still as you feel inclined. It won't really stay there, but it will be
> close.
>
> Not familiar with the SE, but the band for WWW may be either disabled
> or just not present in the transmit selection modes, so TUNE may be
> the only one that hears it for that rig.
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com,
> "adrian.langford@..." <adrian@...> wrote:
> >
> > Picked up this weekend and absolutely love it. Such a pleasure to
> operate!
> >
> > Dial calibration was out by about 25kHz so I reset this, and
> previous owner only used for listening which isprobably why bias
> current was way off but easy to set with the pot behind side panel.
> >
> > Getting well over 100W on 40, 20 and 15 but no ALC signal whatsoever
> on 10m so presume the 12BY7 driver could be on way out?
> >
> > Probably needs alignment when tool arrives (I was guy who asked
> about why metal hex key could crack slugs) as the Drive position is
> very different for peak ALC on Tx compared with peak signal receive.
> On the calibrator signal difference is around S7 to S2 so justifies
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> > I was also curious about the WWV 15MHz receive position and its use
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> hear the WWV second beeps but sometimes can't find them (maybe
> propagation)! Why does manual say rig must be in Tune position (with
> 25kHz Cal on) to adjust the marker frequency? Do you zero beat against
> the second beeps or a carrier tone? Is WWV actually transmitted as an
> AM signal?
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> 520SE. Found pair of new old stock RCA 6146Bs and a GE 12BY7A. I think
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> source of 10m problem. I was also on lookout for a suitable micropone
> - ideally MC50 - and there was one at show which had never been yout
> its box for same price average used ones go for on eBay. Honestly it
> looks brand new with shiny plugs and stand - real time capsule.
> >
> > When I've finished fiddling with the rig Ihope to meet some of you

> on the air soon!
> >
> > 73 Adrian G4IQW
> >
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

42125. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-15 23:55:57 UTC
From: Terry Wagoner
Topic: 42105 Message: 42125

Robert:

I will probably regret wading in to this pond!

I do not doubt that you have no ALC indication on 10 meters on your TS-520. In my experience it is "common", but not "normal". I would also be very careful citing and observing any of these "service bulletins". I am very skeptical of most of these as some are just flat wrong. Putting star lock washers on circuit board to cure VFO drift isnt first thing I will ever reach for! They appear to me to be nothing more than a list of one line anecdotal entries submitted by owners and perhaps Kenwood service center bench techs? One line entries with no details, no basis, no explanations are not what I would expect from a factory authorized service bulletin.

I have worked on probably 30 or so TS520s in a 10 year period. Not an exhaustive number, but enough to know that all but one left my bench with adequate ALC indication on 10 meters. That one would get approx 1/4 scale deflection and was very touchy and owner was in a hurry to get it back. In my experience can typically get at least 1/2 scale deflection with Car Level pot at 1400 to 1500 position. My own personal TS-520 ALC indication on 10 meters is a little bit better than 1/2 scale deflection. It had none when I got it.

I once had a fellow call me(some how got my home phone) and he was mad as hell. He told me he saw where I responded on some forum just as I am to you and that he had purchased his TS520 new from big west coast dealer and it had no ALC on 10 meters out of the box and he called Kenwood and they told him it was "normal". Now I dont want to call anyone a liar, but I suggested that I doubted he had actually called Kenwood factory design engineer in Japan. If so what did that engineer say was the reason? Would there not have been a discussion and some additional probing questions? I suggested that perhaps he had called the dealer and maybe even talked to a dealer bench tech who said something like " I see that all the time". Very different from a design engineer explaining why it was "normal". I then suggested that had it been me I would have taken the rig back to dealer and told them when they can sell me a new in the box one that has ALC indication on all bands I will take it. He was fuming by time conversation ended.

I closed the conversation this way. The compelling question you need to ask yourself is....."IF ONE OR MORE TS-520 HAVE SOME LEVEL OF ALC INDICATION ON 10 METERS WHY CANNOT ALL"? If later serial number production runs did not have this problem, wouldnt a mod have been issued? I know of no such Kenwood fix.

Would Ford make a car that the speed-o-meter worked in 1st, 2nd, and 3rd gear, but in 4th gear you had to use some kind of work around to tell how fast your were going (maybe timing mile marker post with your wrist watch)? Would customers really live with that and call it normal? I dont think so.

Also the manual does not say it is normal. I get that thrown at me. The operating manual clearly states that "Note: If there is no ALC reading indicated, increase the CAR control until there is an ALC reading" There is no disclaimer that follows that says "with the exception of on 10 meters". I think what confuses people is the statement later under the

CW loading that says at 200 ma of Ip there may be no ALC indication. Too bad Kenwood had to make that statement, but apparently people were loading rig for max RF output using the RF detector position and for some odd reason then flipping meter back to ALC position instead of back to Ip. Maybe old timers who were use to loading the old Class C CW grid leak bias transmitters? Maybe they thought they needed to check and re-peak grid current? A Class AB1 Kenwood doesnt operate that way. We have essentially no grid current and no reason to keep checking ALC indication in the loading procedure. I dont understand it. Kenwood even followed this note by adding a chart that shows the preferred meter positions and it clearly shows that you should use Ip position when loading in CW. At 200 ma you are done and no reason to see if ALC has fallen off.

There is a reason that you may have no ALC indication in CW Mode at 200 ma Ip and it has to do with degenerative RF feedback, but I wont go into it in this response.

Sorry so long, but this is not easy subject to cover briefly.

If you want to work on your no ALC indication on 10 meters start with a fresh 12BY7A and make sure you have spec DC voltages and make sure your cathode resistors are all at design value.

Then in order to have ALC indication you need two key voltages. Start by checking your 6146 control grid Pin 5 operating DC bias voltage with 60 ma resting plate current. Also measure your RF drive voltage. If one or both of these are not to spec on 10 meters you will have no ALC indication. Need to be able to accurately measure these with a calibrated RF millivolt meter or O-scope. If you have -55vdc operating bias then you will need greater than 55/1.414 = 38.89 rms or 110.4 P-P rf drive volts. At 39 rf volts you will have just barely overcome the DC bias offset. The control grid of the 6146 must go positive on the positive half of the RF drive envelope in order for Ua grid current to flow. If 6146 control grid never goes positive relative to the cathode then there will be no Ua grid current. No Ua grid current means no ALC indication. This is the first place to start.

Not just my experience. You might contact Jimmy Lamanteer WB2KNR who still operates his original dealer purchased new TS520 as his main rig and collects them and has 8 or 10 at all times and he reports to me that they all have some level of ALC indication on 10 meters.

Not being critical of you Robert. Just trying to help.

73s Terry K9TW

>
> According to the TS-520 service bulletins, no ALC indication on 10M is "normal." And that is the way it is with my 520. I assume the 520SE is the same, although there are 520 owners who say they do get ALC on 10M.
>
>
>

42126. Driver Tube Testing, Driver Tube Power, DRV 50 ohm Dummy Load

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-16 14:10:44 UTC
From: Terry Wagoner
Topic: 42126 Message: 42126

1. How can I test the Driver Tube?
2. What is the Driver Tube power?
3. Can I lift the Blue DRV lead and terminate with a 50 ohm dummy load to test the Driver tube?

1. I have posted numerous times on how to test the Driver tube stage. Standard test is performed in CW mode, SG off, Heaters on. Key rig and peak RF Drive control for full scale ALC deflection (not top of ALC black box). If meter pegs just lower the Car Level pot to set indication right on FSD. Do this on each band. Let it rest a few seconds between each band. Good Driver tube stage will produce full scale deflection and not drift off FSD. Just leave keyed for a few seconds. Tube is running Class A and this test will give it a good work out and shield will get quite hot.

2. You can calculate or measure Dc input power just like you would for the 6146 finals. DC input power = Plate volts x Plate current. From schematic or voltage chart then P = 290vdc x 30ma = 8.7 watts or approx 9 watts dc input power. Where did 30 ma come from? Measure or use Cathode voltage and cathode resistance values from schematics. Measuring is better. Assume cathode resistance = 150 ohms and cathode voltage = 5 volts. I = E/R I = 5/150 = 33 ma. In my experience the Driver tube cathode current ranges from approx 27ma to 35ma. Tube data sheets show max plate current is 27 ma so the Kenwood hybrids are pushing the Driver tube to max plate current. Note: Cathode current includes SG current so Plate current is really slightly less.

3. Calculating or measuring the output power is a little more involved. Class A amplifiers that are capacitively coupled have a maximum efficiency of 25%. In practice far less than this. Assuming 9 watts dc input then max output power would be approx 2.25 watts. It is generally accepted that the maximum rf output power of the 12BY7A is approx 2 watts.

A Class AB1 amplifier (our 6146 finals) requires Zero drive power. The Driver tube only needs to provide RF voltage swing. There is no grid current. With Zero current then power equals zero as P = E x I and if I = zero then P = zero. This isnt technically accurate as the Driver tube does have to provide the charge/discharge current at an RF rate for the 6146 inter-electrode capacitance. So a small amount of power is provided. I have seen estimates of 1% to 2% of RF output power. So at 100 watts out that would be approx 1 to 2 watts of Drive power is consumed charging this capacitance.

The Driver tube is working into the control grid of the 6146 finals. What Resistance does this present? Well we are looking at Admittance and not dc ohmic resistance, which is a little hard to understand. Requires digging in to Conductance and Susceptance. Can think of it as a hypothetical resistor and capacitor in shunt from the 6146 grid to ground. Basically the Driver tube is seeing the Conductance of the control grids. Actual calculations of the grid resistance are complex. Rough calc is Rg = Egrid squared/2xPd. Pd = peak power. So assuming grid bias is -62 and power is 2 watts then 62 squared/2x2 = 3844/4 = 961 ohms. So the Driver tube is looking at approx 1k ohm and not 50 ohms.

This is why you do not want to lift the Blue DRV lead and terminate it with a 50 ohm dummy load resistor.

My own testing on a TS830 is as follows.
1.Lift Blue DRV lead off Final board.
2. Connect 1k ohm 2 watt metal film resistor from blue lead to chassis ground. Note: My resistor measured 980 ohms.
3. Place SG off
4. Connect Rf millivolt meter or O-scope across dummy load resistor
5. Flip to send and peak the Drive control for maximum RF voltage across the 1k dummy load. Note: there will be no ALC meter indication as finals are out of picture.

Plate voltage = 290 vdc
Cathode current = 32ma
DC input power = 9.3 watts
RF voltage across 1k dummy load = 31 rms volts
RF power = E squared/R = 31x31/980 ohms = .98 watts or 1 watt output

So efficiency is very poor at approx 1/9.3 = .107 = 10.7 %

I tried a variety of values for the lifted DRV lead dummy load ranging from 50 ohms to 47k ohms and I found values in the 1k to 2k ohm range produced the maximum RF voltage drop for approx 1 watt output power.

Summary:
1. No need to lift DRV lead and terminate with dummy load to test 12BY7A Driver stage. Use standard CW full scale ALC deflection test.
2. Driver tube DC input power is approx 9 watts and plate current at 32ma is at max of tube data sheet recommended value.
3. In theory Class AB1 6146 final control grids require no RF drive power only need rf voltage swing. No grid current means no power.
4. In practice Driver tube does have to provide power to charge and discharge the 6146 control grid inter-electrode capacitance. I suppose could calculate the Xc for this capacitance and calculate this current. I have not done this. I think you would need to calculate the Cgk in series with the Cgp to arrive at the total capacitance. It would be a small Pf value.
5. The approx Z that the 6146 control grids present to the Driver tube is 1000 ohms and not 50 ohms. With DRV terminated with 1k ohm dummy load max RF output is approx 1 watt.
6. No reason beyond academic to know the Driver tube input and output power. Standard testing is to use TX Level Diagrams and measure the RF voltage at Driver tube Plate and at 6146 control grids. If spec values you know Driver stage is producing design RF output power.

Thanks for the off list questions. If anyone has other experience or sees flaws in my logic or testing please share with us.

73s Terry K9TW

42127. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-16 18:40:03 UTC
From: adrian.langford@ymail.com
Topic: 42105 Message: 42127

Many thanks for valuable info Terry.

Different views from similarly experienced owners, so what I'll do is test whether a new driver valve - after checking voltages described here - makes any difference to 10m ALC.

Plenty of time anyway till 10m shows signs of life!

73 Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Robert:
>
> I will probably regret wading in to this pond!
>
> I do not doubt that you have no ALC indication on 10 meters on your TS-520. In my experience it is "common", but not "normal". I would also be very careful citing and observing any of these "service bulletins". I am very skeptical of most of these as some are just flat wrong. Putting star lock washers on circuit board to cure VFO drift isnt first thing I will ever reach for! They appear to me to be nothing more than a list of one line anecdotal entries submitted by owners and perhaps Kenwood service center bench techs? One line entries with no details, no basis, no explanations are not what I would expect from a factory authorized service bulletin.
>
> I have worked on probably 30 or so TS520s in a 10 year period. Not an exhaustive number, but enough to know that all but one left my bench with adequate ALC indication on 10 meters. That one would get approx 1/4 scale deflection and was very touchy and owner was in a hurry to get it back. In my experience can typically get at least 1/2 scale deflection with Car Level pot at 1400 to 1500 position. My own personal TS-520 ALC indication on 10 meters is a little bit better than 1/2 scale deflection. It had none when I got it.
>
> I once had a fellow call me(some how got my home phone) and he was mad as hell. He told me he saw where I responded on some forum just as I am to you and that he had purchased his TS520 new from big west coast dealer and it had no ALC on 10 meters out of the box and he called Kenwood and they told him it was "normal". Now I dont want to call anyone a liar, but I suggested that I doubted he had actually called Kenwood factory design engineer in Japan. If so what did that engineer say was the reason? Would there not have been a discussion and some additional probing questions? I suggested that perhaps he had called the dealer and maybe even talked to a dealer bench tech who said something like " I see that all the time". Very different from a design engineer explaining why it was "normal". I then suggested that had it been me I would have taken the rig back to dealer and told them when they can sell me a new in the box one that has ALC indication on all bands I will take it. He was fuming by time conversation ended.
>
> I closed the conversation this way. The compelling question you need to ask yourself is....."IF ONE OR MORE TS-520 HAVE SOME LEVEL OF ALC INDICATION ON 10 METERS WHY CANNOT

ALL"? If later serial number production runs did not have this problem, wouldnt a mod have been issued? I know of no such Kenwood fix.
>
> Would Ford make a car that the speed-o-meter worked in 1st, 2nd, and 3rd gear, but in 4th gear you had to use some kind of work around to tell how fast your were going (maybe timing mile marker post with your wrist watch)? Would customers really live with that and call it normal? I dont think so.
>
> Also the manual does not say it is normal. I get that thrown at me. The operating manual clearly states that "Note: If there is no ALC reading indicated, increase the CAR control until there is an ALC reading" There is no disclaimer that follows that says "with the exception of on 10 meters". I think what confuses people is the statement later under the CW loading that says at 200 ma of Ip there may be no ALC indication. Too bad Kenwood had to make that statement, but apparently people were loading rig for max RF output using the RF detector position and for some odd reason then flipping meter back to ALC position instead of back to Ip. Maybe old timers who were use to loading the old Class C CW grid leak bias transmitters? Maybe they thought they needed to check and re-peak grid current? A Class AB1 Kenwood doesnt operate that way. We have essentially no grid current and no reason to keep checking ALC indication in the loading procedure. I dont understand it. Kenwood even followed this note by adding a chart that shows the preferred meter positions and it clearly shows that you should use Ip position when loading in CW. At 200 ma you are done and no reason to see if ALC has fallen off.
>
> There is a reason that you may have no ALC indication in CW Mode at 200 ma Ip and it has to do with degenerative RF feedback, but I wont go into it in this response.
>
> Sorry so long, but this is not easy subject to cover briefly.
>
> If you want to work on your no ALC indication on 10 meters start with a fresh 12BY7A and make sure you have spec DC voltages and make sure your cathode resistors are all at design value.
>
> Then in order to have ALC indication you need two key voltages. Start by checking your 6146 control grid Pin 5 operating DC bias voltage with 60 ma resting plate current. Also measure your RF drive voltage. If one or both of these are not to spec on 10 meters you will have no ALC indication. Need to be able to accurately measure these with a calibrated RF millivolt meter or O-scope. If you have -55vdc operating bias then you will need greater than 55/1.414 = 38.89 rms or 110.4 P-P rf drive volts. At 39 rf volts you will have just barely overcome the DC bias offset. The control grid of the 6146 must go positive on the positive half of the RF drive envelope in order for Ua grid current to flow. If 6146 control grid never goes positive relative to the cathode then there will be no Ua grid current. No Ua grid current means no ALC indication. This is the first place to start.
>
> Not just my experience. You might contact Jimmy Lamanteer WB2KNR who still operates his original dealer purchased new TS520 as his main rig and collects them and has 8 or 10 at all times and he reports to me that they all have some level of ALC indication on 10 meters.
>
> Not being critical of you Robert. Just trying to help.
>
> 73s Terry K9TW

>
>
> >
> > According to the TS-520 service bulletins, no ALC indication on 10M is "normal." And that is the way it is with my 520. I assume the 520SE is the same, although there are 520 owners who say they do get ALC on 10M.
> >
> >
> >
>

42128. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-16 18:48:00 UTC
From: adrian.langford@ymail.com
Topic: 42105 Message: 42128

Thanks a lot Paul.

So from what you say it sounds as if the rig is actually creating a 15MHz transmit signal on WWV/tune position. I think I had wrong idea that in this mode the crystal calibrator generated frequency was being heterodyned with the broadcast WWV signal, but I suppose you only hear that in Receive mode.

73 de Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "paul.nussbaum" <paul.nussbaum@...> wrote:
>
> Sounds nice!
>
> If you tune just below WWW frequency you will hear a side tone. When you set function to CAL25 the crystal's harmonic every 25KHz is inserted and makes side tones available, so there will be one for the WWW frequency.
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> If all is well, those two side tones will match, or be close enough to make a very slow beat frequency. It may help to use IF Shift to hear it.. If the WWW side tone is faint, it may help to switch the CAL25 on and off to hear and compare.
>
> At some point in approaching a match in frequency (using the adjustment to the marker crystal to zero beat the WWW) you won't be able to hear the beat difference as audio, so you can switch to looking at the S meter - when the difference gets down to just a few Hz the meter's time base and dynamics will allow it to wiggle with the beat frequency, and as you adjust closer it will slow down and pump slowly... you can adjust to get that to slow down to as close to dead still as you feel inclined. It won't really stay there, but it will be close.
>
> Not familiar with the SE, but the band for WWW may be either disabled or just not present in the transmit selection modes, so TUNE may be the only one that hears it for that rig.
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> --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
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> > Picked up this weekend and absolutely love it. Such a pleasure to operate!
> >
> > Dial calibration was out by about 25kHz so I reset this, and previous owner only used for listening which isprobably why bias current was way off but easy to set with the pot behind side panel.
> >
> > Getting well over 100W on 40, 20 and 15 but no ALC signal whatsoever on 10m so presume the 12BY7 driver could be on way out?
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> > Probably needs alignment when tool arrives (I was guy who asked about why metal hex key could crack slugs) as the Drive position is very different for peak ALC on Tx compared with peak signal receive. On the calibrator signal difference is around S7 to S2 so justifies aligning.
> >
> > The receive audio is lovely- even my XYL commented on how great it sounds and she normally doesn't like sound of rigs!
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> > I was also curious about the WWV 15MHz receive position and its use for calibrating the marker. If I tune very carefully I can sometimes hear the WWV second beeps but sometimes can't find them (maybe propagation)! Why does manual say rig must be in Tune position (with 25kHz Cal on) to adjust the marker frequency? Do you zero beat against the second beeps or a carrier tone? Is WWV actually transmitted as an AM signal?
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> >
> > When I've finished fiddling with the rig Ihope to meet some of you on the air soon!
> >
> > 73 Adrian G4IQW
> >
>

42129. paint polished alu ts520se

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-16 19:10:22 UTC
From: Jerry
Topic: 42129 Message: 42129

hi all is it paint or polished alu? the square/rect around the vfo and switches/ its really dark in some areas so cant tell/ and how can i clean the vfo vari cap cant seem to get the cover off to really get to it

42130. Re: [TS-520_820_530_830] Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-16 20:26:58 UTC
From: John Davidson
Topic: 42105 Message: 42130

Please re-read your receiver theory,
The radio has in internal signal at the IF frequency going into the product detector it is not transmitting on the WWV freq ! Without this you would not hear SSB or CW signals in your loudspeaker (or phones). Since WWV is an AM transmission you hear the carrier as a tone along with the modulation, unless you tune the dial for Zero-beat.
To set your calibrator you can set your mode to SSB or CW as long as you can hear the calibtrator signal beating with WWV.

From: "adrian.langford@..." <adrian@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, May 16, 2013 2:48 PM
Subject: [TS-520_820_530_830] Re: Progress report new 520SE acquisition

Thanks a lot Paul.

So from what you say it sounds as if the rig is actually creating a 15MHz transmit signal on WWV/tune position. I think I had wrong idea that in this mode the crystal calibrator generated frequency was being heterodyned with the broadcast WWV signal, but I suppose you only hear that in Receive mode.

73 de Adrian G4IQW

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> Not familiar with the SE, but the band for WWW may be either disabled or just not present in the transmit selection modes, so TUNE may be the only one that hears it for that rig.
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> --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
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> > Dial calibration was out by about 25kHz so I reset this, and previous owner only used for listening which isprobably why bias current was way off but easy to set with the pot behind side panel.
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> >
> > When I've finished fiddling with the rig Ihope to meet some of you on the air soon!
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> > 73 Adrian G4IQW
> >
>

[Non-text portions of this message have been removed]

42131. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-16 21:22:04 UTC
From: adrian.langford@ymail.com
Topic: 42105 Message: 42131

OK thanks very much for making it clear.

I was confused by fact that in the 520SE the manual instructions are to adjust the calibration generator frequency in "tune" mode (which I associate with transmitting, albeit with no power to finals), even though the 520SE has a normal recive position for WWV too

I do hear the sidetone when tuning off the WWV frequency, but wasn't sure why 25kHz marker adjust had to be done in Tune mode.

Thanks again! I will re-read circuit description in manual.

Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> Please re-read your receiver theory,Â
> The radio has in internal signal at the IF frequency Â going into the product detector it is not transmitting on the WWV freq ! Without this you would not hear SSB or CW signals in your loudspeaker (or phones). Since WWV is an AM transmission you hear the carrier Â as a tone along with the modulation, Â unless you tune the dial for Zero-beat.
> To set your calibrator you can set your mode to SSB or CW as long as you can hear the calibtrator signal beating with WWV.
>
>
>
> _____
> From: "adrian.langford@..." <adrian@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, May 16, 2013 2:48 PM
> Subject: [TS-520_820_530_830] Re: Progress report new 520SE acquisition
>
>
>
> Â
>
> Thanks a lot Paul.
>
> So from what you say it sounds as if the rig is actually creating a 15MHz transmit signal on WWV/tune position. I think I had wrong idea that in this mode the crystal calibrator generated frequency was being heterodyned with the broadcast WWV signal, but I suppose you only hear that in Receive mode.
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> 73 de Adrian G4IQW
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> > > Dial calibration was out by about 25kHz so I reset this, and previous owner only used for listening which isprobably why bias current was way off but easy to set with the pot behind side panel.
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> > > 73 Adrian G4IQW
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>
>
> [Non-text portions of this message have been removed]
>

42132. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-17 10:42:39 UTC
From: Terry Wagoner
Topic: 42105 Message: 42132

It hasnt been made clear at all.

There is a reason why they want you to "calibrate" your dial in the Tune position of the mode switch. There are three carrier oscillators and placing the rig in Tune selects the correct oscillator crystal so that you can hear the 700hz CW offset zero beat and align your dial to the center mark.

The crystal calibrator is required of course because you have no digital dial and must use the bandswitch, vfo dial and sub dials to determine where you are at. You cannot simply rely on the VFO dial as with all air variable capacitor VFOs there are linearity problems. Not easy to get VFO to accurately track across full travel. Crystal Calibrator or "Marker" gives you birdies or markers every 25khz across the range of the VFO. The accuracy of these markers is no better than the accuracy of the Markers base crystal oscillator frequency. This oscillator can and should be adjusted.

So your first step is checking the accuracy of your Marker against some frequency standard. Absent a calibrated Frequency Counter which is the easiest method your Kenwood provides the ability to receive off air WWV signals. With either frequency source you use the zero beat method to adjust the trimmer capacitor on your Marker board to ensure your crystal oscillator is accurate. This way the divided down outputs at 25 khz will be reasonably accurate. Use a non metal tuning tool to make this trimmer cap adjustment. TC-1 trimmer is located on the Marker board on the top left rear of the rig.

If you have no experience with zero beating it can be a little difficult. Place your AGC in Fast position and as someone mentioned as you approach Zero beat you will hear a woosh-woosh sound in speaker and will see a flutter on the S-meter. The closer you get to zero beat the slower the woosh and slower the S-meter flutter will be.

Some of the problems include propagation and doppler shift and the roll off on low end of our SSB filters and of course the human ear. With a good strong WWV signal, AGC on Fast, a light touch on VFO knob and a little practice you can get it close.

After you adjust your Marker trimmer cap you can then tune the VFO to say 7.050 on your analog dial and turn on the Marker and in TUNE mode you can slip the dial alignment to the center mark which will then give you accurate 700 hz offset.

VFO tracking will depend on how well your VFO L/C has been adjusted. The TS-520S service manual describes this alignment step.

You cannot expect the dial alignment you make at 7.050 to track as you move up in frequency. You will have to use the Marker as you move from one end of the VFO travel to other.

Because you have VFO accuracy limitations it is best to stay well clear of the band limits of the terms of your license. Today with so many modern digital dial rigs on the air you can also check accuracy by listening to some of the long running nets.

73s Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@..." <adrian@...> wrote:
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> > _____
> > From: "adrian.langford@" <adrian@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Thursday, May 16, 2013 2:48 PM
> > Subject: [TS-520_820_530_830] Re: Progress report new 520SE acquisition
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> > > > The receive audio is lovely- even my XYL commented on how great it sounds and she normally doesn't like sound of rigs!
> > > >
> > > > I was also curious about the WWV 15MHz receive position and its use for calibrating the marker. If I tune very carefully I can sometimes hear the WWV second beeps but sometimes can't find them (maybe propagation)! Why does manual say rig must be in Tune position (with 25kHz Cal on) to adjust the marker frequency? Do you zero beat against the second beeps or a carrier tone? Is WWV actually transmitted as an AM signal?
> > > >

> > > > Had some luck at a vintage radio rally I went to day after I got the 520SE. Found pair of new old stock RCA 6146Bs and a GE 12BY7A. I think the finals are ok but good to have "new" spares and the driver may be source of 10m problem. I was also on lookout for a suitable micropone - ideally MC50 - and there was one at show which had never been yout its box for same price average used ones go for on eBay. Honestly it looks brand new with shiny plugs and stand - real time capsule.
> > > >
> > > > When I've finished fiddling with the rig Ihope to meet some of you on the air soon!
> > > > >
> > > > 73 Adrian G4IQW
> > > > >
> > > >
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> > [Non-text portions of this message have been removed]
> >
>

42133. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-18 15:45:57 UTC
From: Terry Wagoner
Topic: 42105 Message: 42133

Sorry I mis-spoke. If you use a frequency counter to adjust your Marker oscillator frequency you do not use the "zero beat" method.

You simply connect the counter to the Marker output and adjust the trimmer capacitor. Dont connect the counter to the collector of the oscillator transistor as it will pull the oscillator crystal frequency.

Terry

>
>

42134. T/R-599 cable or one connector

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-18 22:03:18 UTC
From: Jan Servaites
Topic: 42126 Message: 42134

Anyone have a spare 599 Twins cable or just one connector plug? I just picked up my T599 and I want to mate it to the R599, and I just need the interconnecting cable or just one plug.
Thanks
Jan N8CBX

42135. ts 520se

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-18 22:29:40 UTC
From: Jerry
Topic: 42135 Message: 42135

hi all got my ts520 back togeather and seems to work fine now/think ihear wwv but may jus be hopeng/vol up all the way on a mini g5rv/cut for 20 meters/ it isnt real great on the ts2k either on a 573ft loop but easy to copy/any idea\s

42136. Re: [TS-520_820_530_830] ts 520se

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-18 23:00:50 UTC
From: Tyler Frugia
Topic: 42135 Message: 42136

I have the same problem on my 520se. You might try the alignment procedure. I was able to hear WWV after doing this but like you it's well below noise and doesn't move the S meter. My other radios hear it S9.

I'm hoping to dive into it more later tonight.

Sent from my iPhone

On May 18, 2013, at 3:29 PM, "Jerry" <kj6ntl@...> wrote:

> hi all got my ts520 back togeather and seems to work fine now/think ihear wwv but may jus be hopeng/vol up all the way on a mini g5rv/cut for 20 meters/ it isnt real great on the ts2k either on a 573ft loop but easy to copy/any idea\s
>
>

[Non-text portions of this message have been removed]

42137. Re: ts 520se

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-19 00:29:08 UTC
From: Terry Wagoner
Topic: 42135 Message: 42137

If you have not downloaded the TS-520S service manual and studied it suggest that it is a must. It will tell you how to align the front end for WWV reception. You need a RF signal generator and usually do it in two passes. Inject 15mhz signal into the SO-239 antenna connector at approx 500uv or -53dBm and adjust T4, T5,and T3 on the RF board. Reduce sig gen attenutor for approx 50uv or -73dBm level and repeak T4, T5 and T3.

If you do not have a sig gen with a calibrated output attenuator then inject a test signal on 20 meters around 14.2 mhz and adjust your sig gen for S9 indication. Then set sig gen frequency to 15 mhz and do not touch the output level and use that level to align the WWV coils.

Absent any kind of RF sig gen then use the Marker signal. Section 6 of your Operating manual describes how to use the Marker for WWV alignment.

Terry K9TW
--- In TS-520_820_530_830@yahoogroups.com, Tyler Frugia <tfrugia@...> wrote:
>
> I have the same problem on my 520se. You might try the alignment procedure. I was able to hear WWV after doing this but like you it's well below noise and doesn't move the S meter. My other radios hear it S9.
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> I'm hoping to dive into it more later tonight.
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> > hi all got my ts520 back togeather and seems to work fine now/think ihear wwv but may jus be hopeng/vol up all the way on a mini g5rv/cut for 20 meters/ it isnt real great on the ts2k either on a 573ft loop but easy to copy/any idea\s
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42138. Re: [TS-520_820_530_830] ts 520se

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-19 00:21:11 UTC
From: Jerry Barr
Topic: 42135 Message: 42138

what kinda equipment is needed to alighn iti dont even have a hex alighnment tool NYLON or plastic /no better then use metal/ wonder if anyone else has the same issue

Jerry KJ6NTL

From: Tyler Frugia <tfrugia@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Saturday, May 18, 2013 4:00 PM
Subject: Re: [TS-520_820_530_830] ts 520se

I have the same problem on my 520se. You might try the alignment procedure. I was able to hear WWV after doing this but like you it's well below noise and doesn't move the S meter. My other radios hear it S9.

I'm hoping to dive into it more later tonight.

Sent from my iPhone

On May 18, 2013, at 3:29 PM, "Jerry" <mailto:kj6ntl%40yahoo.com> wrote:

> hi all got my ts520 back togeather and seems to work fine now/think ihear wwv but may jus be hopeng/vol up all the way on a mini g5rv/cut for 20 meters/ it isnt real great on the ts2k either on a 573ft loop but easy to copy/any idea\s
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42139. Re: AT-200 Meter Faulty?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-19 01:21:04 UTC
From: cl5ltd
Topic: 42100 Message: 42139

Thanks for the tip. I gave the VRs and rotary switches a blast of contact cleaner followed by a blast of compressed air.

The needle is no longer moving erratically so the clean up worked.

However, power output readings are still well down on my reference meter when both connected in line. On 20 m shows 70 watts when other meter shows 100 watts -

I haven't made any internal adjustments. All components appear OK- no obvious burntout parts.

I haven't been to find any info on correcting this inaccurate readings.

SWR readings seem to be more accurate.

What to try next?

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:

It's quite possible that VR1, VR2 and VR3 pots are dirty. Try cleaning
them then perform the alignment again.

73
Mike W5RKL

42140. RE: [TS-520_820_530_830] Re: AT-200 Meter Faulty?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-19 02:52:38 UTC
From: fpath fpath
Topic: 42100 Message: 42140

Chris,

Go to 10m and tune the radio, once you have peak wattage, turn power down and leave tranmitting and see if the ALC\wattage drops, if it does means 12by7a or 6146\s2001a tubes are prob on the way out may need to be replaced, this is very common.

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: christopherlarwood@...
Date: Sun, 19 May 2013 01:21:04 +0000
Subject: [TS-520_820_530_830] Re: AT-200 Meter Faulty?

Thanks for the tip. I gave the VRs and rotary switches a blast of contact cleaner followed by a blast of compressed air.

The needle is no longer moving erratically so the clean up worked.

However, power output readings are still well down on my reference meter when both connected in line. On 20 m shows 70 watts when other meter shows 100 watts -

I haven't made any internal adjustments. All components appear OK- no obvious burntout parts.

I haven't been to find any info on correcting this inaccurate readings.

SWR readings seem to be more accurate.

What to try next?

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:

It's quite possible that VR1, VR2 and VR3 pots are dirty. Try cleaning
them then perform the alignment again.

73
Mike W5RKL

[Non-text portions of this message have been removed]

42141. Re: [TS-520_820_530_830] Re: ts 520se

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-19 03:29:36 UTC
From: Jerry Barr
Topic: 42135 Message: 42141

Hello Yes i have the op manuel and believe the service as well/ tho no sig gen / keep e-baying for one but no luck yet/someone keeps sniping me hihi/but i will find one /what features shud i ;look for (thinking cheap)/want a communications monitor with all the goodies but i am retiured and on a very limited budget so i will look at section 6 and go from there   thank u

Jerry KJ6NTL

From: Terry Wagoner <wagstw46@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, May 18, 2013 5:29 PM
Subject: [TS-520_820_530_830] Re: ts 520se

If you have not downloaded the TS-520S service manual and studied it suggest that it is a must. It will tell you how to align the front end for WWV reception. You need a RF signal generator and usually do it in two passes. Inject 15mhz signal into the SO-239 antenna connector at approx 500uv or -53dBm and adjust T4, T5,and T3 on the RF board. Reduce sig gen attenutor for approx 50uv or -73dBm level and repeak T4, T5 and T3.

If you do not have a sig gen with a calibrated output attenuator then inject a test signal on 20 meters around 14.2 mhz and adjust your sig gen for S9 indication. Then set sig gen frequency to 15 mhz and do not touch the output level and use that level to align the WWV coils.

Absent any kind of RF sig gen then use the Marker signal. Section 6 of your Operating manual describes how to use the Marker for WWV alignment.

Terry K9TW
--- In mailto:TS-520_820_530_830%40yahoogroups.com, Tyler Frugia <tfrugia@...> wrote:
>
> I have the same problem on my 520se. You might try the alignment procedure. I was able to hear WWV after doing this but like you it's well below noise and doesn't move the S meter. My other radios hear it S9.
>
> I'm hoping to dive into it more later tonight.
>
> Sent from my iPhone
>
> On May 18, 2013, at 3:29 PM, "Jerry" <kj6ntl@...> wrote:
>
> > hi all got my ts520 back togeather and seems to work fine now/think ihear wwv but may jus be hopeng/vol up all the way on a mini g5rv/cut for 20 meters/ it isnt real great on the ts2k either on a 573ft loop but easy to copy/any idea\s
> >
> >
>

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42142. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-19 09:22:31 UTC
From: adrian.langford@ymail.com
Topic: 42105 Message: 42142

Thanks Terry - I have a good calibrated freq counter so will check/adjust the marker first. WWV not always readable here in G-land on my current antenna (the better one is down just now)

73 Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Sorry I mis-spoke. If you use a frequency counter to adjust your Marker oscillator frequency you do not use the "zero beat" method.
>
> You simply connect the counter to the Marker output and adjust the trimmer capacitor. Dont connect the counter to the collector of the oscillator transistor as it will pull the oscillator crystal frequency.
>
> Terry
>
>
> >
> >
>

42143. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-19 11:15:49 UTC
From: Terry Wagoner
Topic: 42105 Message: 42143

Great. This makes things a lot simpler for you.

If you have a good freq counter you wont need WWV. Only reason Kenwood provided the ability to receive WWV is so you had a precise signal source to adjust your internal Crystal Calibrator (Marker). Ability to receive WWV off air signals makes the rig self sufficient for owner who doesnt have a freq counter. Back in 70s the average ham did not own a cheap, accurate, digital frequency counter. If you were lucky you might have had a military surplus BC221. Analog dials with 5kc readout were the norm for a lot of us. I remember my first Heath LMO with 1kc readout and I thought I was in heaven! Back then we took it very seriously if we got a "pinks slip" from FCC for out of band operation.

Once you adjust your crystal oscillator so it is running very close to 2.5mhz (the 520SE did not use more common 100khz crystal)then you will be able to trust that the 25khz birdies or markers that it produces are accurate and you will use them to adjust your dial.

Remember you need to use the Tune position to align dial for CW operation.

Have Fun
Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@..." <adrian@...> wrote:
>
>
> Thanks Terry - I have a good calibrated freq counter so will check/adjust the marker first. WWV not always readable here in G-land on my current antenna (the better one is down just now)
>
> 73 Adrian G4IQW
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
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> > Sorry I mis-spoke. If you use a frequency counter to adjust your Marker oscillator frequency you do not use the "zero beat" method.
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> >
> > Terry
> >
> >
> > >
> > >
> >
>

42144. Re: ts 520se

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-19 12:27:24 UTC
From: Terry Wagoner
Topic: 42135 Message: 42144

Well understand being on fixed income. You can get by with a LC type RF signal generator as your first sig gen. Most all of us started there and soon learned the limitations and graduated to better units.

Biggest limitation is no calibrated step attenuator. Also best to use a freq counter with them as dials are not precise. They also may drift, have leakage, and can be microphonic. Leakage can be a real problem if you are trying to do low signal level RF and IF alignment. Sometimes they make better transmitters than sig gens!

If you are going to start with a LC type unit suggest Heath as readily available and can buy a spare parts unit to keep the good one running. The SG series are really vintage and I would probably move up to something like a Heath IG-102. I had a EICO 324 for some years. BK also made LC units. The best BK is the E-200D.

Above the Heath, Knight, Eico level many hams stepped up to URM/25D military and the HP-606 was very popular. These are large heavy units and also getting long in the tooth.

Today can find several new Chinese made units selling on Ebay.

Lasty might want to look at DDS technology. There are some kits available for digital VFOs which can also serve as sig gens.

If you buy a IG-102 Heath you can use it for signal injection and signal tracing. Where it falls down is being able to set a precise output level such as 50uv to calibrate your S-meter.

One way around that is if you have a good commercial receiver with accurate and known S meter units you can drive it with the IG-102 and set the output level switches and pot for say an S9 indication and then use an external step attenuator to obtain reasonably accurate lower rf output levels for alignment work. Step attenuators can be built of purchased in kit or assembled units. Elecraft and Hendricks QRP make kits.

If you get serious about bench work then a HP8640B or Wavetek 3002 PLL units are popular way to go, but now in the several hundred dollars range for a functional one. It all depends on your priorities and how you chose to spend your discretionary income.

There are 3 or 4 IG-102 units on Ebay right now in the $10 to $20 dollar range.

Good Luck
Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Jerry Barr <kj6ntl@...> wrote:
>
> Hello Yes i have the op manuel and believe the service as well/ tho no sig genÂ / keep e-baying for one but no luck yet/someone keeps sniping me hihi/but i will find one /what features shud i ;look for (thinking cheap)/want a communications monitor with all the goodies but i am retiured and on a very limited budget so i will look atÂ section 6 and go from thereÂ Â Â thank u

>
> Jerry KJ6NTL
>
> From: Terry Wagoner <wagstw46@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Saturday, May 18, 2013 5:29 PM
> Subject: [TS-520_820_530_830] Re: ts 520se
>
> Â
> If you have not downloaded the TS-520S service manual and studied it suggest that it is a must. It will tell you how to align the front end for WWV reception. You need a RF signal generator and usually do it in two passes. Inject 15mhz signal into the SO-239 antenna connector at approx 500uv or -53dBm and adjust T4, T5,and T3 on the RF board. Reduce sig gen attenutor for approx 50uv or -73dBm level and repeak T4, T5 and T3.
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> If you do not have a sig gen with a calibrated output attenuator then inject a test signal on 20 meters around 14.2 mhz and adjust your sig gen for S9 indication. Then set sig gen frequency to 15 mhz and do not touch the output level and use that level to align the WWV coils.
>
> Absent any kind of RF sig gen then use the Marker signal. Section 6 of your Operating manual describes how to use the Marker for WWV alignment.
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> Terry K9TW
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, Tyler Frugia <tfrugia@> wrote:
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> > I have the same problem on my 520se. You might try the alignment procedure. I was able to hear WWV after doing this but like you it's well below noise and doesn't move the S meter. My other radios hear it S9.
> >
> > I'm hoping to dive into it more later tonight.
> >
> > Sent from my iPhone
> >
> > On May 18, 2013, at 3:29 PM, "Jerry" <kj6ntl@> wrote:
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> > > hi all got my ts520 back togeather and seems to work fine now/think ihear wwv but may jus be hopeng/vol up all the way on a mini g5rv/cut for 20 meters/ it isnt real great on the ts2k either on a 573ft loop but easy to copy/any idea\s
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42145. Re: [TS-520_820_530_830] Re: ts 520se

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-19 14:32:29 UTC
From: Mike
Topic: 42135 Message: 42145

If I may add to Terry's comments.

The IG-102 is a fair signal generator. I have one and I use it for basic IF and detector testing. I replaced the screw on connectors (there are 2, one for audio and one for RF) with Female BNCs. A BNC "T" connector is required in order to connect the frequency counter AND the connecting cable to the signal generators (I use an inexpensive scope probe).

The IG-102 and the URM-25D generators will drift and, as Terry said, a frequency counter is a must when using these generators. I use a Sinometer VC-2000 counter, available on eBay to ensure the IG-102 and URM-25D generators are on frequency. I always power up the signal generators and allow them to warm up for at least 30 minutes or more before using them.

The IG-102 has a LF limitation, 100Khz. It will work for receiver's having a 455Khz IF. The URM-25D LF low end is 10Khz so it will work with receiver's having an IF as low as 50Khz (NC-300/303, Apache RX-1, and others).

As for DDS generators, there are quite a few that can be used as signal generators (see eBay using DDS as the search phrase). The N3ZI DDS VFO, for example, can be used as a signal generator (RF only) up to approximately 30Mhz. Most, not all, DDS generators are powered from 12VDC. The N3ZI DDS VFO for example, requires 12VDC at less than an amp using a power cube/brick (Walwart). Most power cubes/brick's output voltage is NOT regulated! For example, a cube/brick that's rated at 12VDC a 1 amp, can have an "unloaded" output voltage at high as "19VDC"!! I found some 12VDC 6 amp "regulated" power bricks on eBay, they are designed to power digital cameras. Their output "unloaded" DC voltage is 12.3VDC at 6 amps. Also, not all cube/brick's output connector's center pin is positive, some have a "negative" potential on the center pin. So PAY ATTENTION, DO NOT assume anything!!

73
Mike W5RKL

On 5/19/2013 7:27 AM, Terry Wagoner wrote:
>
> Well understand being on fixed income. You can get by with a LC type
> RF signal generator as your first sig gen. Most all of us started
> there and soon learned the limitations and graduated to better units.
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> Good Luck
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> --- In TS-520_820_530_830@yahoogroups.com
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> > Jerry KJ6NTL
> >
> > From: Terry Wagoner <wagstw46@...>
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Saturday, May 18, 2013 5:29 PM
> > Subject: [TS-520_820_530_830] Re: ts 520se
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42146. Re: ts 520se

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-19 14:58:16 UTC
From: Terry Wagoner
Topic: 42135 Message: 42146

Thanks Mike for adding your very good experience with rf sig gens and wall worts open circuit high voltage. I did not mention the Heath IG-5280 which I think replaced the IG-102? It is solid state unit, but I have no experience with it. I never really liked the look of the later Heath Kit packaging (late 80s to early 90s). Probably not fair as performance may have been OK, but the packages looked cheap. I dont think the 5280 had calibrated RF output attenuator.

I am really surprised that you dont see reasonably priced DDS RF sig gen kit. Seems like would not be too hard to add a low pass filter, maybe a wide band post amp to get the level up, and a step attenuator to one of the VFO kits.

Anyone who owns and intends to maintain their own hybrid needs a decent rf sig generator. A reasonably priced DDS unit would fill that bill nicely. All the old popular units come with their share of problems from unavailable parts, cracked drive gears, PLL unlock etc.

73s Terry

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
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> 2, one for audio and one for RF) with Female BNCs. A BNC "T" connector
> is required in order to connect the frequency counter AND the connecting
> cable to the signal generators (I use an inexpensive scope probe).
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> The IG-102 and the URM-25D generators will drift and, as Terry said, a
> frequency counter is a must when using these generators. I use a
> Sinometer VC-2000 counter, available on eBay to ensure the IG-102 and
> URM-25D generators are on frequency. I always power up the signal
> generators and allow them to warm up for at least 30 minutes or more
> before using them.
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> generators (see eBay using DDS as the search phrase). The N3ZI DDS VFO,
> for example, can be used as a signal generator (RF only) up to
> approximately 30Mhz. Most, not all, DDS generators are powered from
> 12VDC. The N3ZI DDS VFO for example, requires 12VDC at less than an amp
> using a power cube/brick (Walwart). Most power cubes/brick's output
> voltage is NOT regulated! For example, a cube/brick that's rated at

> 12VDC a 1 amp, can have an "unloaded" output voltage at high as
> "19VDC"!! I found some 12VDC 6 amp "regulated" power bricks on eBay,
> they are designed to power digital cameras. Their output "unloaded" DC
> voltage is 12.3VDC at 6 amps. Also, not all cube/brick's output
> connector's center pin is positive, some have a "negative" potential on
> the center pin. So PAY ATTENTION, DO NOT assume anything!!
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> > Biggest limitation is no calibrated step attenuator. Also best to use
> > a freq counter with them as dials are not precise. They also may
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> > If you are going to start with a LC type unit suggest Heath as readily
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> > available for digital VFOs which can also serve as sig gens.
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> > signal tracing. Where it falls down is being able to set a precise
> > output level such as 50uv to calibrate your S-meter.
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> > One way around that is if you have a good commercial receiver with
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> > built of purchased in kit or assembled units. Elecraft and Hendricks

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> > > Hello Yes i have the op manuel and believe the service as well/ tho
> > no sig genÂ / keep e-baying for one but no luck yet/someone keeps
> > sniping me hihi/but i will find one /what features shud i ;look for
> > (thinking cheap)/want a communications monitor with all the goodies
> > but i am retiured and on a very limited budget so i will look atÂ
> > section 6 and go from thereÂ Â Â thank u
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> > > Jerry KJ6NTL
> > >
> > > From: Terry Wagoner <wagstw46@>
> > > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Saturday, May 18, 2013 5:29 PM
> > > Subject: [TS-520_820_530_830] Re: ts 520se
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> > approx 500uv or -53dBm and adjust T4, T5,and T3 on the RF board.
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> > > > On May 18, 2013, at 3:29 PM, "Jerry" <kj6ntl@> wrote:
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> > > > > hi all got my ts520 back togeather and seems to work fine
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42147. Re: AT-200 Meter Faulty?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-19 11:01:35 UTC
From: cl5ltd
Topic: 42100 Message: 42147

Dave- I will do that with the radio and report back - there is a set of spare tubes with the radio but I don't know condition.

However it's the ATU power reading correction I was asking about in this case. The power level reading is well down on correct level. Need to fix this

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:

> Chris,

> Go to 10m and tune the radio, once you have peak wattage, turn power down and leave tranmitting and see if the ALC\wattage drops, if it does means 12by7a or 6146\s2001a tubes are prob on the way out may need to be replaced, this is very common.

> Dave
> VK5PDL

42148. Re: [TS-520_820_530_830] Re: ts 520se

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-19 18:27:38 UTC
From: Mike
Topic: 42135 Message: 42148

The IG-5280 is a simple RF signal generator, basically the same as the IG-102 except it's solid state. The nice thing about the IG-5280 is it's powered by batteries for field use. One can use a Walwart for shack use (see the manual for details). The IG-5280 is one of a group of test gear. I bought the Heathkit IB-5281 RLC Bridge which is part of the IG-5280 test gear set. It operates from two 9 volt batteries. I wouldn't use it for any precision work. I thought about purchasing the IG-5280 signal generator at one time but decided not to. I don't know what the stability of the IG-5280 is but I would assume a frequency counter connected to its output would be necessary!

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http://www.heathkit.nu/heathkit_nu_IM-17.html

I found a "DURACELL PROCELL DA-1466" 8.4 volt Zinc Air Medical Battery on eBay. The price varies from $4 to $19.99 depending on the seller. There are quite a few NEW PROCELL batteries in sealed packaging on eBay right now. One seller is selling 6 new batteries in their sealed packaging for $7.50 plus shipping. The PROCELL battery doesn't start losing it's charge until taken out of its sealed packaging and installed in the circuit. The battery can sit on the shelf for ages, providing the sealed packaging is not tampered with or broken, and still work when removed from it's sealed packaging.

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42149. Re: ts 520se

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-19 19:24:24 UTC
From: Terry Wagoner
Topic: 42135 Message: 42149

Mike:

I just looked at the IM-17 and the specs say it is 11meg ohm input Z on all dc ranges. That is equiv to the VTVMs. It also appears to have a nice 200ua large meter movement. I wonder about the hinge life on the case? Having to lay it down to view the meter isnt as good for bench work. Not too thrilled with the fixed test leads, but not a big deal. Also the meter ranges of the VTVMs offer a little better overlap, but those of the IM-17 will work just fine.

I will start telling Kenwood owners who have no VTVM to consider the IM-17 in lieu of IM-18 type VTVMs if they have budget concerns or cant find a decent VTVM. I see on Ebay that they go cheaper than a VTVM. It is not unusual to have to spend a little more money on your first VTVM when you get it to replace electrolytic filter cap in power supply and to replace the two tubes.

Only concern I have is with all battery powered gear it is a must to replace batteries annually. I place a piece of blue painters masking tape on bottom of any battery powered test gear with battery date on it and I religiously replace the batteries once a year even if they still have good voltage. I do this same time I do the house smoke detectors.

I once destroyed the battery connections inside a very expensive meter when a Duracell alkaline leaked and corroded them. The acid also puked on to the PC board and not easy to clean it off. From then on I decided to spring for a $3.00 battery versus wrecking a piece of test gear.

I wonder if they sold the IM-17 primarily for the auto repair techs? If so, would want to get good close up pictures to make sure unit was not grease stained.

Thanks for sharing. Looks like a good option if you dont have a VTVM or analog FET meter on your bench.

Terry
K9TW

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> > > cable to the signal generators (I use an inexpensive scope probe).
> > >
> > > The IG-102 and the URM-25D generators will drift and, as Terry said, a
> > > frequency counter is a must when using these generators. I use a
> > > Sinometer VC-2000 counter, available on eBay to ensure the IG-102 and
> > > URM-25D generators are on frequency. I always power up the signal
> > > generators and allow them to warm up for at least 30 minutes or more
> > > before using them.
> > >
> > > The IG-102 has a LF limitation, 100Khz. It will work for receiver's
> > > having a 455Khz IF. The URM-25D LF low end is 10Khz so it will work
> > with
> > > receiver's having an IF as low as 50Khz (NC-300/303, Apache RX-1, and
> > > others).
> > >
> > > As for DDS generators, there are quite a few that can be used as signal
> > > generators (see eBay using DDS as the search phrase). The N3ZI DDS VFO,
> > > for example, can be used as a signal generator (RF only) up to
> > > approximately 30Mhz. Most, not all, DDS generators are powered from
> > > 12VDC. The N3ZI DDS VFO for example, requires 12VDC at less than an amp
> > > using a power cube/brick (Walwart). Most power cubes/brick's output
> > > voltage is NOT regulated! For example, a cube/brick that's rated at
> > > 12VDC a 1 amp, can have an "unloaded" output voltage at high as
> > > "19VDC"!! I found some 12VDC 6 amp "regulated" power bricks on eBay,
> > > they are designed to power digital cameras. Their output "unloaded" DC
> > > voltage is 12.3VDC at 6 amps. Also, not all cube/brick's output
> > > connector's center pin is positive, some have a "negative" potential on
> > > the center pin. So PAY ATTENTION, DO NOT assume anything!!
> > >
> > > 73
> > > Mike W5RKL
> > >
> > >
> > >
> > >
> > > On 5/19/2013 7:27 AM, Terry Wagoner wrote:
> > > >
> > > > Well understand being on fixed income. You can get by with a LC type

> > > > RF signal generator as your first sig gen. Most all of us started
> > > > there and soon learned the limitations and graduated to better units.
> > > >
> > > > Biggest limitation is no calibrated step attenuator. Also best to use
> > > > a freq counter with them as dials are not precise. They also may
> > > > drift, have leakage, and can be microphonic. Leakage can be a real
> > > > problem if you are trying to do low signal level RF and IF alignment.
> > > > Sometimes they make better transmitters than sig gens!
> > > >
> > > > If you are going to start with a LC type unit suggest Heath as
> > readily
> > > > available and can buy a spare parts unit to keep the good one
> > running.
> > > > The SG series are really vintage and I would probably move up to
> > > > something like a Heath IG-102. I had a EICO 324 for some years. BK
> > > > also made LC units. The best BK is the E-200D.
> > > >
> > > > Above the Heath, Knight, Eico level many hams stepped up to URM/25D
> > > > military and the HP-606 was very popular. These are large heavy units
> > > > and also getting long in the tooth.
> > > >
> > > > Today can find several new Chinese made units selling on Ebay.
> > > >
> > > > Lasty might want to look at DDS technology. There are some kits
> > > > available for digital VFOs which can also serve as sig gens.
> > > >
> > > > If you buy a IG-102 Heath you can use it for signal injection and
> > > > signal tracing. Where it falls down is being able to set a precise
> > > > output level such as 50uv to calibrate your S-meter.
> > > >
> > > > One way around that is if you have a good commercial receiver with
> > > > accurate and known S meter units you can drive it with the IG-102 and
> > > > set the output level switches and pot for say an S9 indication and
> > > > then use an external step attenuator to obtain reasonably accurate
> > > > lower rf output levels for alignment work. Step attenuators can be
> > > > built of purchased in kit or assembled units. Elecraft and Hendricks
> > > > QRP make kits.
> > > >
> > > > If you get serious about bench work then a HP8640B or Wavetek 3002
> > PLL
> > > > units are popular way to go, but now in the several hundred dollars
> > > > range for a functional one. It all depends on your priorities and how
> > > > you chose to spend your discretionary income.
> > > >
> > > > There are 3 or 4 IG-102 units on Ebay right now in the $10 to $20
> > > > dollar range.
> > > >
> > > > Good Luck
> > > > Terry K9TW
> > > >

> > > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Jerry Barr <kj6ntl@>
> > > > wrote:
> > > > >
> > > > > Hello Yes i have the op manuel and believe the service as well/ tho
> > > > no sig genÂ / keep e-baying for one but no luck yet/someone keeps
> > > > sniping me hihi/but i will find one /what features shud i ;look for
> > > > (thinking cheap)/want a communications monitor with all the goodies
> > > > but i am retiured and on a very limited budget so i will look atÂ
> > > > section 6 and go from thereÂ Â Â thank u
> > > > >
> > > > > Jerry KJ6NTL
> > > > >
> > > > > From: Terry Wagoner <wagstw46@>
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > Sent: Saturday, May 18, 2013 5:29 PM
> > > > > Subject: [TS-520_820_530_830] Re: ts 520se
> > > > >
> > > > > Â
> > > > > If you have not downloaded the TS-520S service manual and
> > studied it
> > > > suggest that it is a must. It will tell you how to align the front
> > end
> > > > for WWV reception. You need a RF signal generator and usually do
> > it in
> > > > two passes. Inject 15mhz signal into the SO-239 antenna connector at
> > > > approx 500uv or -53dBm and adjust T4, T5,and T3 on the RF board.
> > > > Reduce sig gen attenutor for approx 50uv or -73dBm level and repeak
> > > > T4, T5 and T3.
> > > > >
> > > > > If you do not have a sig gen with a calibrated output attenuator
> > > > then inject a test signal on 20 meters around 14.2 mhz and adjust
> > your
> > > > sig gen for S9 indication. Then set sig gen frequency to 15 mhz
> > and do
> > > > not touch the output level and use that level to align the WWV coils.
> > > > >
> > > > > Absent any kind of RF sig gen then use the Marker signal. Section 6
> > > > of your Operating manual describes how to use the Marker for WWV
> > > > alignment.
> > > > >
> > > > > Terry K9TW
> > > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, Tyler Frugia
> > > > <tfrugia@> wrote:
> > > > > >
> > > > > > I have the same problem on my 520se. You might try the alignment
> > > > procedure. I was able to hear WWV after doing this but like you it's

> > > > well below noise and doesn't move the S meter. My other radios
> > hear it S9.
> > > > > >
> > > > > > I'm hoping to dive into it more later tonight.
> > > > > > >
> > > > > > > Sent from my iPhone
> > > > > > >
> > > > > > > On May 18, 2013, at 3:29 PM, "Jerry" <kj6ntl@> wrote:
> > > > > > >
> > > > > > > > hi all got my ts520 back togeather and seems to work fine
> > > > > now/think ihear wwv but may jus be hopeng/vol up all the way on a
> > mini
> > > > > g5rv/cut for 20 meters/ it isnt real great on the ts2k either on a
> > > > > 573ft loop but easy to copy/any idea\s
> > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > >
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> > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > [Non-text portions of this message have been removed]
> > > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > [Non-text portions of this message have been removed]
> > > > >

42150. Re: ts 520se

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-19 19:36:13 UTC
From: Terry Wagoner
Topic: 42135 Message: 42150

Mike: I forgot to mention it would probably be pretty easy to place a silicon rectifier diode in series with a 9vdc duracell to drop the voltage close to 8.4vdc?

I think they went with the mercury to have essentially flat 8.4vdc output thru its life and thus hold the meter calibration better. It might even cal OK with the 9vdc and if changed once a year not have to worry about losing accuracy?

Terry
K9TW

42151. Original 520-was drifting on transmit, then let smoke out

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-19 19:25:54 UTC
From: edriscoll2000
Topic: 42151 Message: 42151

Hi folks! NE5N here. My 520 purchased new in 1976 came out of storage in Nov. and after cleaning up wafer switches, contacts, etc. seemed to be working OK. Then ragchew friends started telling me that it was drifting on transmit (I never noticed any drift on receive after normal warm-up), but after unkeying, it would be off freq. So I got the idea to plug in the external VFO to see if that would help. Unfortunately grabbed TS700SP VFO (very similar in appearance-especially to tired old guy) and plugged in. On power up, there was an instant dead short somewhere which blew the fuse and let out a large amount of smoke, with associated burned insulation and component smells. Any pointers on where the drift problem might be coming from once I sort out the short?
Thanks!

42152. Re: Original 520-was drifting on transmit, then let smoke out

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-19 20:57:24 UTC
From: Terry Wagoner
Topic: 42151 Message: 42152

Well your idea to reach for external VFO was a good one. If rig still drifts on the external VFO then almost always have a problem with AVR board regulated 9VDC supply. If no drift while on external VFO then problem likely inside the internal VFO. Try loosening and tightening the PC board mounting screws, re-heating solder connections, cleaning the PC board. Not an easy task.

If frequency is jumping or dead spots or noisy (very different than drift) then would indicate that the VFO air variable capacitor rotor shaft wiper contact needs cleaning. People often confuse the two symptoms. Two very different problems and causes.

If 9vdc is source of drift you would think it would manifest itself on transmit and on receive. You can power the internal VFO with a dc bench supply or a 9vdc battery. You might want to parallel two fresh 9vdc batteries. Unplug your Pin 8/9 jumper and connect 9vdc battery to Pin 8 and chassis ground. VFO should pull approx 50 to 60ma.

If you now have no drift you need to look at AVR board.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "edriscoll2000" <ne5n@...> wrote:
>
> Hi folks! NE5N here. My 520 purchased new in 1976 came out of storage in Nov. and after cleaning up wafer switches, contacts, etc. seemed to be working OK. Then ragchew friends started telling me that it was drifting on transmit (I never noticed any drift on receive after normal warm-up), but after unkeying, it would be off freq. So I got the idea to plug in the external VFO to see if that would help. Unfortunately grabbed TS700SP VFO (very similar in appearance-especially to tired old guy) and plugged in. On power up, there was an instant dead short somewhere which blew the fuse and let out a large amount of smoke, with associated burned insulation and component smells. Any pointers on where the drift problem might be coming from once I sort out the short?
> Thanks!
>

42153. Re: Original 520-was drifting on transmit, then let smoke out

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-19 21:30:38 UTC
From: Terry Wagoner
Topic: 42151 Message: 42153

Sorry got my rigs mixed up.

Your TS-520 vfo will pull approx 25 ma. So a single fresh 9vdc battery at Pin 8 will power it long enough for you to make QSO to see if you are still getting reports of frequency drift.

The TS-830 VFO pulls approx 50 ma. Old age and too many rigs in the dusty old file cabinet between the ears!

Terry K9TW

42154. Re: Original 520-was drifting on transmit, then let smoke out

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-19 22:10:07 UTC
From: Terry Wagoner
Topic: 42151 Message: 42154

I forgot to ask do you have a frequency counter that you could watch your output frequency as you transmit into a dummy load and to monitor your VFO frequency with?

Also make sure the people reporting the frequency drift are reporting it correctly. Ask them if they have to slowly tune their VFO or RIT to follow you up or down in frequency. Or is your frequency jumping up or down.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Sorry got my rigs mixed up.
>
> Your TS-520 vfo will pull approx 25 ma. So a single fresh 9vdc battery at Pin 8 will power it long enough for you to make QSO to see if you are still getting reports of frequency drift.
>
> The TS-830 VFO pulls approx 50 ma. Old age and too many rigs in the dusty old file cabinet between the ears!
>
> Terry K9TW
>

42155. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-19 22:31:29 UTC
From: adrian.langford@ymail.com
Topic: 42105 Message: 42155

Well I popped in "new" 12BY7A driver.

Rewarded with much healthier ALC on 15m (before had been unstable on that band) but still no ALC whatsoever on 10m. I also used switch cleaner on band switch and worked it in, in case of contact problem on 10m.

Next I will check the grid volatfes and cathode resistors as Terry suggested.

I also wondered if coil alignment may be part of answer so alsomtook off bottom of case.

The bad news is that the nylon hex toool I got on ebay was too big for the cores (have ordered one from Ken K4EAA).

The good news is that I examined all the slugs very carefully under bright light. Only one appears crackdd - the 3.5MHz oscillator coil. So when proper tool arrives I can align rig properly.

73 Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@..." <adrian@...> wrote:
>
>
> Many thanks for valuable info Terry.
>
> Different views from similarly experienced owners, so what I'll do is test whether a new driver valve - after checking voltages described here - makes any difference to 10m ALC.
>
> Plenty of time anyway till 10m shows signs of life!
>
> 73 Adrian G4IQW
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Robert:
> >
> > I will probably regret wading in to this pond!
> >
> > I do not doubt that you have no ALC indication on 10 meters on your TS-520. In my experience it is "common", but not "normal". I would also be very careful citing and observing any of these "service bulletins". I am very skeptical of most of these as some are just flat wrong. Putting star lock washers on circuit board to cure VFO drift isnt first thing I will ever reach for! They appear to me to be nothing more than a list of one line anecdotal entries submitted by owners and perhaps Kenwood service center bench techs? One line entries with no details, no basis, no explanations are not what I would expect from a factory authorized service bulletin.
> >

> > I have worked on probably 30 or so TS520s in a 10 year period. Not an exhaustive number, but enough to know that all but one left my bench with adequate ALC indication on 10 meters. That one would get approx 1/4 scale deflection and was very touchy and owner was in a hurry to get it back. In my experience can typically get at least 1/2 scale deflection with Car Level pot at 1400 to 1500 position. My own personal TS-520 ALC indication on 10 meters is a little bit better than 1/2 scale deflection. It had none when I got it.
> >
> > I once had a fellow call me(some how got my home phone) and he was mad as hell. He told me he saw where I responded on some forum just as I am to you and that he had purchased his TS520 new from big west coast dealer and it had no ALC on 10 meters out of the box and he called Kenwood and they told him it was "normal". Now I dont want to call anyone a liar, but I suggested that I doubted he had actually called Kenwood factory design engineer in Japan. If so what did that engineer say was the reason? Would there not have been a discussion and some additional probing questions? I suggested that perhaps he had called the dealer and maybe even talked to a dealer bench tech who said something like " I see that all the time". Very different from a design engineer explaining why it was "normal". I then suggested that had it been me I would have taken the rig back to dealer and told them when they can sell me a new in the box one that has ALC indication on all bands I will take it. He was fuming by time conversation ended.
> >
> > I closed the conversation this way. The compelling question you need to ask yourself is....."IF ONE OR MORE TS-520 HAVE SOME LEVEL OF ALC INDICATION ON 10 METERS WHY CANNOT ALL"? If later serial number production runs did not have this problem, wouldnt a mod have been issued? I know of no such Kenwood fix.
> >
> > Would Ford make a car that the speed-o-meter worked in 1st, 2nd, and 3rd gear, but in 4th gear you had to use some kind of work around to tell how fast your were going (maybe timing mile marker post with your wrist watch)? Would customers really live with that and call it normal? I dont think so.
> >
> > Also the manual does not say it is normal. I get that thrown at me. The operating manual clearly states that "Note: If there is no ALC reading indicated, increase the CAR control until there is an ALC reading" There is no disclaimer that follows that says "with the exception of on 10 meters". I think what confuses people is the statement later under the CW loading that says at 200 ma of Ip there may be no ALC indication. Too bad Kenwood had to make that statement, but apparently people were loading rig for max RF output using the RF detector position and for some odd reason then flipping meter back to ALC position instead of back to Ip. Maybe old timers who were use to loading the old Class C CW grid leak bias transmitters? Maybe they thought they needed to check and re-peak grid current? A Class AB1 Kenwood doesnt operate that way. We have essentially no grid current and no reason to keep checking ALC indication in the loading procedure. I dont understand it. Kenwood even followed this note by adding a chart that shows the preferred meter positions and it clearly shows that you should use Ip position when loading in CW. At 200 ma you are done and no reason to see if ALC has fallen off.
> >
> > There is a reason that you may have no ALC indication in CW Mode at 200 ma Ip and it has to do with degenerative RF feedback, but I wont go into it in this response.
> >
> > Sorry so long, but this is not easy subject to cover briefly.
> >

> > If you want to work on your no ALC indication on 10 meters start with a fresh 12BY7A and make sure you have spec DC voltages and make sure your cathode resistors are all at design value.
> >
> > Then in order to have ALC indication you need two key voltages. Start by checking your 6146 control grid Pin 5 operating DC bias voltage with 60 ma resting plate current. Also measure your RF drive voltage. If one or both of these are not to spec on 10 meters you will have no ALC indication. Need to be able to accurately measure these with a calibrated RF millivolt meter or O-scope. If you have -55vdc operating bias then you will need greater than 55/1.414 = 38.89 rms or 110.4 P-P rf drive volts. At 39 rf volts you will have just barely overcome the DC bias offset. The control grid of the 6146 must go positive on the positive half of the RF drive envelope in order for Ua grid current to flow. If 6146 control grid never goes positive relative to the cathode then there will be no Ua grid current. No Ua grid current means no ALC indication. This is the first place to start.
> >
> > Not just my experience. You might contact Jimmy Lamanteer WB2KNR who still operates his original dealer purchased new TS520 as his main rig and collects them and has 8 or 10 at all times and he reports to me that they all have some level of ALC indication on 10 meters.
> >
> > Not being critical of you Robert. Just trying to help.
> >
> > 73s Terry K9TW
> >
> >
> > >
> > > According to the TS-520 service bulletins, no ALC indication on 10M is "normal." And that is the way it is with my 520. I assume the 520SE is the same, although there are 520 owners who say they do get ALC on 10M.
> > >
> > >
> > >
> > >
> >
>

42156. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-19 23:43:38 UTC
From: Terry Wagoner
Topic: 42105 Message: 42156

Here are my readings from my personal TS-520 serial number 040234:

1. Full load on 28.500 Mhz = 85 watts output @200 ma into 50 ohm dummy load.
2. ALC indication is full scale deflection(FSD)ie the needle is far right at "350 ma" with Car Level Pot at position "8" and Drive Control peaked at 1230.
3. DC bias voltage at 6146 control grid Pin 5 = -85.6vdc cutoff bias in RX mode and -51.4 vdc operating bias in TX mode.
4. RF drive voltage at 6146 control grid Pin 5 = 43.0 rms volts measured with a Boonton 92E RF millivolt meter.

43 x 1.414 = 60.8 peak rf volts
60.8 - 51.4 vdc bias = 9.4 volts difference. This is reason why I have FSD ALC indication. It is normal to require more Car Level voltage on 10 meters. If unsure just set it Full CW to start with.

-51.4/1.414 = 36.0 rf volts. You must have greater than 36.0 rf volts at -51.4vdc operating bias to get any ALC indication. The Rf drive signal must make the 6146 control grid positive with respect to the cathode so that ua grid current flows to produce any ALC indication. The greater the delta between dc bias and RF drive voltage on positive swing of the RF envelope the higher the ALC deflection will be.

So you need to load your rig on 10 meters into dummy load. Since you have no ALC indication use a workaround like peaking the Drive Control on receiver back ground noise or use the Marker. After loading to full load flip the SG switch off and make the RF drive and DC bias voltage measurements on the 6146 control grid as I did above.

You will need a 3 diode RF probe and VTVM, or an O-scope, or an RF Millivolt meter to make the RF drive measurements.

Report back the RF output level, the operating bias voltage, and RF drive voltage and based on those I can point you to next place to look.

Terry
K9TW

--- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@..." <adrian@...> wrote:
>
> Well I popped in "new" 12BY7A driver.
>
> Rewarded with much healthier ALC on 15m (before had been unstable on that band) but still no ALC whatsoever on 10m. I also used switch cleaner on band switch and worked it in, in case of contact problem on 10m.
>
> Next I will check the grid volatfes and cathode resistors as Terry suggested.
>
> I also wondered if coil alignment may be part of answer so alsomtook off bottom of case.
>

> The bad news is that the nylon hex toool I got on ebay was too big for the cores (have ordered one from Ken K4EAA).
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>
> 73 Adrian G4IQW
>
> --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> >
> >
> > Many thanks for valuable info Terry.
> >
> > Different views from similarly experienced owners, so what I'll do is test whether a new driver valve - after checking voltages described here - makes any difference to 10m ALC.
> >
> > Plenty of time anyway till 10m shows signs of life!
> >
> > 73 Adrian G4IQW
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > >
> > > Robert:
> > >
> > > I will probably regret wading in to this pond!
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> > > I do not doubt that you have no ALC indication on 10 meters on your TS-520. In my experience it is "common", but not "normal". I would also be very careful citing and observing any of these "service bulletins". I am very skeptical of most of these as some are just flat wrong. Putting star lock washers on circuit board to cure VFO drift isnt first thing I will ever reach for! They appear to me to be nothing more than a list of one line anecdotal entries submitted by owners and perhaps Kenwood service center bench techs? One line entries with no details, no basis, no explanations are not what I would expect from a factory authorized service bulletin.
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engineer in Japan. If so what did that engineer say was the reason? Would there not have been a discussion and some additional probing questions? I suggested that perhaps he had called the dealer and maybe even talked to a dealer bench tech who said something like " I see that all the time". Very different from a design engineer explaining why it was "normal". I then suggested that had it been me I would have taken the rig back to dealer and told them when they can sell me a new in the box one that has ALC indication on all bands I will take it. He was fuming by time conversation ended.
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> > > Would Ford make a car that the speed-o-meter worked in 1st, 2nd, and 3rd gear, but in 4th gear you had to use some kind of work around to tell how fast your were going (maybe timing mile marker post with your wrist watch)? Would customers really live with that and call it normal? I dont think so.
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> > > There is a reason that you may have no ALC indication in CW Mode at 200 ma Ip and it has to do with degenerative RF feedback, but I wont go into it in this response.
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> > > If you want to work on your no ALC indication on 10 meters start with a fresh 12BY7A and make sure you have spec DC voltages and make sure your cathode resistors are all at design value.
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> > > Then in order to have ALC indication you need two key voltages. Start by checking your 6146 control grid Pin 5 operating DC bias voltage with 60 ma resting plate current. Also measure your RF drive voltage. If one or both of these are not to spec on 10 meters you will have no ALC indication. Need to be able to accurately measure these with a calibrated RF millivolt meter or O-scope. If you have -55vdc operating bias then you will need greater than 55/1.414 = 38.89 rms or 110.4 P-P rf drive volts. At 39 rf volts you will have just barely overcome the DC bias offset. The control grid of the 6146 must go positive on the positive half of the RF drive envelope in order for Ua grid current to flow. If 6146 control grid never goes positive relative to the cathode then there will be no Ua grid

current. No Ua grid current means no ALC indication. This is the first place to start.
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> > > Not being critical of you Robert. Just trying to help.
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42157. My TS-820 got sick... :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-20 03:50:50 UTC
From: coyoteinventor@ymail.com
Topic: 42157 Message: 42157

Hi group! I'm new in this forum and in ham radio, and I'm in need of some help from the experts. ;-)

I bought a Kenwood TS-820 a month ago or so, and it's been working pretty well other than the common issues (drifting VFO, LCD going on/off, and weakening final tubes) I have not had time to look into some of the solutions mentioned in this forum.

Last night, while using the radio, I stopped receiving for a few seconds (everything went quiet) and then back to normal. Today I used the radio for a while with no problems, then turned it off, and, when I came back to it a couple of hours later, no receive at all, even after fiddling with it for 15 minutes. :-(

So, the symptoms: on SSB, I crank up the RF gain all the way up, and the AF gain quite high, and I barely hear things (even the noise I can hardly hear when usually, with these settings, I would be going deaf!). If I crank up the AF gain all the way up, I get some type of feedback (loud beep). If I switch to CW or TUN, I also get a loud feedback (louder). If I transmit to a dummy load, I am getting less than 50% of my normal transmit power.

Any ideas what could have gone bad?

Thanks in advance for your help!

--Cesar-- K1TNT

42158. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-20 09:59:26 UTC
From: adrian.langford@ymail.com
Topic: 42105 Message: 42158

Thanks for such detailed readings Terry.

I won't be home to check my rig till the weekend but will report then. Before leaving today I did have time just to put a freq counter on the marker output. You are absolutely correct that SE has a 2.5MHz crystal, but at the output my counter was picking up 50kHz signal (forget how many decimal places but several!). Must be some peculiarity of the counter that determines which 25kHz harmonicis picked up (the service manual says to trim for an even multiple harmoic). So at least the calibrator is set correctly without benefit of strong WWV signal, but I guess I knew that as I could compare it with my FT817ND frequency display on same signal, and the sub-dial was also within 1kHz on some of the regular nets Iisten to.

Thanks again for terrific help.

73 Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
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> Here are my readings from my personal TS-520 serial number 040234:
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> 1. Full load on 28.500 Mhz = 85 watts output @200 ma into 50 ohm dummy load.
> 2. ALC indication is full scale deflection(FSD)ie the needle is far right at "350 ma" with Car Level Pot at position "8" and Drive Control peaked at 1230.
> 3. DC bias voltage at 6146 control grid Pin 5 = -85.6vdc cutoff bias in RX mode and -51.4 vdc operating bias in TX mode.
> 4. RF drive voltage at 6146 control grid Pin 5 = 43.0 rms volts measured with a Boonton 92E RF millivolt meter.
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> 43 x 1.414 = 60.8 peak rf volts
> 60.8 - 51.4 vdc bias = 9.4 volts difference. This is reason why I have FSD ALC indication. It is normal to require more Car Level voltage on 10 meters. If unsure just set it Full CW to start with.
>
> -51.4/1.414 = 36.0 rf volts. You must have greater than 36.0 rf volts at -51.4vdc operating bias to get any ALC indication. The Rf drive signal must make the 6146 control grid positive with respect to the cathode so that ua grid current flows to produce any ALC indication. The greater the delta between dc bias and RF drive voltage on positive swing of the RF envelope the higher the ALC deflection will be.
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> So you need to load your rig on 10 meters into dummy load. Since you have no ALC indication use a workaround like peaking the Drive Control on receiver back ground noise or use the Marker. After loading to full load flip the SG switch off and make the RF drive and DC bias voltage measurements on the 6146 control grid as I did above.
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> You will need a 3 diode RF probe and VTVM, or an O-scope, or an RF Millivolt meter to make the RF drive measurements.

>
> Report back the RF output level, the operating bias voltage, and RF drive voltage and based on those I can point you to next place to look.
>
> Terry
> K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
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> > Well I popped in "new" 12BY7A driver.
> >
> > Rewarded with much healthier ALC on 15m (before had been unstable on that band) but still no ALC whatsoever on 10m. I also used switch cleaner on band switch and worked it in, in case of contact problem on 10m.
> >
> > Next I will check the grid volatfes and cathode resistors as Terry suggested.
> >
> > I also wondered if coil alignment may be part of answer so alsomtook off bottom of case.
> >
> > The bad news is that the nylon hex toool I got on ebay was too big for the cores (have ordered one from Ken K4EAA).
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> > The good news is that I examined all the slugs very carefully under bright light. Only one appears crackdd - the 3.5MHz oscillator coil. So when proper tool arrives I can align rig properly.
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> > > Many thanks for valuable info Terry.
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> > > Different views from similarly experienced owners, so what I'll do is test whether a new driver valve - after checking voltages described here - makes any difference to 10m ALC.
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> > > Plenty of time anyway till 10m shows signs of life!
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> > > > I will probably regret wading in to this pond!
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> > > > I do not doubt that you have no ALC indication on 10 meters on your TS-520. In my

experience it is "common", but not "normal". I would also be very careful citing and observing any of these "service bulletins". I am very skeptical of most of these as some are just flat wrong. Putting star lock washers on circuit board to cure VFO drift isnt first thing I will ever reach for! They appear to me to be nothing more than a list of one line anecdotal entries submitted by owners and perhaps Kenwood service center bench techs? One line entries with no details, no basis, no explanations are not what I would expect from a factory authorized service bulletin.
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> > > > I have worked on probably 30 or so TS520s in a 10 year period. Not an exhaustive number, but enough to know that all but one left my bench with adequate ALC indication on 10 meters. That one would get approx 1/4 scale deflection and was very touchy and owner was in a hurry to get it back. In my experience can typically get at least 1/2 scale deflection with Car Level pot at 1400 to 1500 position. My own personal TS-520 ALC indication on 10 meters is a little bit better than 1/2 scale deflection. It had none when I got it.
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> > > > I once had a fellow call me(some how got my home phone) and he was mad as hell. He told me he saw where I responded on some forum just as I am to you and that he had purchased his TS520 new from big west coast dealer and it had no ALC on 10 meters out of the box and he called Kenwood and they told him it was "normal". Now I dont want to call anyone a liar, but I suggested that I doubted he had actually called Kenwood factory design engineer in Japan. If so what did that engineer say was the reason? Would there not have been a discussion and some additional probing questions? I suggested that perhaps he had called the dealer and maybe even talked to a dealer bench tech who said something like " I see that all the time". Very different from a design engineer explaining why it was "normal". I then suggested that had it been me I would have taken the rig back to dealer and told them when they can sell me a new in the box one that has ALC indication on all bands I will take it. He was fuming by time conversation ended.
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> > > > I closed the conversation this way. The compelling question you need to ask yourself is....."IF ONE OR MORE TS-520 HAVE SOME LEVEL OF ALC INDICATION ON 10 METERS WHY CANNOT ALL"? If later serial number production runs did not have this problem, wouldnt a mod have been issued? I know of no such Kenwood fix.
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> > > > Also the manual does not say it is normal. I get that thrown at me. The operating manual clearly states that "Note: If there is no ALC reading indicated, increase the CAR control until there is an ALC reading" There is no disclaimer that follows that says "with the exception of on 10 meters". I think what confuses people is the statement later under the CW loading that says at 200 ma of Ip there may be no ALC indication. Too bad Kenwood had to make that statement, but apparently people were loading rig for max RF output using the RF detector position and for some odd reason then flipping meter back to ALC position instead of back to Ip. Maybe old timers who were use to loading the old Class C CW grid leak bias transmitters? Maybe they thought they needed to check and re-peak grid current? A Class AB1 Kenwood doesnt operate that way. We have essentially no grid current and no reason to keep checking ALC indication in the loading procedure. I dont understand it. Kenwood even followed this note by adding a chart that shows the preferred meter positions and it clearly shows that you should use Ip position when loading in CW. At 200 ma you are

done and no reason to see if ALC has fallen off.
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> > > > There is a reason that you may have no ALC indication in CW Mode at 200 ma Ip and it has to do with degenerative RF feedback, but I wont go into it in this response.
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> > > > Sorry so long, but this is not easy subject to cover briefly.
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> > > > If you want to work on your no ALC indication on 10 meters start with a fresh 12BY7A and make sure you have spec DC voltages and make sure your cathode resistors are all at design value.
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> > > > Then in order to have ALC indication you need two key voltages. Start by checking your 6146 control grid Pin 5 operating DC bias voltage with 60 ma resting plate current. Also measure your RF drive voltage. If one or both of these are not to spec on 10 meters you will have no ALC indication. Need to be able to accurately measure these with a calibrated RF millivolt meter or O-scope. If you have -55vdc operating bias then you will need greater than 55/1.414 = 38.89 rms or 110.4 P-P rf drive volts. At 39 rf volts you will have just barely overcome the DC bias offset. The control grid of the 6146 must go positive on the positive half of the RF drive envelope in order for Ua grid current to flow. If 6146 control grid never goes positive relative to the cathode then there will be no Ua grid current. No Ua grid current means no ALC indication. This is the first place to start.
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> > > >
> > > > Not being critical of you Robert. Just trying to help.
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> > > > 73s Terry K9TW
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42159. Coil board conundrum

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-20 10:23:02 UTC
From: adrian.langford@ymail.com
Topic: 42159 Message: 42159

On Ken K4EAA's site he discusses rewinding coils if a ferrite slug gets stuck/broken and new formeri s needed.

Was pleased to find only one of my 520SE coils is cracked (3.5 mhz osc), but when I was looking at the board I saw the band switch shaft goes right through it!

So how would anyone be able to desolder any of the coils, without major surgery? Are you meant to desolder former while board is still in place? That looks extremely tricky given narrow space between each of the coil boards.

Has anyone here ever removed and replaced one of these coils, and if so how?

73 Adrian G4IQW

42160. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-20 11:37:45 UTC
From: Terry Wagoner
Topic: 42105 Message: 42160

Adrian-it is OK that your counter saw 50khz, but need to make sure the "decimal places" were all 00000 or 99999 or shifting back and forth from 99999 to 00000. If not need to adjust trimmer cap.

I would use your counter next and see how the VFO tracks from Zero to 600 (full travel of the VFO air variable).

Connect the counter to the External VFO socket Pin 1 or if you have top cover off connect at the Out terminal post on the AVR board.

1. Zero = 5.500 mhz - if off adjust with TC-1 inside the VFO
2. 600 = 4.900 mhz - if off adjust with L1 inside the VFO

Fig 20 in service manual shows location of these two adjustments.

You will have to go back and forth several times to get the best tracking.

If you have a rf probe/vtvm or a O-scope can also measure the VFO output level. Should be no less than 0.9v rms or 2.54 P-P.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@..." <adrian@...> wrote:
>
>
> Thanks for such detailed readings Terry.
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> I won't be home to check my rig till the weekend but will report then. Before leaving today I did have time just to put a freq counter on the marker output. You are absolutely correct that SE has a 2.5MHz crystal, but at the output my counter was picking up 50kHz signal (forget how many decimal places but several!). Must be some peculiarity of the counter that determines which 25kHz harmonicis picked up (the service manual says to trim for an even multiple harmoic). So at least the calibrator is set correctly without benefit of strong WWV signal, but I guess I knew that as I could compare it with my FT817ND frequency display on same signal, and the sub-dial was also within 1kHz on some of the regular nets Iisten to.
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> Thanks again for terrific help.
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42161. Re: My TS-820 got sick... :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-20 12:52:17 UTC
From: coyoteinventor@ymail.com
Topic: 42157 Message: 42161

Oh, and one more thing I forgot to mention, which might be important.

Even though I can not hear hardly anything, the needle in the meter of the TS-820 moves all the way to the right (on all meter selections), but when I transmit it goes back to the left and moves a little bit as I talk.

Thanks again!

--Cesar-- K1TNT

--- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@..." <coyoteinventor@...> wrote:
>
> Hi group! I'm new in this forum and in ham radio, and I'm in need of some help from the experts. ;-)
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> I bought a Kenwood TS-820 a month ago or so, and it's been working pretty well other than the common issues (drifting VFO, LCD going on/off, and weakening final tubes) I have not had time to look into some of the solutions mentioned in this forum.
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> Last night, while using the radio, I stopped receiving for a few seconds (everything went quiet) and then back to normal. Today I used the radio for a while with no problems, then turned it off, and, when I came back to it a couple of hours later, no receive at all, even after fiddling with it for 15 minutes. :-(
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> So, the symptoms: on SSB, I crank up the RF gain all the way up, and the AF gain quite high, and I barely hear things (even the noise I can hardly hear when usually, with these settings, I would be going deaf!). If I crank up the AF gain all the way up, I get some type of feedback (loud beep). If I switch to CW or TUN, I also get a loud feedback (louder). If I transmit to a dummy load, I am getting less than 50% of my normal transmit power.
>
> Any ideas what could have gone bad?
>
> Thanks in advance for your help!
>
> --Cesar-- K1TNT
>

42162. Re: [TS-520_820_530_830] Re: My TS-820 got sick... :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-20 13:02:24 UTC
From: Mike
Topic: 42157 Message: 42162

Cesar,

When the 820 is in "receive", NONE of the meter switch positions work, they are ALL disabled. The only time the meter switch positions are active is in "transmit".

73
Mike

On 5/20/2013 7:52 AM, coyoteinventor@... wrote:
>
> Oh, and one more thing I forgot to mention, which might be important.
>
> Even though I can not hear hardly anything, the needle in the meter of
> the TS-820 moves all the way to the right (on all meter selections),
> but when I transmit it goes back to the left and moves a little bit as
> I talk.
>
> Thanks again!
>
> --Cesar-- K1TNT
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "coyoteinventor@..."
> <coyoteinventor@...> wrote:
> >
> > Hi group! I'm new in this forum and in ham radio, and I'm in need of
> some help from the experts. ;-)
> >
> > I bought a Kenwood TS-820 a month ago or so, and it's been working
> pretty well other than the common issues (drifting VFO, LCD going
> on/off, and weakening final tubes) I have not had time to look into
> some of the solutions mentioned in this forum.
> >
> > Last night, while using the radio, I stopped receiving for a few
> seconds (everything went quiet) and then back to normal. Today I used
> the radio for a while with no problems, then turned it off, and, when
> I came back to it a couple of hours later, no receive at all, even
> after fiddling with it for 15 minutes. :-(
> >
> > So, the symptoms: on SSB, I crank up the RF gain all the way up, and
> the AF gain quite high, and I barely hear things (even the noise I can
> hardly hear when usually, with these settings, I would be going
> deaf!). If I crank up the AF gain all the way up, I get some type of
> feedback (loud beep). If I switch to CW or TUN, I also get a loud
> feedback (louder). If I transmit to a dummy load, I am getting less

> than 50% of my normal transmit power.
> >
> > Any ideas what could have gone bad?
> >
> > Thanks in advance for your help!
> >
> > --Cesar-- K1TNT
> >
>
>

[Non-text portions of this message have been removed]

42163. Re: Coil board conundrum

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-20 13:04:49 UTC
From: roberteleazer@rocketmail.com
Topic: 42159 Message: 42163

Okay, first do your mean that the coil slug is cracked?

Second, what you you mean that the "band switch shaft goes right through it?"

If it is a slug, in some cases I have used a drop of superglue and a jeweler's screwdriver to extract the broken slug. Then you can replace it with a similar one taken from another coil. Best source of such slugs are old CB radios, but places such as All Electronics do sell new IF coils that might have slugs that would work.

You need to get some small wooden dowels and make yourself some tuning tools that will fit the slugs and will not crack them.

Good Luck!

Robert

--- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@..." <adrian@...> wrote:
>
> On Ken K4EAA's site he discusses rewinding coils if a ferrite slug gets stuck/broken and new formeri s needed.
>
> Was pleased to find only one of my 520SE coils is cracked (3.5 mhz osc), but when I was looking at the board I saw the band switch shaft goes right through it!
>
> So how would anyone be able to desolder any of the coils, without major surgery? Are you meant to desolder former while board is still in place? That looks extremely tricky given narrow space between each of the coil boards.
>
> Has anyone here ever removed and replaced one of these coils, and if so how?
>
> 73 Adrian G4IQW
>

42164. Re: My TS-820 got sick... :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-20 13:19:38 UTC
From: Terry Wagoner
Topic: 42157 Message: 42164

If S-meter is pegged full scale right then your AGC bus is not seeing RF-1 and you will have no receive as the RF and IF amp mosfets have very low or no control voltage on Gate 2.

Measure RF-1 and clean Aux relay contacts for starters.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@..." <coyoteinventor@...> wrote:
>
> Oh, and one more thing I forgot to mention, which might be important.
>
> Even though I can not hear hardly anything, the needle in the meter of the TS-820 moves all the way to the right (on all meter selections), but when I transmit it goes back to the left and moves a little bit as I talk.
>
> Thanks again!
>
> --Cesar-- K1TNT
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@" <coyoteinventor@> wrote:
> >
> > Hi group! I'm new in this forum and in ham radio, and I'm in need of some help from the experts. ;-)
> >
> > I bought a Kenwood TS-820 a month ago or so, and it's been working pretty well other than the common issues (drifting VFO, LCD going on/off, and weakening final tubes) I have not had time to look into some of the solutions mentioned in this forum.
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> > Last night, while using the radio, I stopped receiving for a few seconds (everything went quiet) and then back to normal. Today I used the radio for a while with no problems, then turned it off, and, when I came back to it a couple of hours later, no receive at all, even after fiddling with it for 15 minutes. :-(
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> > So, the symptoms: on SSB, I crank up the RF gain all the way up, and the AF gain quite high, and I barely hear things (even the noise I can hardly hear when usually, with these settings, I would be going deaf!). If I crank up the AF gain all the way up, I get some type of feedback (loud beep). If I switch to CW or TUN, I also get a loud feedback (louder). If I transmit to a dummy load, I am getting less than 50% of my normal transmit power.
> >
> > Any ideas what could have gone bad?
> >
> > Thanks in advance for your help!

> >
> > --Cesar-- K1TNT
> >
>

42165. Re: Coil board conundrum

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-20 13:32:02 UTC
From: Terry Wagoner
Topic: 42159 Message: 42165

Yes all the bandswitch boards hang off the RF board and the bandswitch shaft runs thru them. It is not uncommon to find cracked tuned slugs and also the fiber coil formers twisted off the mounting pins that solder to the board. This happens when someone torques on the core trying to free it and twists the coil former. I hate to see this. Ham fisted work.

Cracked cores can be replaced as others suggest, but I am afraid best way to replace coil formers and/or het osc crytals is to pull the boards. Not an easy task. If you try to do it in place you risk lifting a foil. You may want to contact Bob Mansker and see what he gets for a complete set of boards. He may have a set with no cracked cores and no formers twisted off the mounts.

If you get a good set of boards from Bob suggest you use a tooth pick or artist brush and apply small drop of Tri-flow lube at top edge of cores and work back and forth to free them before installing in the rig. Some folks use WD-40. Whatever you use just apply very sparingly.

Not an easy job but can be done. I have done several and just need to take your time. Just pay close attention to the shaft coupler orientation between the bandswitch boards shaft and the PA cage bandswitch shaft(under the metal shield can cover).

Terry k9TW

--- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@..." <adrian@...> wrote:
>
> On Ken K4EAA's site he discusses rewinding coils if a ferrite slug gets stuck/broken and new formeri s needed.
>
> Was pleased to find only one of my 520SE coils is cracked (3.5 mhz osc), but when I was looking at the board I saw the band switch shaft goes right through it!
>
> So how would anyone be able to desolder any of the coils, without major surgery? Are you meant to desolder former while board is still in place? That looks extremely tricky given narrow space between each of the coil boards.
>
> Has anyone here ever removed and replaced one of these coils, and if so how?
>
> 73 Adrian G4IQW
>

42166. Re: Coil board conundrum

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-20 14:35:27 UTC
From: adrian.langford@ymail.com
Topic: 42159 Message: 42166

Apart from that single cracked 3.5 slug all the cores are ok and all formers correctly attached.

As I understand it the OSC coils not involved in aligning Rx and Tx, so when I get correct tool I will peak the ANT, MIX and DRIVE coils.

I will be sure to take your advice on careful lubeing of the slugs before I attempt to move any slugs. Don't want to break anything trying to fix it!

Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Yes all the bandswitch boards hang off the RF board and the bandswitch shaft runs thru them. It is not uncommon to find cracked tuned slugs and also the fiber coil formers twisted off the mounting pins that solder to the board. This happens when someone torques on the core trying to free it and twists the coil former. I hate to see this. Ham fisted work.
>
> Cracked cores can be replaced as others suggest, but I am afraid best way to replace coil formers and/or het osc crytals is to pull the boards. Not an easy task. If you try to do it in place you risk lifting a foil. You may want to contact Bob Mansker and see what he gets for a complete set of boards. He may have a set with no cracked cores and no formers twisted off the mounts.
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> If you get a good set of boards from Bob suggest you use a tooth pick or artist brush and apply small drop of Tri-flow lube at top edge of cores and work back and forth to free them before installing in the rig. Some folks use WD-40. Whatever you use just apply very sparingly.
>
> Not an easy job but can be done. I have done several and just need to take your time. Just pay close attention to the shaft coupler orientation between the bandswitch boards shaft and the PA cage bandswitch shaft(under the metal shield can cover).
>
> Terry k9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> >
> > On Ken K4EAA's site he discusses rewinding coils if a ferrite slug gets stuck/broken and new formeri s needed.
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> > Was pleased to find only one of my 520SE coils is cracked (3.5 mhz osc), but when I was looking at the board I saw the band switch shaft goes right through it!
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> > So how would anyone be able to desolder any of the coils, without major surgery? Are you meant to desolder former while board is still in place? That looks extremely tricky

given narrow space between each of the coil boards.
> >
> > Has anyone here ever removed and replaced one of these coils, and if so how?
> >
> > 73 Adrian G4IQW
> >
>

42167. Re: Coil board conundrum

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-20 14:45:36 UTC
From: adrian.langford@ymail.com
Topic: 42159 Message: 42167

Sorry for ambiguity - the slug is cracked but luckily not on coil critical for alignment as I have oscillation for 80m.

The RF boards on which the could sit have a hole through each board, and they are skewered by the band switch shaft as it heads for finals cage. I was just curious about how people tackled pulling such a board - it looks almost impossible!

Thanks for your tips on sources for slugs/coils and correct tool.

Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> Okay, first do your mean that the coil slug is cracked?
>
> Second, what you you mean that the "band switch shaft goes right through it?"
>
> If it is a slug, in some cases I have used a drop of superglue and a jeweler's screwdriver to extract the broken slug. Then you can replace it with a similar one taken from another coil. Best source of such slugs are old CB radios, but places such as All Electronics do sell new IF coils that might have slugs that would work.
>
> You need to get some small wooden dowels and make yourself some tuning tools that will fit the slugs and will not crack them.
>
> Good Luck!
>
> Robert
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> >
> > On Ken K4EAA's site he discusses rewinding coils if a ferrite slug gets stuck/broken and new formeri s needed.
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> > Was pleased to find only one of my 520SE coils is cracked (3.5 mhz osc), but when I was looking at the board I saw the band switch shaft goes right through it!
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> >
>

42168. Re: Coil board conundrum

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-20 15:19:11 UTC
From: Terry Wagoner
Topic: 42159 Message: 42168

I do not agree with that. I would not assume that former owners have peaked the Het Osc coils properly. I would adjust them prior to doing Ant, Mixer, and Drive coils for couple of reasons.

1. If not set properly the oscillators may not reliably start each time selected by the bandswitch. Should not be set on the fast side of the response curve. Service manual describes how to adjust.

2. The Het Osc signal is the Local Oscillator (LO) signal for the Transmit and Receive Mixers. It is important to have correct LO injection level for proper mixer action.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@..." <adrian@...> wrote:
>
> Apart from that single cracked 3.5 slug all the cores are ok and all formers correctly attached.
>
> As I understand it the OSC coils not involved in aligning Rx and Tx, so when I get correct tool I will peak the ANT, MIX and DRIVE coils.
>
> I will be sure to take your advice on careful lubeing of the slugs before I attempt to move any slugs. Don't want to break anything trying to fix it!
>
> Adrian G4IQW
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Yes all the bandswitch boards hang off the RF board and the bandswitch shaft runs thru them. It is not uncommon to find cracked tuned slugs and also the fiber coil formers twisted off the mounting pins that solder to the board. This happens when someone torques on the core trying to free it and twists the coil former. I hate to see this. Ham fisted work.
> >
> > Cracked cores can be replaced as others suggest, but I am afraid best way to replace coil formers and/or het osc crytals is to pull the boards. Not an easy task. If you try to do it in place you risk lifting a foil. You may want to contact Bob Mansker and see what he gets for a complete set of boards. He may have a set with no cracked cores and no formers twisted off the mounts.
> >
> > If you get a good set of boards from Bob suggest you use a tooth pick or artist brush and apply small drop of Tri-flow lube at top edge of cores and work back and forth to free them before installing in the rig. Some folks use WD-40. Whatever you use just apply very sparingly.
> >
> > Not an easy job but can be done. I have done several and just need to take your time.

Just pay close attention to the shaft coupler orientation between the bandswitch boards shaft and the PA cage bandswitch shaft(under the metal shield can cover).
> >
> > Terry k9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> > >
> > > On Ken K4EAA's site he discusses rewinding coils if a ferrite slug gets stuck/broken and new formeri s needed.
> > >
> > > Was pleased to find only one of my 520SE coils is cracked (3.5 mhz osc), but when I was looking at the board I saw the band switch shaft goes right through it!
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> > > So how would anyone be able to desolder any of the coils, without major surgery? Are you meant to desolder former while board is still in place? That looks extremely tricky given narrow space between each of the coil boards.
> > >
> > > Has anyone here ever removed and replaced one of these coils, and if so how?
> > >
> > > 73 Adrian G4IQW
> > >
> >
>

42169. Re: Coil board conundrum

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-20 16:59:11 UTC
From: adrian.langford@ymail.com
Topic: 42159 Message: 42169

OK Terry thanks for correction - I thought that as I could receive ok on all bands then I could leave LO coils as they were. But now I will adjust as per manual, apart from the cracked 3.5MHz core.

Come to think of it I've never heard anything on 10m, but thought that's just conditions. Could I have no ALC because the 28 LO is not oscillating?

Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> I do not agree with that. I would not assume that former owners have peaked the Het Osc coils properly. I would adjust them prior to doing Ant, Mixer, and Drive coils for couple of reasons.
>
> 1. If not set properly the oscillators may not reliably start each time selected by the bandswitch. Should not be set on the fast side of the response curve. Service manual describes how to adjust.
>
> 2. The Het Osc signal is the Local Oscillator (LO) signal for the Transmit and Receive Mixers. It is important to have correct LO injection level for proper mixer action.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> >
> > Apart from that single cracked 3.5 slug all the cores are ok and all formers correctly attached.
> >
> > As I understand it the OSC coils not involved in aligning Rx and Tx, so when I get correct tool I will peak the ANT, MIX and DRIVE coils.
> >
> > I will be sure to take your advice on careful lubeing of the slugs before I attempt to move any slugs. Don't want to break anything trying to fix it!
> >
> > Adrian G4IQW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > >
> > > Yes all the bandswitch boards hang off the RF board and the bandswitch shaft runs thru them. It is not uncommon to find cracked tuned slugs and also the fiber coil formers twisted off the mounting pins that solder to the board. This happens when someone torques on the core trying to free it and twists the coil former. I hate to see this. Ham fisted work.
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> > > Cracked cores can be replaced as others suggest, but I am afraid best way to replace

coil formers and/or het osc crytals is to pull the boards. Not an easy task. If you try to do it in place you risk lifting a foil. You may want to contact Bob Mansker and see what he gets for a complete set of boards. He may have a set with no cracked cores and no formers twisted off the mounts.
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> > > Not an easy job but can be done. I have done several and just need to take your time. Just pay close attention to the shaft coupler orientation between the bandswitch boards shaft and the PA cage bandswitch shaft(under the metal shield can cover).
> > >
> > > Terry k9TW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> > > >
> > > > On Ken K4EAA's site he discusses rewinding coils if a ferrite slug gets stuck/broken and new formeri s needed.
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> > > > 73 Adrian G4IQW
> > > >
> > >
> > >
>

42170. Re: Coil board conundrum

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-20 18:43:58 UTC
From: Terry Wagoner
Topic: 42159 Message: 42170

Yes if Het Osc isnt oscillating on any band will have no RX on that band and no TX. I thought you had RF output on 10 and just no ALC indication. If you have RF output you have to have Het Osc running as I mentioned it is the LO signal for Q3 TX Mixer.

I am not sure who counseled that you could skip it, but if rig was on my bench and you were paying me for an alignment it would get performed. If you have no RX and TX on 10 mtrs even more reason to do it now.

Top 10 reasons (ok 3!)

1. Make sure adjusted properly by former owner and no bad xtals (they do age and fail).
2. Make sure your oscillators are running on 10 meters bandswitch positions.
3. So you can learn how to do it. Fun!

As a point of interest design engineers establish Mixer LO injection levels so it is not too high or too low. If too high can cause problems with carrier in the Mixer output and/or spurs and worse case high 2nd harmonic content (2 x 8.830 = 17.660 mhz). Only way to know for sure is look at output with Spectrum Analyzer or to listen on a General Coverage receiver. If LO level is set too low can have increased Mixer conversion loss which would probably be more concern for the Receiver mixer.

In practice with your TS520 about worse case would be as found adjustment set so the oscillator doesnt start reliably each time it is selected.

You can adjust using the "listening method" described in Sect 6 of your operating manual or more precisely using method described in the Service Manual. If you measure you should have approx 1.5rms rf volts at TP-3 on RF board.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@..." <adrian@...> wrote:
>
>
> OK Terry thanks for correction - I thought that as I could receive ok on all bands then I could leave LO coils as they were. But now I will adjust as per manual, apart from the cracked 3.5MHz core.
>
> Come to think of it I've never heard anything on 10m, but thought that's just conditions. Could I have no ALC because the 28 LO is not oscillating?
>
> Adrian G4IQW
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
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> > I do not agree with that. I would not assume that former owners have peaked the Het Osc coils properly. I would adjust them prior to doing Ant, Mixer, and Drive coils for couple of reasons.

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> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> > >
> > > Apart from that single cracked 3.5 slug all the cores are ok and all formers correctly attached.
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> > > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
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> > > > Yes all the bandswitch boards hang off the RF board and the bandswitch shaft runs thru them. It is not uncommon to find cracked tuned slugs and also the fiber coil formers twisted off the mounting pins that solder to the board. This happens when someone torques on the core trying to free it and twists the coil former. I hate to see this. Ham fisted work.
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> > > >
> > > > Terry k9TW
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> > > > >

> > > > > On Ken K4EAA's site he discusses rewinding coils if a ferrite slug gets stuck/broken and new formeri s needed.
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> > > > > Has anyone here ever removed and replaced one of these coils, and if so how?
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> > > > > 73 Adrian G4IQW
> > > > > >
> > > > >
> > > >
> > >
>

42171. Re: [TS-520_820_530_830] Re: removing broken slugs

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-20 19:07:17 UTC
From: William Houghton
Topic: 42159 Message: 42171

My technique to remove a cracked slug is to drill it out. Before you think I'm crazy, let me explain. I have a set of numbered drill bits. I start with the small bits and see if it fits through the hex hole in the slug and keep going until I find the first drill that doesn't slide through. I then drill through the slug hole with that size by hand. I slowly twist the drill by hand. I do this over a newspaper because the ferrite will come out as dust. I also put on a dust mask. I then go to the next larger size or maybe up one size. The nice thing about numbered drill bits is that they go up in size by pretty small increments. I repeat this process again and again. The powdered iron is very brittle and eventually the walls of the slug become thin enough that the slug breaks into pieces that fall out. I have done this about 5 or 6 times on various gear and never damaged a coil form.

From: "roberteleazer@rocketmail.com" <roberteleazer@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, May 20, 2013 6:04:55 AM
Subject: [TS-520_820_530_830] Re: Coil board conundrum

Okay, first do your mean that the coil slug is cracked?

Second, what you you mean that the "band switch shaft goes right through it?"

If it is a slug, in some cases I have used a drop of superglue and a jeweler's screwdriver to extract the broken slug. Then you can replace it with a similar one taken from another coil. Best source of such slugs are old CB radios, but places such as All Electronics do sell new IF coils that might have slugs that would work.

You need to get some small wooden dowels and make yourself some tuning tools that will fit the slugs and will not crack them.

Good Luck!

Robert

--- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@..." <adrian@...>
wrote:
>
> On Ken K4EAA's site he discusses rewinding coils if a ferrite slug gets
>stuck/broken and new formeri s needed.
>
> Was pleased to find only one of my 520SE coils is cracked (3.5 mhz osc), but
>when I was looking at the board I saw the band switch shaft goes right through
>it!
>
> So how would anyone be able to desolder any of the coils, without major

>surgery? Are you meant to desolder former while board is still in place? That
>looks extremely tricky given narrow space between each of the coil boards.
>
> Has anyone here ever removed and replaced one of these coils, and if so how?
>
> 73 Adrian G4IQW
>

[Non-text portions of this message have been removed]

42172. Re: Coil board conundrum

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-20 20:40:30 UTC
From: adrian.langford@ymail.com
Topic: 42159 Message: 42172

Based on that (very helpful!) description I probably do have oscillation on 28MHz. I do have RF output on that band but it's very low - all other bands 100W sometimes more, but on 28MHz maybe 20W max.

I can adjust the oscillator coils on a scope.

73 Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Yes if Het Osc isnt oscillating on any band will have no RX on that band and no TX. I thought you had RF output on 10 and just no ALC indication. If you have RF output you have to have Het Osc running as I mentioned it is the LO signal for Q3 TX Mixer.
>
> I am not sure who counseled that you could skip it, but if rig was on my bench and you were paying me for an alignment it would get performed. If you have no RX and TX on 10 mtrs even more reason to do it now.
>
> Top 10 reasons (ok 3!)
>
> 1. Make sure adjusted properly by former owner and no bad xtals (they do age and fail).
> 2. Make sure your oscillators are running on 10 meters bandswitch positions.
> 3. So you can learn how to do it. Fun!
>
> As a point of interest design engineers establish Mixer LO injection levels so it is not too high or too low. If too high can cause problems with carrier in the Mixer output and/or spurs and worse case high 2nd harmonic content (2 x 8.830 = 17.660 mhz). Only way to know for sure is look at output with Spectrum Analyzer or to listen on a General Coverage receiver. If LO level is set too low can have increased Mixer conversion loss which would probably be more concern for the Receiver mixer.
>
> In practice with your TS520 about worse case would be as found adjustment set so the oscillator doesnt start reliably each time it is selected.
>
> You can adjust using the "listening method" described in Sect 6 of your operating manual or more precisely using method described in the Service Manual. If you measure you should have approx 1.5rms rf volts at TP-3 on RF board.
>
> Terry K9TW
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> >
> >
> > OK Terry thanks for correction - I thought that as I could receive ok on all bands then

I could leave LO coils as they were. But now I will adjust as per manual, apart from the cracked 3.5MHz core.
> >
> > Come to think of it I've never heard anything on 10m, but thought that's just conditions. Could I have no ALC because the 28 LO is not oscillating?
> >
> > Adrian G4IQW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > >
> > > I do not agree with that. I would not assume that former owners have peaked the Het Osc coils properly. I would adjust them prior to doing Ant, Mixer, and Drive coils for couple of reasons.
> > >
> > > 1. If not set properly the oscillators may not reliably start each time selected by the bandswitch. Should not be set on the fast side of the response curve. Service manual describes how to adjust.
> > >
> > > 2. The Het Osc signal is the Local Oscillator (LO) signal for the Transmit and Receive Mixers. It is important to have correct LO injection level for proper mixer action.
> > >
> > > Terry K9TW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> > > >
> > > > Apart from that single cracked 3.5 slug all the cores are ok and all formers correctly attached.
> > > >
> > > > As I understand it the OSC coils not involved in aligning Rx and Tx, so when I get correct tool I will peak the ANT, MIX and DRIVE coils.
> > > >
> > > > I will be sure to take your advice on careful lubeing of the slugs before I attempt to move any slugs. Don't want to break anything trying to fix it!
> > > >
> > > > Adrian G4IQW
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > > > >
> > > > > Yes all the bandswitch boards hang off the RF board and the bandswitch shaft runs thru them. It is not uncommon to find cracked tuned slugs and also the fiber coil formers twisted off the mounting pins that solder to the board. This happens when someone torques on the core trying to free it and twists the coil former. I hate to see this. Ham fisted work.
> > > > >
> > > > > Cracked cores can be replaced as others suggest, but I am afraid best way to replace coil formers and/or het osc crytals is to pull the boards. Not an easy task. If you try to do it in place you risk lifting a foil. You may want to contact Bob Mansker and see what he gets for a complete set of boards. He may have a set with no cracked cores and no formers twisted off the mounts.
> > > > >
> > > > > If you get a good set of boards from Bob suggest you use a tooth pick or artist

brush and apply small drop of Tri-flow lube at top edge of cores and work back and forth to free them before installing in the rig. Some folks use WD-40. Whatever you use just apply very sparingly.
> > > > >
> > > > > Not an easy job but can be done. I have done several and just need to take your time. Just pay close attention to the shaft coupler orientation between the bandswitch boards shaft and the PA cage bandswitch shaft(under the metal shield can cover).
> > > > >
> > > > > Terry k9TW
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> > > > > >
> > > > > > On Ken K4EAA's site he discusses rewinding coils if a ferrite slug gets stuck/broken and new formeri s needed.
> > > > > >
> > > > > > Was pleased to find only one of my 520SE coils is cracked (3.5 mhz osc), but when I was looking at the board I saw the band switch shaft goes right through it!
> > > > > >
> > > > > > So how would anyone be able to desolder any of the coils, without major surgery? Are you meant to desolder former while board is still in place? That looks extremely tricky given narrow space between each of the coil boards.
> > > > > >
> > > > > > Has anyone here ever removed and replaced one of these coils, and if so how?
> > > > > >
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> > > > > >
> > > > >
> > > >
> > >
> >
>

42173. Re: removing broken slugs

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-20 20:49:22 UTC
From: adrian.langford@ymail.com
Topic: 42159 Message: 42173

That's a great tip thanks.

Not crazy at all - I work on old cars for fun and drilling out seized bolts using similarprocedurev(but not by hand!) is routine.

But would not have occurred to me to usevthisvtechnique on the slugs.

This is a fantastic group! Full of know-how and people generous in sharing it.

73 Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, William Houghton <rdrbill@...> wrote:
>
> My technique to remove a cracked slug is to drill it out. Before you think I'm
> crazy, let me explain. I have a set of numbered drill bits. I start with the
> small bits and see if it fits through the hex hole in the slug and keep going
> until I find the first drill that doesn't slide through. I then drill through
> the slug hole with that size by hand. I slowly twist the drill by hand. I do
> this over a newspaper because the ferrite will come out as dust. I also put on a
> dust mask. I then go to the next larger size or maybe up one size. The nice
> thing about numbered drill bits is that they go up in size by pretty small
> increments. I repeat this process again and again. The powdered iron is very
> brittle and eventually the walls of the slug become thin enough that the slug
> breaks into pieces that fall out. I have done this about 5 or 6 times on various
> gear and never damaged a coil form.
>
>
>
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>
>
> _____
> From: "roberteleazer@..." <roberteleazer@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Mon, May 20, 2013 6:04:55 AM
> Subject: [TS-520_820_530_830] Re: Coil board conundrum
>
> Â
> Okay, first do your mean that the coil slug is cracked?
>
> Second, what you you mean that the "band switch shaft goes right through it?"
>
> If it is a slug, in some cases I have used a drop of superglue and a jeweler's
> screwdriver to extract the broken slug. Then you can replace it with a similar
> one taken from another coil. Best source of such slugs are old CB radios, but
> places such as All Electronics do sell new IF coils that might have slugs that
> would work.

>
> You need to get some small wooden dowels and make yourself some tuning tools
> that will fit the slugs and will not crack them.
>
> Good Luck!
>
> Robert
>
> --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@>
> wrote:
> >
> > On Ken K4EAA's site he discusses rewinding coils if a ferrite slug gets
> >stuck/broken and new formeri s needed.
> >
> > Was pleased to find only one of my 520SE coils is cracked (3.5 mhz osc), but
> >when I was looking at the board I saw the band switch shaft goes right through
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> >
> > So how would anyone be able to desolder any of the coils, without major
> >surgery? Are you meant to desolder former while board is still in place? That
> >looks extremely tricky given narrow space between each of the coil boards.
> >
> > Has anyone here ever removed and replaced one of these coils, and if so how?
> >
> > 73 Adrian G4IQW
> >
>
>
>
>
> [Non-text portions of this message have been removed]
>

42174. Re: My TS-820 got sick... :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-20 21:28:12 UTC
From: kb9wwq
Topic: 42157 Message: 42174

Cesar, are you sure you have the RF gain all the way up, full CW? Your RX symptoms match having the RF gain all the way down, CCW.

+jay, kb9wwq

--- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@..." <coyoteinventor@...> wrote:
>
> Oh, and one more thing I forgot to mention, which might be important.
>
> Even though I can not hear hardly anything, the needle in the meter of the TS-820 moves all the way to the right (on all meter selections), but when I transmit it goes back to the left and moves a little bit as I talk.
>
> Thanks again!
>
> --Cesar-- K1TNT
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@" <coyoteinventor@> wrote:
> >
> > Hi group! I'm new in this forum and in ham radio, and I'm in need of some help from the experts. ;-)
> >
> > I bought a Kenwood TS-820 a month ago or so, and it's been working pretty well other than the common issues (drifting VFO, LCD going on/off, and weakening final tubes) I have not had time to look into some of the solutions mentioned in this forum.
> >
> > Last night, while using the radio, I stopped receiving for a few seconds (everything went quiet) and then back to normal. Today I used the radio for a while with no problems, then turned it off, and, when I came back to it a couple of hours later, no receive at all, even after fiddling with it for 15 minutes. :-(
> >
> > So, the symptoms: on SSB, I crank up the RF gain all the way up, and the AF gain quite high, and I barely hear things (even the noise I can hardly hear when usually, with these settings, I would be going deaf!). If I crank up the AF gain all the way up, I get some type of feedback (loud beep). If I switch to CW or TUN, I also get a loud feedback (louder). If I transmit to a dummy load, I am getting less than 50% of my normal transmit power.
> >
> > Any ideas what could have gone bad?
> >
> > Thanks in advance for your help!
> >

> > --Cesar-- K1TNT
> >
>

42175. Re: [TS-520_820_530_830] Re: removing broken slugs

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-20 21:50:54 UTC
From: William Houghton
Topic: 42159 Message: 42175

I have a small drill chuck that has a 1/4 inch hex shaft that was intended to be used with a stick type power screwdriver. Its great for holding drill bits up to about 1/4 inch diameter. I often use it to give me a better grip on the bit but I still turn it by hand.

From: "adrian.langford@..." <adrian@qualitative.co.uk>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, May 20, 2013 1:49:28 PM
Subject: [TS-520_820_530_830] Re: removing broken slugs

That's a great tip thanks.

Not crazy at all - I work on old cars for fun and drilling out seized bolts using similarprocedurev(but not by hand!) is routine.

But would not have occurred to me to usevthisvtechnique on the slugs.

This is a fantastic group! Full of know-how and people generous in sharing it.

73 Adrian G4IQW

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>
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> the slug hole with that size by hand. I slowly twist the drill by hand. I do
> this over a newspaper because the ferrite will come out as dust. I also put on
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>
> dust mask. I then go to the next larger size or maybe up one size. The nice
> thing about numbered drill bits is that they go up in size by pretty small
> increments. I repeat this process again and again. The powdered iron is very
> brittle and eventually the walls of the slug become thin enough that the slug
> breaks into pieces that fall out. I have done this about 5 or 6 times on
>various
>
> gear and never damaged a coil form.
>
>
>
>
>
> ---

> From: "roberteleazer@..." <roberteleazer@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Mon, May 20, 2013 6:04:55 AM
> Subject: [TS-520_820_530_830] Re: Coil board conundrum
>
> Â
> Okay, first do your mean that the coil slug is cracked?
>
> Second, what you you mean that the "band switch shaft goes right through it?"
>
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> screwdriver to extract the broken slug. Then you can replace it with a similar

> one taken from another coil. Best source of such slugs are old CB radios, but
> places such as All Electronics do sell new IF coils that might have slugs that

> would work.
>
> You need to get some small wooden dowels and make yourself some tuning tools
> that will fit the slugs and will not crack them.
>
> Good Luck!
>
> Robert
>
> --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@>
> wrote:
> >
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> >
>
>
>
>

> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

42176. Re: My TS-820 got sick... :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-21 04:17:07 UTC
From: coyoteinventor@ymail.com
Topic: 42157 Message: 42176

Terry (K9TW),
Thanks for your suggestions. After looking at the schematics for a while I think I found what gate you are referring to; is it the gate2 on the Q1 in the RF Unit board? Or is it Q8? I'll have to figure out where it physically is located once I open up the rig. ;-)
I was not clear about the relays you were referring to. Can you tell me in which board they are and maybe their component name/number so I can try to find them in the schematic?

Jay (kb9wwq): yes, the RF gain is all the way up. ;-)

--Cesar-- K1TNT
--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" wrote:
>
> If S-meter is pegged full scale right then your AGC bus is not seeing RF-1 and you will have no receive as the RF and IF amp mosfets have very low or no control voltage on Gate 2.
>
> Measure RF-1 and clean Aux relay contacts for starters.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@" coyoteinventor@ wrote:
> >
> > Oh, and one more thing I forgot to mention, which might be important.
> >
> > Even though I can not hear hardly anything, the needle in the meter of the TS-820 moves all the way to the right (on all meter selections), but when I transmit it goes back to the left and moves a little bit as I talk.
> >
> > Thanks again!
> >
> > --Cesar-- K1TNT
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@" wrote:
> > >
> > > Hi group! I'm new in this forum and in ham radio, and I'm in need of some help from the experts. ;-)
> > >
> > > I bought a Kenwood TS-820 a month ago or so, and it's been working

pretty well other than the common issues (drifting VFO, LCD going on/off, and weakening final tubes) I have not had time to look into some of the solutions mentioned in this forum.
> > >
> > > Last night, while using the radio, I stopped receiving for a few seconds (everything went quiet) and then back to normal. Today I used the radio for a while with no problems, then turned it off, and, when I came back to it a couple of hours later, no receive at all, even after fiddling with it for 15 minutes. :-(
> > >
> > > So, the symptoms: on SSB, I crank up the RF gain all the way up, and the AF gain quite high, and I barely hear things (even the noise I can hardly hear when usually, with these settings, I would be going deaf!). If I crank up the AF gain all the way up, I get some type of feedback (loud beep). If I switch to CW or TUN, I also get a loud feedback (louder). If I transmit to a dummy load, I am getting less than 50% of my normal transmit power.
> > >
> > > Any ideas what could have gone bad?
> > >
> > > Thanks in advance for your help!
> > >
> > > --Cesar-- K1TNT
> > >
> >
>

[Non-text portions of this message have been removed]

42177. Re: My TS-820 got sick... :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-21 10:34:07 UTC
From: Terry Wagoner
Topic: 42157 Message: 42177

You do not need to locate the devices or measure Gate 2 voltage at them.

There are several places you can measure the AGC bus voltage. On the IF board at Conn IF-3 Pin 11 for example. You need at least a 10 to 11 meg ohm meter. Even that meter will pull the voltage down some. Should have approx 3 vdc with RF gain full CW. If lower or missing common to start by measuring at it source and cleaning Aux relay contacts that switch it.

A short lesson....The RF and IF amplifiers in the radio are all dual gate mosfets. We call these "gain controlled" stages. We use a variable positive dc voltage (approx 3.5vdc) applied to Gate 2 of these devices to automatically control the gain of these devices. We call this control voltage AGC. This 3.5 vdc control voltage is derived from the RF-1 voltage on the AF-AVR board. With approx 3.5vdc applied to the Gate 2 of these devices they have maximum gain and as the voltage is lowered the gain is lowered (assuming all other required dc voltages to the devices is to spec).

Two things normally lower this control voltage....receiving a strong off air signal and you running RF gain pot back CCW. The S-meter simply monitors the AGC bus line and when it sees the voltage go down it moves the meter up scale. Also, If the AF-AVR board fails you will have no RF-1 to supply the AGC bus so that is why I suggested you also measure it.

You have two identical relays in the radio. One is the Aux relay that controls functions like switching the AGC and ALC bus line voltage and the other is your Antenna TR relay. These are plug in relays and very easy to remove and clean. Pull the Aux relay and carefully remove the plastic cover and clean the NC and NO contacts by wetting strip of printer paper with Deoxit and placing between the contacts and applying gentle pressure to the movable armature and pull the paper thru. Should see black traces on the paper. Do this several times and then blow out relay with canned air.

When you report you had good receive one moment and then the level went down or became nearly non-existent and the S-meter is now pegged it sounds like the AGC bus voltage available at the IF Board and RF board to be applied to Gate 2 of the IF and Rf amp devices is very low.

So I still recommend you check RF-1 on the AVR board and make sure it is available and set per the service manual. First step in alignment is checking and setting the regulated 9vdc and the RF-1 voltages.

Remove the bottom cover of the radio after line cord has been unplugged and rig allowed to sit for awhile to ensure filter caps have bled off. The Aux Relay is about in center of radio next to two vertically oriented filter capacitors about on a line back from the VFO knob. The Ant relay is under a metal shield can in rear corner. You can remove both and clean contacts. Some folks rotate the position of these relays from time to time to place them in different service. Kens Electronics in Kalamazoo Mich has NOS replacements. He has a website. Not a bad idea to have a spare.

Terry K9TW
--- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@..." <coyoteinventor@...>

wrote:
>
> Terry (K9TW),
> Thanks for your suggestions. After looking at the schematics for a while
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> Q1 in the RF Unit board? Or is it Q8? I'll have to figure out where it
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> than 50% of my normal transmit power.
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> > > > Thanks in advance for your help!
> > > >
> > > > --Cesar-- K1TNT
> > > >
> > >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

42178. ts-820. Added CW filter. CAR control must be >8 to achieve full power tuning?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-21 14:59:59 UTC
From: kd0fds
Topic: 42178 Message: 42178

Hello Hybrid group. I have an operational question for our team.

On my tech special TS-820 which was working pretty well, I added a used TRIO CW filter. At some point after that, (maybe right away, I can't recall.) I now require a lot of CAR control while tuning up to get to full power. Example: I have to crank the CAR control above "8" on 20 meters to get full IP current while tuning into a dummy load.

Power output seems steady and the same as it always was, I just seem to need a lot more CAR control these days.

Possibly Related:
Unable to do the transmit tuning procedure with the drive control at 12:00. I have to crank it to 1:00 to get the meter to move.

Is more CAR control "normal" after adding a CW filter?

or,

Did something fail?
Do I have to realign everything after adding the CW filter?
Anywhere should I focus my tuning efforts?

Tools available at hand:
Frequency counter
Digital volt meter
Kenwood station monitor
oscilloscope

I have a VTVM, but it is a $5 hamfest Heathkit unit and I don't trust the results I see while I use it.
I don't have a tone generator beyond the marker tone and the tones I can inject from the station monitor.

3.3 and 9 volt stuff looks normal.
HV looks to be normal with minimal sag.

Hey thanks in advance for any clues to my high CAR requirements.
Sincerely, Stephen

42179. Re: INTERMITTANT RX SENS

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-21 11:39:51 UTC
From: johng1409
Topic: 26 Message: 42179

I just picked up a TS-830S and the receiver had the intermittence problem. The peculiar thing was that normal reception returned when I gave my antenna rotator a kick (it's a windscreen wiper motor switched by relays) and then faded again after a minute or so.

I went through the basic cleaning and servicing of contacts on the RF board and found to my surprise that when I tried to remove the vertical connectors for input and output of the RF board, the entire assemblies came away from the PCB leaving neat little holes in the solder joints under the PCB - there were dry joints! Removing the RF board and reflowing connector joints seems to have cured the problem.

As for the rotator switching? I can only assume there was enough of a transient induced in the antenna, and therefore in the RF board input, to temporarily close the circuit where corrosion had formed in the dry joint (not sure what the physics are, but this is occurring at a very small physical scale). These dry joints have been in there for 35 years, so it's anyone's guess as to what was going on chemically in terms of conductivity.

So my advice: reflow the main connectors and components on the main RF signal path if you're getting partial sensitivity loss, and work your way outwards to the receiver control and drive circuitry (AGC, VFO etc.) depending on the severity of sensitivity loss. As well as good cleaning and lubrication of contacts, of course! Then you could be looking at actual component failure after that.

73,

John ZS1ZC.

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
> Bill,
>
> What Terry said is 100%, however, as I am the lucky owner of two 530s, I had a similar problem years ago and it actually related to the RF att switch on the front panel. Try giving it a little wiggle\push in out before cycling through transmit and see if that helps. Mine just had a build up of age in it, I gave it a good blast of deoxit and cycled the switch numerous times, blew out with compressed air and it appeared to fix it, been good for 5+ years.
>
> Remember if you going to go into the PA cage, make sure the radio is disconnected from power and you have discharged the HV, the voltages here are lethal! If it isn't the RF att switch, my money is on the molex connector, either dry joint or just dirty. As Terry said just replacing relays on a hunch is pointless in my opinion and applying heat the the foil track for too long can cause them to lift, so why introduce another problem without looking at the typical easy solve first.
>
> 73's
> Dave

> VK5PDL
>
>
>
>
>
>
>
> To: TS-520_820_530_830@yahoogroups.com
> From: wagstw46@...
> Date: Sat, 27 Apr 2013 10:15:23 +0000
> Subject: [TS-520_820_530_830] Re: INTERMITTANT RX SENS
>
>
>
>
>
> You are all talking about very different relays. K0ZL is talking about the 4PDT flat pack aux relay which does cause several intermittent problems. Ordinarily I would advise you to troubleshoot this condition by studying the RX path from the SO-239 to the RF board and first exhausting the experiential based items followed by signal injection/signal tracing and not just replacing a relay on a guess. I have seen poor solder connection at the So-239 where tinned lead will actually pull out, dirty RF attenuator switch, dirty RF board molex Conn 3, or bad solder connection at Conn 3.
>
> The antenna T/R relays for the TS-530 and the TS-830 are different animals. Both are located under the PA cage in metal shield cans. The TS-830 uses a plug in Omron MX-2P and the the TS-530 uses a miniature solder in Fujitsu FBR321DO12. It is Kenwood part number S51-2407-05 and no longer available. Also, the two antenna T/R relays will not interchange. I have never seen a MX-2P in a TS-530, but have heard of at least one owner who reports one installed which I believe is a mod unless it is an export version of the 530. You need to determine which configuration you have and easy to do by pulling the shield can.
>
> As to the Antenna T/R Relay causing receiver de-sensitivity that would not be common in my experience. The NC contact in this relay sees virtually no current unless the rig has been exposed to ESD. The contacts cannot be cleaned on the TS-530 FBR Ant T/R relay.
>
> If you have the original clear plastic case Omron LZN4 flat pack Aux relay cleaning the contacts can be done, but in my experience will at best be a temporary fix. The LZN4 is no longer available, but can be replaced with a Aromat NF4EB or similar. I suggest buying one from Ken or Jim and replacing.
>
> This issue is definitely a multiple repeat FAQ.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "bartbrummans" <cocobean64@> wrote:
> >
> > Ditto on the relay (Ant relay), just replaced it on my TS-830, it's the same relay/location as on the 530 I believe.

> > Fixed the rx issue...
> > If you cannot find it in the UK, Jim at www.Hybridrestore.com has them.
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "sparks98.g4kki" <sparks98.g4kki@> wrote:
> > >
> > > Hi Bill,
> > > thanks for that info, i have tried to clean the relay contacts but it has made very little difference.
> > > I will see if i can get a replacement relay from it over here but not sure yet how available they are in the
> > > uk. Most the dealers here don't want to know you if they are'nt going to do the job themselves and
> > > if your rig is over a couple of years old it's obsolete !
> > > The cleaner i have used is Servisol super 10, i suppose that they are nearly all the same .I might try
> > > putting the tx/rx over on the other contacts and tape the aux ones up for now. Never used the aux socket.
> > >
> > > 73's
> > > de
> > > Bill
> > > G4KKI. RSARS 1596 FISTS 7709
> > > ----- Original Message -----
> > > From: Bill
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Tuesday, September 10, 2002 1:30 AM
> > > Subject: Re: [TS-520_820_530_830] INTERMITTANT RX SENS
> > >
> > >
> > > Definitely a relay. If you have a good cleaner such
> > > as Cailube, you can just spritz the contacts a bit,
> > > and cycle it. If you can, also slide a very narrow
> > > piece of manila folder paper between the contacts with
> > > the juice on it, and try to get both the NC and the NO
> > > contacts.
> > >
> > > If you have to replace the relay, it's Kenwood part
> > > number S51-4402-05.
> > >
> > > If you cannot locate one of these locally, let me
> > > know, email direct please.
> > >
> > > 73!
> > >
> > > Bill K0ZL
> > > --- "sparks98.g4kki" <sparks98.g4kki@>
> > > wrote:
> > > > Hi All,
> > > > i am a new member, i am G4KKI and i live in
> > > > Manchester in the North West of England.

> > > > I have a ts530s.which has developed a slight fault
> > > > and i wondered ifanyone has come across this and got
> > > > a cure
> > > > .It seems to keep going deaf,i click the key or send
> > > > switch and signals comeback up to normal.
> > > > The bandswitches seem ok . Wondered if perhaps the
> > > > tx/rx relay might be at fault ?
> > > >
> > > > Not had time yet to read through the messages that
> > > > have been posted to the group but will do so
> > > > later this evening.
> > > > A very good afternoon/evening/morning to who ever is
> > > > in the group,where ever you may be
> > > >
> > > > 73's de
> > > >
> > > > Bill Stevenson G4KKI. RSARS 1596 FISTS 7709
> > > >
> > >
> > >
> > > =====
> > >
> > > see our website www.amateur-repairs.com
> > >
> > >
> > > _____
> > > Do You Yahoo!?
> > > Yahoo! Finance - Get real-time stock quotes
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> > > Yahoo! Groups Sponsor
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> > >
> > >
> > > To unsubscribe from this group, send an email to:
> > > TS-520_820_530_830-unsubscribe@yahoogroups.com
> > >
> > >
> > >
> > > Your use of Yahoo! Groups is subject to the Yahoo! Terms of Service.
> > >
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>
> [Non-text portions of this message have been removed]

>

42180. Re: ts-820. Added CW filter. CAR control must be >8 to achieve full power tuning?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-21 16:16:23 UTC
From: Terry Wagoner
Topic: 42178 Message: 42180

Stephen: Couple of things come to my mind. 1. Bad CW filter Or 2. Bad Filter switching diode D7 or D8 Or 3. Not turning D7 and D8 full on.

1. If you look at TX Level Diagram you will see input RF voltage at the filter should be approx 25mv rms or 71mv P-P and at the output should be approx 19mv rms or 54mv P-P. Normal to have some filter insertion loss. Can measure this with RF millivolt meter or O-scope at the cathodes of switching diodes D7 and D8. TX Level Diagram levels were taken at 14.175 by loading into dummy load for approx 100watts output and then flip off the SG switch and record the drive levels.

I have covers on my TS-820 at this time so cannot measure the RF voltage at input and output of my CW filter and dont see in my notes that I have recorded it. Perhaps Robert or Joe can tell you what typical goes in and goes out levels are for their 820s? If not, I can remove cover and measure for you along with the Car Level position if you need it.

I am not familiar with the specs for your station monitor in O-scope mode. If it is 20mhz BW scope then your measured P-P levels will be low at 14.175mhz by approx 15%.

2. Measure the dc voltage at IF board Conn IF-2 CW/CWF terminals. Should be 14vdc. This is required to ensure approx 10 ma available to fully turn on D7 and D8.

3. Filter install should not have affected the peak position of the Drive control.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "kd0fds" <kd0fds@...> wrote:
>
> Hello Hybrid group. I have an operational question for our team.
>
> On my tech special TS-820 which was working pretty well, I added a used TRIO CW filter. At some point after that, (maybe right away, I can't recall.) I now require a lot of CAR control while tuning up to get to full power. Example: I have to crank the CAR control above "8" on 20 meters to get full IP current while tuning into a dummy load.
>
> Power output seems steady and the same as it always was, I just seem to need a lot more CAR control these days.
>
> Possibly Related:
> Unable to do the transmit tuning procedure with the drive control at 12:00. I have to crank it to 1:00 to get the meter to move.
>
> Is more CAR control "normal" after adding a CW filter?
>
> or,
>

> Did something fail?
> Do I have to realign everything after adding the CW filter?
> Anywhere should I focus my tuning efforts?
>
>
> Tools available at hand:
> Frequency counter
> Digital volt meter
> Kenwood station monitor
> oscilloscope
>
> I have a VTVM, but it is a $5 hamfest Heathkit unit and I don't trust the results I see while I use it.
> I don't have a tone generator beyond the marker tone and the tones I can inject from the station monitor.
>
> 3.3 and 9 volt stuff looks normal.
> HV looks to be normal with minimal sag.
>
>
> Hey thanks in advance for any clues to my high CAR requirements.
> Sincerely, Stephen
>

42181. Re: ts-820. Added CW filter. CAR control must be >8 to achieve full power tuning?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-21 16:34:02 UTC
From: Terry Wagoner
Topic: 42178 Message: 42181

Stephen:

I just looked at the SM-220 specs in scope mode noted in the manual on Gordons site and it says scope BW is approx 10 mhz. If that is true it will read P-P voltage of the rf signals very low at 14mhz (less than 30% of the actual value).

After measuring voltages at 14.175 mhz you might want to try loading to 100 watts out on 80 meters and flip SG switch off and then take the CW filter input and output voltage levels. At 3.5 mhz your measured values will be approx 4% low.

It can be confusing if you are taking signal levels and have to remember to make corrections for the Bandwidth of your O-scope.

Terry

42182. Re: ts-820. Added CW filter. CAR control cranked < >

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-21 21:46:54 UTC
From: kd0fds
Topic: 42178 Message: 42182

Thank you, Terry.

I'm looking forward to checking things out with your suggestions. I think my oscilloscope is rated to 100mhz so that will simplify things instead of trying to use the station monitor as a basic scope. Sorry I didn't mention that sooner.

The peak-to-peak numbers and other hints you have provided will put me on the path to tracking down my low carrier drive. I hope to poke around at the radio some more tonight! I know it is fun when people post up findings and resolutions to problems while the topic is still hot.

P.S.
I gave my fully functional Kenwood TS-50s to my Dad, K2ZZQ. I just have more fun tinkering and learning with this old(er) TS-820. (Even if it seems like it is never quite "fixed.")

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Stephen:
>
> I just looked at the SM-220 specs in scope mode noted in the manual on Gordons site and it says scope BW is approx 10 mhz. If that is true it will read P-P voltage of the rf signals very low at 14mhz (less than 30% of the actual value).
>
> After measuring voltages at 14.175 mhz you might want to try loading to 100 watts out on 80 meters and flip SG switch off and then take the CW filter input and output voltage levels. At 3.5 mhz your measured values will be approx 4% low.
>
> It can be confusing if you are taking signal levels and have to remember to make corrections for the Bandwidth of your O-scope.
>
> Terry
>

42183. TS-520 with heil mics

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-21 21:53:05 UTC
From: hsumaverick01
Topic: 42183 Message: 42183

Just wondering if anyone out there has had any luck running a heil mic/headset on a TS-520? I am looking at possibly getting the proset elite 6 to use with my unit at home at times.

Thanks,
Chris
N5HSU

42184. RE: [TS-520_820_530_830] Re: INTERMITTANT RX SENS

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-21 23:54:26 UTC
From: fpath fpath
Topic: 26 Message: 42184

John,

The molex plugs are a constant source of many problems, this is why when fault finding it is suggested to pull the molex plugs or give them a slight wiggle. The band switch is also an issue, most of the time it is a build up of dirt\corrosion or a finger on one of the waffer switches has bent out of the way. Best method that has been devised is when finding a dry joint is to remove all old solder sand back the pins and start with fresh solder.

73s

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: johng1409@...
Date: Tue, 21 May 2013 11:39:51 +0000
Subject: [TS-520_820_530_830] Re: INTERMITTANT RX SENS

I just picked up a TS-830S and the receiver had the intermittence problem. The peculiar thing was that normal reception returned when I gave my antenna rotator a kick (it's a windscreen wiper motor switched by relays) and then faded again after a minute or so.

I went through the basic cleaning and servicing of contacts on the RF board and found to my surprise that when I tried to remove the vertical connectors for input and output of the RF board, the entire assemblies came away from the PCB leaving neat little holes in the solder joints under the PCB - there were dry joints! Removing the RF board and reflowing connector joints seems to have cured the problem.

As for the rotator switching? I can only assume there was enough of a transient induced in the antenna, and therefore in the RF board input, to temporarily close the circuit where corrosion had formed in the dry joint (not sure what the physics are, but this is occurring at a very small physical scale). These dry joints have been in there for 35 years, so it's anyone's guess as to what was going on chemically in terms of conductivity.

So my advice: reflow the main connectors and components on the main RF signal path if you're getting partial sensitivity loss, and work your way outwards to the receiver control and drive circuitry (AGC, VFO etc.) depending on the severity of sensitivity loss. As well as good cleaning and lubrication of contacts, of course! Then you could be looking at actual component failure after that.

73,

John ZS1ZC.

[Non-text portions of this message have been removed]

42185. Re: ts-820. Added CW filter. CAR control cranked < >

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-21 23:56:00 UTC
From: roberteleazer@rocketmail.com
Topic: 42178 Message: 42185

Stephen:

I once bought a used SSB filter for a TS-820 that supposedly was tested by the previous owner. LSB was fine. On USB it only worked if you used a carrier module USB signal with a frequency that was substantially outside of nominal.

Clearly, filters can have excursions outside the nominal center frequency for no obvious reason. Aside from that, if you look at the INRAD procedure I posted in the Files section you will see that they actually recommend aligning the radio to the filter rather than to a nominal center frequency. You can't change the filter frequency (although I have been tempted to try a hammer) so you have to change the radio to match the filter.

So you might:

1. Make sure the carrier module frequency is correct.
2. Try moving the carrier module frequency around a bit and see how that affects CW output.

Good Luck!

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "kd0fds" <kd0fds@...> wrote:
>
> Thank you, Terry.
>
> I'm looking forward to checking things out with your suggestions. I think my oscilloscope is rated to 100mhz so that will simplify things instead of trying to use the station monitor as a basic scope. Sorry I didn't mention that sooner.
>
> The peak-to-peak numbers and other hints you have provided will put me on the path to tracking down my low carrier drive. I hope to poke around at the radio some more tonight! I know it is fun when people post up findings and resolutions to problems while the topic is still hot.
>
> P.S.
> I gave my fully functional Kenwood TS-50s to my Dad, K2ZZQ. I just have more fun tinkering and learning with this old(er) TS-820. (Even if it seems like it is never quite "fixed.")
>
>
>
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>

> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Stephen:
> >
> > I just looked at the SM-220 specs in scope mode noted in the manual on Gordons site and it says scope BW is approx 10 mhz. If that is true it will read P-P voltage of the rf signals very low at 14mhz (less than 30% of the actual value).
> >
> > After measuring voltages at 14.175 mhz you might want to try loading to 100 watts out on 80 meters and flip SG switch off and then take the CW filter input and output voltage levels. At 3.5 mhz your measured values will be approx 4% low.
> >
> > It can be confusing if you are taking signal levels and have to remember to make corrections for the Bandwidth of your O-scope.
> >
> > Terry
> >
>

42186. Re: [TS-520_820_530_830] TS-520 with heil mics

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-22 00:31:53 UTC
From: Mike
Topic: 42183 Message: 42186

Chris,

The TS-520 requires a "high impedance" microphone, 50K ohms (see the TS-520 operator's manual). The Heil pro 6 microphone is a "low impedance", 600 ohm, microphone.

73
Mike

On 5/21/2013 4:53 PM, hsumaverick01 wrote:
>
> Just wondering if anyone out there has had any luck running a heil
> mic/headset on a TS-520? I am looking at possibly getting the proset
> elite 6 to use with my unit at home at times.
>
> Thanks,
> Chris
> N5HSU
>
>

[Non-text portions of this message have been removed]

42187. Re: ts-820. Added CW filter. CAR control cranked < >

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-22 01:04:00 UTC
From: Terry Wagoner
Topic: 42178 Message: 42187

Ok-- I got confused because TX level diagram were developed at 14.175 and I had that stuck in my old head, but you will not be measuring the drive levels at that point on the diagram. You will be back at the output of the Balanced Modulator.

So no reason to load on 80 meters due to scope bandwidth limitation affecting accuracy of the measurements. You wont be measuring any rf drive levels at 14.175 mhz. You will be measuring the CWT carrier osc output from the balanced modulator which is under 9 mhz.

If you will be using a scope with a 100 mhz BW you will need no correction to the P-P levels you will read at the input and output of the YG-88C filter. Not so if using the SM-220 if it truly is limited to approx 10 mhz BW.

Terry K9TW

>
>
>
>
>
>
>

42188. Re: [TS-520_820_530_830] TS-520 with heil mics

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-22 01:09:53 UTC
From: Christopher Lagrone
Topic: 42183 Message: 42188

Would I need the optional transormer that heil makes to solve it?

Chris
N5HSU

Sent from my iPhone

Sent from my iPhone

On May 21, 2013, at 7:31 PM, Mike <w5rkl@...> wrote:

> Chris,
>
> The TS-520 requires a "high impedance" microphone, 50K ohms (see the
> TS-520 operator's manual). The Heil pro 6 microphone is a "low
> impedance", 600 ohm, microphone.
>
> 73
> Mike
>
> On 5/21/2013 4:53 PM, hsumaverick01 wrote:
> >
> > Just wondering if anyone out there has had any luck running a heil
> > mic/headset on a TS-520? I am looking at possibly getting the proset
> > elite 6 to use with my unit at home at times.
> >
> > Thanks,
> > Chris
> > N5HSU
> >
> >
>
> [Non-text portions of this message have been removed]
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>

[Non-text portions of this message have been removed]

42189. Re: INTERMITTANT RX SENS

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-22 01:16:03 UTC
From: Terry Wagoner
Topic: 26 Message: 42189

I agree with you 100% Dave.

If the solder never really wetted to the pin I have never been able to get it to re-flow very well. The pin has oxidized over the years. I always remove all old solder (I use a Hakko 808 but solder wick will work) and then remove the oxidation off the pin either with lite sanding or filing and then apply new solder. Makes a very big difference in quality of the soldering. Yes the Pins are plated, but no concern about removing it where you will be applying solder. Clean bright connection is what you need for a good solder connection. Plating only matters at the male/female socket to pin interface.

I also take good look under magnification to make sure no hair line crack between the trace and the pad. This does happen and can give you fits.

I never remove and install any board without inspecting every molex connector under bright light and magnification. I always re-insert the plug back in to the connector body so that all the pins are fully seated and then I rock connector side to side and watch to make sure I dont see any pin movement or any circumferential crack running around the solder cone. Very easy to see.

I have pulled off my share of connectors and not a fun thing.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
> John,
>
>
>
> The molex plugs are a constant source of many problems, this is why when fault finding it is suggested to pull the molex plugs or give them a slight wiggle. The band switch is also an issue, most of the time it is a build up of dirt\corrosion or a finger on one of the waffer switches has bent out of the way. Best method that has been devised is when finding a dry joint is to remove all old solder sand back the pins and start with fresh solder.
>
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> 73s
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> Dave
>
> VK5PDL
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>
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>
> To: TS-520_820_530_830@yahoogroups.com
> From: johng1409@...
> Date: Tue, 21 May 2013 11:39:51 +0000
> Subject: [TS-520_820_530_830] Re: INTERMITTANT RX SENS
>
>
>
>
>
> I just picked up a TS-830S and the receiver had the intermittence problem. The peculiar thing was that normal reception returned when I gave my antenna rotator a kick (it's a windscreen wiper motor switched by relays) and then faded again after a minute or so.
>
> I went through the basic cleaning and servicing of contacts on the RF board and found to my surprise that when I tried to remove the vertical connectors for input and output of the RF board, the entire assemblies came away from the PCB leaving neat little holes in the solder joints under the PCB - there were dry joints! Removing the RF board and reflowing connector joints seems to have cured the problem.
>
> As for the rotator switching? I can only assume there was enough of a transient induced in the antenna, and therefore in the RF board input, to temporarily close the circuit where corrosion had formed in the dry joint (not sure what the physics are, but this is occurring at a very small physical scale). These dry joints have been in there for 35 years, so it's anyone's guess as to what was going on chemically in terms of conductivity.
>
> So my advice: reflow the main connectors and components on the main RF signal path if you're getting partial sensitivity loss, and work your way outwards to the receiver control and drive circuitry (AGC, VFO etc.) depending on the severity of sensitivity loss. As well as good cleaning and lubrication of contacts, of course! Then you could be looking at actual component failure after that.
>
> 73,
>
> John ZS1ZC.
>
>
>
>
> [Non-text portions of this message have been removed]
>

42190. Re: ts-820. Added CW filter. CAR control cranked < >

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-22 01:30:02 UTC
From: Terry Wagoner
Topic: 42178 Message: 42190

I agree with Robert that you should also measure the CAR-2 frequency and level. I would measure it at the IF board at Conn IF-5 pin 13. It should be 8830.7 at approx 300 mv.

If you have good spec frequency and level applied to the board then I would measure filter input and output levels at the switching diodes as I previously suggested. If you find it low at the output of the filter or the insertion loss is greater than what is shown on TX level diagram then go ahead as Robert suggests and vary the Osc frequency by varying trimmer TC-1 on CAR-2 board.

Also make sure you have 14vdc being provided by the mode switch to turn on the filter switching diodes.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> Stephen:
>
> I once bought a used SSB filter for a TS-820 that supposedly was tested by the previous owner. LSB was fine. On USB it only worked if you used a carrier module USB signal with a frequency that was substantially outside of nominal.
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> Clearly, filters can have excursions outside the nominal center frequency for no obvious reason. Aside from that, if you look at the INRAD procedure I posted in the Files section you will see that they actually recommend aligning the radio to the filter rather than to a nominal center frequency. You can't change the filter frequency (although I have been tempted to try a hammer) so you have to change the radio to match the filter.
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> So you might:
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> 1. Make sure the carrier module frequency is correct.
> 2. Try moving the carrier module frequency around a bit and see how that affects CW output.
>
> Good Luck!
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> Robert
> WB5WSV
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> --- In TS-520_820_530_830@yahoogroups.com, "kd0fds" <kd0fds@> wrote:
> >
> > Thank you, Terry.
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> > I'm looking forward to checking things out with your suggestions. I think my oscilloscope is rated to 100mhz so that will simplify things instead of trying to use the station monitor as a basic scope. Sorry I didn't mention that sooner.

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> > The peak-to-peak numbers and other hints you have provided will put me on the path to tracking down my low carrier drive. I hope to poke around at the radio some more tonight! I know it is fun when people post up findings and resolutions to problems while the topic is still hot.
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> > P.S.
> > I gave my fully functional Kenwood TS-50s to my Dad, K2ZZQ. I just have more fun tinkering and learning with this old(er) TS-820. (Even if it seems like it is never quite "fixed.")
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> > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
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> > > Stephen:
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> > > I just looked at the SM-220 specs in scope mode noted in the manual on Gordons site and it says scope BW is approx 10 mhz. If that is true it will read P-P voltage of the rf signals very low at 14mhz (less than 30% of the actual value).
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> > > After measuring voltages at 14.175 mhz you might want to try loading to 100 watts out on 80 meters and flip SG switch off and then take the CW filter input and output voltage levels. At 3.5 mhz your measured values will be approx 4% low.
> > >
> > > It can be confusing if you are taking signal levels and have to remember to make corrections for the Bandwidth of your O-scope.
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> > > Terry
> > >
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>

42191. Re: My TS-820 got sick... :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-22 01:38:55 UTC
From: coyoteinventor@ymail.com
Topic: 42157 Message: 42191

Terry (K9TW),

Thanks for the long post!!! I really appreciate your time and effort to explain all this.

I may give it a try this weekend (if I can borrow a better meter than the one I have) and see what I can find out. I'll post back with updates! :-)

Thanks again!

--Cesar-- K1TNT

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> You do not need to locate the devices or measure Gate 2 voltage at them.
>
> There are several places you can measure the AGC bus voltage. On the IF board at Conn IF-3 Pin 11 for example. You need at least a 10 to 11 meg ohm meter. Even that meter will pull the voltage down some. Should have approx 3 vdc with RF gain full CW. If lower or missing common to start by measuring at it source and cleaning Aux relay contacts that switch it.
>
> A short lesson....The RF and IF amplifiers in the radio are all dual gate mosfets. We call these "gain controlled" stages. We use a variable positive dc voltage (approx 3.5vdc) applied to Gate 2 of these devices to automatically control the gain of these devices. We call this control voltage AGC. This 3.5 vdc control voltage is derived from the RF-1 voltage on the AF-AVR board. With approx 3.5vdc applied to the Gate 2 of these devices they have maximum gain and as the voltage is lowered the gain is lowered (assuming all other required dc voltages to the devices is to spec).
>
> Two things normally lower this control voltage....receiving a strong off air signal and you running RF gain pot back CCW. The S-meter simply monitors the AGC bus line and when it sees the voltage go down it moves the meter up scale. Also, If the AF-AVR board fails you will have no RF-1 to supply the AGC bus so that is why I suggested you also measure it.
>
>
> You have two identical relays in the radio. One is the Aux relay that controls functions like switching the AGC and ALC bus line voltage and the other is your Antenna TR relay. These are plug in relays and very easy to remove and clean. Pull the Aux relay and carefully remove the plastic cover and clean the NC and NO contacts by wetting strip of printer paper with Deoxit and placing between the contacts and applying gentle pressure to the movable armature and pull the paper thru. Should see black traces on the paper. Do this several times and then blow out relay with canned air.
>
> When you report you had good receive one moment and then the level went down or became nearly non-existent and the S-meter is now pegged it sounds like the AGC bus voltage available at the IF Board and RF board to be applied to Gate 2 of the IF and Rf amp devices

is very low.
>
> So I still recommend you check RF-1 on the AVR board and make sure it is available and set per the service manual. First step in alignment is checking and setting the regulated 9vdc and the RF-1 voltages.
>
> Remove the bottom cover of the radio after line cord has been unplugged and rig allowed to sit for awhile to ensure filter caps have bled off. The Aux Relay is about in center of radio next to two vertically oriented filter capacitors about on a line back from the VFO knob. The Ant relay is under a metal shield can in rear corner. You can remove both and clean contacts. Some folks rotate the position of these relays from time to time to place them in different service. Kens Electronics in Kalamazoo Mich has NOS replacements. He has a website. Not a bad idea to have a spare.
>
> Terry K9TW
> --- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@" <coyoteinventor@> wrote:
> >
> > Terry (K9TW),
> > Thanks for your suggestions. After looking at the schematics for a while
> > I think I found what gate you are referring to; is it the gate2 on the
> > Q1 in the RF Unit board? Or is it Q8? I'll have to figure out where it
> > physically is located once I open up the rig. ;-)
> > I was not clear about the relays you were referring to. Can you tell me
> > in which board they are and maybe their component name/number so I can
> > try to find them in the schematic?
> >
> > Jay (kb9wwq): yes, the RF gain is all the way up. ;-)
> >
> > --Cesar-- K1TNT
> > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" wrote:
> > >
> > > If S-meter is pegged full scale right then your AGC bus is not seeing
> > RF-1 and you will have no receive as the RF and IF amp mosfets have very
> > low or no control voltage on Gate 2.
> > >
> > > Measure RF-1 and clean Aux relay contacts for starters.
> > >
> > > Terry K9TW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@"
> > coyoteinventor@ wrote:
> > > >
> > > > Oh, and one more thing I forgot to mention, which might be
> > important.
> > > >
> > > > Even though I can not hear hardly anything, the needle in the meter
> > of the TS-820 moves all the way to the right (on all meter selections),
> > but when I transmit it goes back to the left and moves a little bit as I
> > talk.
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> > > > Thanks again!

> > > >
> > > > --Cesar-- K1TNT
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> > > > --- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@" wrote:
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> > > > > Hi group! I'm new in this forum and in ham radio, and I'm in need
> > of some help from the experts. ;-)
> > > > >
> > > > > I bought a Kenwood TS-820 a month ago or so, and it's been working
> > pretty well other than the common issues (drifting VFO, LCD going
> > on/off, and weakening final tubes) I have not had time to look into some
> > of the solutions mentioned in this forum.
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> > > > > Last night, while using the radio, I stopped receiving for a few
> > seconds (everything went quiet) and then back to normal. Today I used
> > the radio for a while with no problems, then turned it off, and, when I
> > came back to it a couple of hours later, no receive at all, even after
> > fiddling with it for 15 minutes. :-(
> > > > >
> > > > > So, the symptoms: on SSB, I crank up the RF gain all the way up,
> > and the AF gain quite high, and I barely hear things (even the noise I
> > can hardly hear when usually, with these settings, I would be going
> > deaf!). If I crank up the AF gain all the way up, I get some type of
> > feedback (loud beep). If I switch to CW or TUN, I also get a loud
> > feedback (louder). If I transmit to a dummy load, I am getting less
> > than 50% of my normal transmit power.
> > > > >
> > > > > Any ideas what could have gone bad?
> > > > >
> > > > > Thanks in advance for your help!
> > > > >
> > > > > --Cesar-- K1TNT
> > > > >
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> > >
> > > [Non-text portions of this message have been removed]
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>

42192. Re: [TS-520_820_530_830] Re: ts-820. Added CW filter. CAR control cranked < >

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-22 01:37:40 UTC
From: NA6XR
Topic: 42178 Message: 42192

Where can I find that signal on a TS-530s ?

Sent from my iPhone

On May 21, 2013, at 6:30 PM, "Terry Wagoner" <wagstw46@...> wrote:

> I agree with Robert that you should also measure the CAR-2 frequency and level. I would measure it at the IF board at Conn IF-5 pin 13. It should be 8830.7 at approx 300 mv.
>
> If you have good spec frequency and level applied to the board then I would measure filter input and output levels at the switching diodes as I previously suggested. If you find it low at the output of the filter or the insertion loss is greater than what is shown on TX level diagram then go ahead as Robert suggests and vary the Osc frequency by varying trimmer TC-1 on CAR-2 board.
>
> Also make sure you have 14vdc being provided by the mode switch to turn on the filter switching diodes.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
> >
> > Stephen:
> >
> > I once bought a used SSB filter for a TS-820 that supposedly was tested by the previous owner. LSB was fine. On USB it only worked if you used a carrier module USB signal with a frequency that was substantially outside of nominal.
> >
> > Clearly, filters can have excursions outside the nominal center frequency for no obvious reason. Aside from that, if you look at the INRAD procedure I posted in the Files section you will see that they actually recommend aligning the radio to the filter rather than to a nominal center frequency. You can't change the filter frequency (although I have been tempted to try a hammer) so you have to change the radio to match the filter.
> >
> > So you might:
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> > 1. Make sure the carrier module frequency is correct.
> > 2. Try moving the carrier module frequency around a bit and see how that affects CW output.
> >
> > Good Luck!
> >
> > Robert

> > WB5WSV
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "kd0fds" <kd0fds@> wrote:
> > >
> > > Thank you, Terry.
> > >
> > > I'm looking forward to checking things out with your suggestions. I think my oscilloscope is rated to 100mhz so that will simplify things instead of trying to use the station monitor as a basic scope. Sorry I didn't mention that sooner.
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> > > The peak-to-peak numbers and other hints you have provided will put me on the path to tracking down my low carrier drive. I hope to poke around at the radio some more tonight! I know it is fun when people post up findings and resolutions to problems while the topic is still hot.
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> > > > Stephen:
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> > > > I just looked at the SM-220 specs in scope mode noted in the manual on Gordons site and it says scope BW is approx 10 mhz. If that is true it will read P-P voltage of the rf signals very low at 14mhz (less than 30% of the actual value).
> > > >
> > > > After measuring voltages at 14.175 mhz you might want to try loading to 100 watts out on 80 meters and flip SG switch off and then take the CW filter input and output voltage levels. At 3.5 mhz your measured values will be approx 4% low.
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> > > > Terry
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> > >
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>

[Non-text portions of this message have been removed]

42193. Re: My TS-820 got sick... :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-22 09:33:17 UTC
From: Terry Wagoner
Topic: 42157 Message: 42193

You do not need a meter to clean the aux relay. If that doesnt work then a meter will be required to troubleshoot.

--- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@..." <coyoteinventor@...> wrote:
>
> Terry (K9TW),
>
> Thanks for the long post!!! I really appreciate your time and effort to explain all this.
>
> I may give it a try this weekend (if I can borrow a better meter than the one I have) and see what I can find out. I'll post back with updates! :-)
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> Thanks again!
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> --Cesar-- K1TNT
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> > Two things normally lower this control voltage....receiving a strong off air signal and you running RF gain pot back CCW. The S-meter simply monitors the AGC bus line and when it sees the voltage go down it moves the meter up scale. Also, If the AF-AVR board fails you will have no RF-1 to supply the AGC bus so that is why I suggested you also measure it.
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> > You have two identical relays in the radio. One is the Aux relay that controls functions like switching the AGC and ALC bus line voltage and the other is your Antenna TR

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> > When you report you had good receive one moment and then the level went down or became nearly non-existent and the S-meter is now pegged it sounds like the AGC bus voltage available at the IF Board and RF board to be applied to Gate 2 of the IF and Rf amp devices is very low.
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> > Remove the bottom cover of the radio after line cord has been unplugged and rig allowed to sit for awhile to ensure filter caps have bled off. The Aux Relay is about in center of radio next to two vertically oriented filter capacitors about on a line back from the VFO knob. The Ant relay is under a metal shield can in rear corner. You can remove both and clean contacts. Some folks rotate the position of these relays from time to time to place them in different service. Kens Electronics in Kalamazoo Mich has NOS replacements. He has a website. Not a bad idea to have a spare.
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> > >
> > > Terry (K9TW),
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> > > I think I found what gate you are referring to; is it the gate2 on the
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> > > > > Oh, and one more thing I forgot to mention, which might be
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> > > feedback (loud beep). If I switch to CW or TUN, I also get a loud
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> > > >
> > > [Non-text portions of this message have been removed]

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42194. Re: ts-820. Added CW filter. CAR control cranked < >

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-22 09:41:31 UTC
From: Terry Wagoner
Topic: 42178 Message: 42194

Do you have the Service Manual? If not must download it.

I assume you are asking about the Carrier Osc? If so, the manual will show you it is developed on the PLL board and adjusted there. It leaves there and is applied to the IF Board at Conn 8 Pin 1.

See Step 3 of the Service Manual for initial level and frequency adjustments.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, NA6XR <na6xr@...> wrote:
>
> Where can I find that signal on a TS-530s ?
>
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> > Also make sure you have 14vdc being provided by the mode switch to turn on the filter switching diodes.
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> > > Clearly, filters can have excursions outside the nominal center frequency for no obvious reason. Aside from that, if you look at the INRAD procedure I posted in the Files section you will see that they actually recommend aligning the radio to the filter rather than to a nominal center frequency. You can't change the filter frequency (although I have been tempted to try a hammer) so you have to change the radio to match the filter.

> > >
> > > So you might:
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> > > 1. Make sure the carrier module frequency is correct.
> > > 2. Try moving the carrier module frequency around a bit and see how that affects CW output.
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> > > Good Luck!
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> > > Robert
> > > WB5WSV
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> > > --- In TS-520_820_530_830@yahoogroups.com, "kd0fds" <kd0fds@> wrote:
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> > > > Thank you, Terry.
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> > > > > Stephen:
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> > > > > Terry
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> [Non-text portions of this message have been removed]
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42195. Re: [TS-520_820_530_830] TS-520 with heil mics

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-22 12:23:04 UTC
From: Mike
Topic: 42183 Message: 42195

Chris,

I see this request quite often on this group and other ham forums. You must provide a means to match the differences in the speaker/headphone and microphone impedance between the Pro 6 and the TS-520.

The TS-520 has an "4 to 16 ohm" speaker/headphone impedance range while the Pro 6 headphone speaker has a "200 ohms" impedance.
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http://www.heilsound.com/amateur/products/prosetelite/

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Mike W5RKL

On 5/21/2013 8:09 PM, Christopher Lagrone wrote:
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> Would I need the optional transormer that heil makes to solve it?
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> Chris
> N5HSU
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> Sent from my iPhone
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> On May 21, 2013, at 7:31 PM, Mike <w5rkl@...
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> > Chris,
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> > TS-520 operator's manual). The Heil pro 6 microphone is a "low
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42196. Re: ts-820. CAR control cranked. < 14VDC at CW pin

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-22 15:45:00 UTC
From: kd0fds
Topic: 42178 Message: 42196

OK team. Thanks for all the help so far. I think Terry's #3 idea might be the first road to repair.

On the IF2 connector's CW and CWF pins, I have 12.35 volts.

I also have 12.11 volts on pin 5 on the RF board's RF1 connector.

So...Where does the 14VDC on the CW and CWF pin come from?

Back at the rectifier board, there is a pin labeled "14" with a red wire on it. I show 14.15 VDC here, but I also THINK I saw a perfect sawtooth waveform on this pin too. Hmmm. This might actually be "normal" because red seems to be the wire color for all the panel lights and I think they are AC if I recall. I think purple wire is the 14VDC back at the mode switch and stuff.

Additional reading/info below.

What I learned so far:
TAKE NOTES while you work!
My 14VDC seems low at 12.35VDC.
I gotta fix or replace my VTVM with a rf voltmeter I trust so I can follow the TX levels in the manual.

Diodes D7 and D8 up by the filter seem to be fine showing about .535volts drop forward biased, and seem to block just fine when when I hook the meter up backwards.

I think it is Q7 on the AF AVR board with the big heat sink on it.
Well that heatsink is too hot to leave a finger on it, but it is "touchable." A possible sign that there is a short somewhere drawing excessive current and lowering the voltage?

Speaking of the AF AVR board, what do VR2 and VR3 do anyway?

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
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> Stephen: Couple of things come to my mind. 1. Bad CW filter Or 2. Bad Filter switching diode D7 or D8 Or 3. Not turning D7 and D8 full on.
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> 1. If you look at TX Level Diagram you will see input RF voltage at the filter should be approx 25mv rms or 71mv P-P and at the output should be approx 19mv rms or 54mv P-P. Normal to have some filter insertion loss. Can measure this with RF millivolt meter or O-scope at the cathodes of switching diodes D7 and D8. TX Level Diagram levels were taken at 14.175 by loading into dummy load for approx 100watts output and then flip off the SG switch and record the drive levels.
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remove cover and measure for you along with the Car Level position if you need it.
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> > Hey thanks in advance for any clues to my high CAR requirements.
> > Sincerely, Stephen
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42197. RE: [TS-520_820_530_830] TS-520 with heil mics

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-22 16:16:27 UTC
From: Brad Allen
Topic: 42183 Message: 42197

You do not have to go to Heil only, you can hit any audio store and ask for a matching transformer for the Mic. It is a device that goes inline. I have a few of them for my sound system to provide the conversion. As far as the headphones, that can be repaired with the install a simple audio transformer 8 ohms to 200, probably at radio shack. I believe they may have some mic devices as well. Brad KB2CHY

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Mike
Sent: Wednesday, May 22, 2013 8:23 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-520 with heil mics

Chris,

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The TS-520 has an "4 to 16 ohm" speaker/headphone impedance range while the Pro 6 headphone speaker has a "200 ohms" impedance.
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42198. Re: ts-820. CAR control cranked. < 14VDC at CW pin

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-22 17:08:46 UTC
From: Terry Wagoner
Topic: 42178 Message: 42198

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Your 12.35vdc at CW/CWF is a little low, but not enough to cause filter switching diodes to not turn on sufficiently. It may be that C1 and C2 are getting a little tired?

2. RF-1 is Pin 4 and not Pin 5 at the RF board.

3. Follow the schematic CW/CWF is fed from the mode switch.

4. You cannot use a standard RF probe and VTVM to measure the low levels at the input and output of the Xtal filters. A germanium diode probe has a barrier voltage of approx 250mv. If you try to measure 25mv with it your VTVM may only just slightly deflect or not at all and if it does will not read accurately. Read the RF probe primer I posted here very recently. For very low signal levels you have two choices. RF millivolt meter or an O-scope.

5. Q7 is on a small heat sink and should not be so hot cant hold finger on it. Series pass regulators are inefficient and they do waste power thus need for a heat sink. It will run warm, but not barely touchable. This means there may be a problem on the 9VDC bus? What is the regulated 9vdc voltage?

6. VR-3 is Side Tone volume

7. VR-2 is used to set the RIT so it does not change VFO frequency when you turn it on with RIT at 1200. The service manual describes how to use the Marker to adjust VR-2.

8. Do you have an RF signal generator with a calibrated step attenuator? If so, can leave CAR LEVEL Pot turned all the way down CCW and inject 8.830 mhz at D7 and use sig gen in lieu of carrier from balanced modulator to drive the rig. Set the output for approx 25 mv or -19dBM. You can also swing the frequency to see if the filter center frequency is not per spec.

Terry K9TW

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42199. RF Probe for IM-18 VTVM

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-22 18:17:31 UTC
From: paul.nussbaum
Topic: 42199 Message: 42199

Replaced the driver in my 820S, still no ALC in TUN mode, want to run the TX level measurements. Anyone have a spare RF probe?
Thx,
Paul
AD5FT

42200. Re: ts-820. CAR control cranked. Wow thanks Terry.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-22 18:50:16 UTC
From: kd0fds
Topic: 42178 Message: 42200

OK, Thanks, Terry. I have had a chance to read all the replies and do some more searching on this amazing forum. I think you have provided enough clues for me to fix my TS-820 now.

One thing I should probably try would be to remove the CW filter and re-test. After all, it is the most recent change and therefor a good place to start looking.

Thanks for the description on VR2 and VR3 on the AF-AVR board. I recall adjusting them in the past, but again, I need to take NOTES!

I have found a lot of great posts related to the "14"VDC path from both you and Mike. All the clues are there. Step one might be a rig safety electrolytic capacitor replacement project. (C1 and C2 included) You guys have me sacred about the 2 axial capacitors on the rectifier board!

9V is currently at 9V. (no changes were required when measured last night. Same with the 3.3 Volt adjustment.)

overheated Q7 is still a "concern."

I'll try to make some progress tonight with my service manual and the tools/parts I do have. Unfortunantely, I don't have an RF signal injector yet. It is a pretty big limiter in keeping my TS-820 alive. I'll have to "address" that.

thanks again,
Stephen

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
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42201. Re: [TS-520_820_530_830] RF Probe for IM-18 VTVM

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-22 18:31:06 UTC
From: michael Miller
Topic: 42199 Message: 42201

Hi Paul, when I needed a RF probe I went on line and made a simple one from plans that I found. Used and RCA connector on top of my dummy load, output side and worked fine or used elsewhere where measurement was needed. I also have 2ea. VTVM heathkit 18s.

BEST 73 and GODS BLESSINGS, MIKE & Princess Ruth.

>_____
> From: paul.nussbaum <paul.nussbaum@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Wednesday, May 22, 2013 2:17 PM
>Subject: [TS-520_820_530_830] RF Probe for IM-18 VTVM
>
>
>
>Replaced the driver in my 820S, still no ALC in TUN mode, want to run the TX level measurements. Anyone have a spare RF probe?
>Thx,
>Paul
>AD5FT
>
>
>

[Non-text portions of this message have been removed]

42202. Re: RF Probe for IM-18 VTVM

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-22 20:49:06 UTC
From: Terry Wagoner
Topic: 42199 Message: 42202

This is the final time I will respond to this. I have tried very hard to describe what you need to perform TX Level Diagram testing. When you post a request like this it makes me think you did not read anything that I provided and clearly some others who are responding have no idea how to troubleshoot transmit drive level problems.

1. What kind of probe do you want? I have told you multiple times you need TWO different germanium diode probes. I even suggested where you might get a Heath PK-3.

2. Probe 1: A SINGLE GERMANIUM DIODE PROBE for measuring the output of the Transmit Mixer on the RF board. Approx 2 rms volts. That probe cannot be used to measure any other RF drive voltages. TIF is too low and beyond Transmit mixer output the levels are too high. It can be used for measuring Het Osc and VCO signals which may be required if you need to troubleshoot the Transmit Mixer.

3.Probe 2: A THREE GERMANIUM DIODE PROBE for measuring the RF drive at the Plate of the 12BY7A tube and at the control grids of the 6146 Final tubes. Approx 65 rms volts and 47 rms volts respectively. If you try to measure these points with a typical single diode probe you will very likely burn out the diode.

4. To measure TIF signal you will need a O-scope or a RF Millivolt meter. Measure TIF last. Start at the Control grid of the 6146 finals and measure DC operating bias and RF drive levels.

5. As I previously posted, the only way you can use a SINGLE GERMANIUM DIODE probe to measure the rf drive at the 12BY7A plate and the 6146 control grids would be to reduce the TIF signal level by keeping CAR LEVEL Pot reduced (CCW) so that you do not exceed the PIV of the probe diode and burn out the diode. Even with experience it would be difficult and easy to mess up.

So I just dont understand how you can ask if any one has an RF probe. Just not specific enough for an intelligent response.

Good Luck--Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "paul.nussbaum" <paul.nussbaum@...> wrote:
>
> Replaced the driver in my 820S, still no ALC in TUN mode, want to run the TX level measurements. Anyone have a spare RF probe?
> Thx,
> Paul
> AD5FT
>

42203. Re: ts-820. CAR control cranked. Wow thanks Terry.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-22 21:12:48 UTC
From: Terry Wagoner
Topic: 42178 Message: 42203

Stephen:

Yes you could remove it and see if rig tunes as it did before and does not require significantly more CAR level. This would tell you that Carrier Oscillator level is close to spec. However, tells you nothing about the CW filter or its switching diodes.

All of us had to start building test bench slowly over time. I and Mike and others have posted many times on what is needed at a minimum to troubleshoot and maintain a Kenwood Hybrid and in what order to buy each piece. You dont need a lab grade RF bench, but something on order of Heathkit level is needed at a minimum. Sometimes there are alternate methods to accomplish the steps and other times you have to bite the bullet and realize the easiest and best method is to use the service manual prescribed test gear. There is no "only one way" but very often one way is clearly superior to others.

Filters can be swept manually and the response shapes plotted on graph paper. I bit tedious but was done that way for years. I have notebook full of graphs before I got a decent sweep generator. Now I am lusting for VNA and/or Spectrum Analyzer and Tracking Generator. Even the old manual method requires a rf signal generator and a means to detect the RF output voltage at the frequency steps you inject.

I dont know any way to measure the filter insertion loss without a means to measure the RF voltage at the input and at the output of the filter. Can use the rigs internal Carrier Osc signal, but still need a RF millivolt meter or an O-scope. No way around it.

If you want to test the filter on the bench you can do that but you should terminate the input and output. I wont go into that test procedure here. Once you get correct gear I highly recommend you sweep any used filter on the bench before installing in rig.

Absent a RF signal generator I think it is best for you to leave filter in the rig and use the Car Oscillator as your signal source. If you have a near by club might ask if someone will loan you an O-scope or RF millivolt meter or let you bring rig to their bench.

I freely do that for folks who are really trying to help themselves.

Take Care
Terry K9TW

42204. Knwd MC-50 Mike For Sale

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-22 21:56:26 UTC
From: k7mks@...
Topic: 42204 Message: 42204

Clean and working as it should BUT missing the cord from the stand to the radio.
Substituted the cord from another MC-50 and all is A-OK!. $35 as-is + USPS.

Joe k7mks

[Non-text portions of this message have been removed]

42205. Re: RF Probe for IM-18 VTVM

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-23 00:11:08 UTC
From: Terry Wagoner
Topic: 42199 Message: 42205

If you want something to do while waiting on construction or purchase of your RF PROBES you can take the DC voltages at the socket of your new Driver Tube. Ordinarily would not do this unless TX Level Diagram results indicated a problem at the Driver Tube. However always good to take the voltages and record in your notes. You can take these with tube pulled, but better to take with load on the tube.

You have to be careful taking these on the foil side of the board accessing the tube socket pins thru the drive chain. I use a micro needle point probe tip insulated with heat shrink or a piece of insulating jacket stripped from small gauge hook up wire.

Take these with heaters on and SG switch Off and flip to Send (I always have dummy load connected for safety in case of inadvertent transmit). Pay close attention to the control grid operating bias voltage and the screen grid voltage.

If you already took and reported these voltages I am sorry as I do not recall the results.

Here are measured values from my notes.

Pin 1 Cathode-- R = 0.32vdc T = 5.25vdc

Pin 2 Control grid-- R = -42.3vdc T = 0.36vdc

Pin 7 Plate-- R = 333vdc T = 305vdc

Pin 8 Screen grid-- R = 248vdc T = 219vdc

Note: With 5.25vdc on cathode you will have approx 35ma cathode current which is full load for a 12BY7A Class A RF amplifier.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "paul.nussbaum" <paul.nussbaum@...> wrote:
>
> Replaced the driver in my 820S, still no ALC in TUN mode, want to run the TX level measurements. Anyone have a spare RF probe?
> Thx,
> Paul
> AD5FT
>

42206. Re: RF Probe for IM-18 VTVM

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-23 02:25:58 UTC
From: paul.nussbaum
Topic: 42199 Message: 42206

Terry,
Apologies for making you think I was not paying attention. I'm still trying to collect the things I need. There are things I won't really understand until I'm hands-on into it, and all I've been able to do so far is learn, plan, and purchase.

I didn't forget your notes about the probes; I even copied them into another document that has many of your other notes because the navigation mechanics of this forum is quite frankly the worst I've ever used... takes me forever to locate anything amongst the 45% duplication of posts, 45% white space, and 10% unique content.

I have the IM-18 and the AC/DC probe. I've calibrated it but have not used it yet.
I received replacement drivers today and put one in... no difference.
I pulled the relay and gave it the cleaning treatment.

While waiting on getting the proper RF probes, I am looking for things to measure / test.

My earlier measures, which seem good:

Pin 5 of the 6146 grid #1:
Finals circuit diagram specs (-100V/-55V)
I measure both tubes at
-99.5V before transmit
-57.5V during transmit
.
ACL ref voltage spec (3.3V), I measure 3.28V

12BY7A Pin 2 grid #1
RF board circuit diagram specs (-43V/0V)
I measure
-40.2V before transmit
.003V during transmit

12BY7A Pin 8 Grid #2 (screen)
RF board circuit diagram specs (250V/210V)
I measure
255V before transmit
224V during transmit

I will try to measure the driver tube pin 1 and 8.

I'm also looking at measuring Q5 on the RF board as that is indicated in the service troubleshooting guide for ALC.

I sent an email to the man you suggested might have some spare probes after he upgraded his instruments... never got a reply.

Now I'm just thinking out loud...
The service troubleshooting guide also mentions coil mis-alignment as a possible cause...

this problem did occur during coil alignment. I don't suppose there is some way to see if that in itself could be the trouble? The problem is on all bands, but I know some of the band coils are interactive.
Any danger in repeating the coil alignment and rotating the slugs far both ways to hunt for ACL indication? Assuming adequate rest time for the driver...

Thanks,
Paul
AD5FT

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> If you want something to do while waiting on construction or purchase of your RF PROBES you can take the DC voltages at the socket of your new Driver Tube. Ordinarily would not do this unless TX Level Diagram results indicated a problem at the Driver Tube. However always good to take the voltages and record in your notes. You can take these with tube pulled, but better to take with load on the tube.
>
> You have to be careful taking these on the foil side of the board accessing the tube socket pins thru the drive chain. I use a micro needle point probe tip insulated with heat shrink or a piece of insulating jacket stripped from small gauge hook up wire.
>
> Take these with heaters on and SG switch Off and flip to Send (I always have dummy load connected for safety in case of inadvertent transmit). Pay close attention to the control grid operating bias voltage and the screen grid voltage.
>
> If you already took and reported these voltages I am sorry as I do not recall the results.
>
> Here are measured values from my notes.
>
> Pin 1 Cathode-- R = 0.32vdc T = 5.25vdc
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> Pin 2 Control grid-- R = -42.3vdc T = 0.36vdc
>
> Pin 7 Plate-- R = 333vdc T = 305vdc
>
> Pin 8 Screen grid-- R = 248vdc T = 219vdc
>
> Note: With 5.25vdc on cathode you will have approx 35ma cathode current which is full load for a 12BY7A Class A RF amplifier.
>
>
>
> Terry K9TW
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "paul.nussbaum" <paul.nussbaum@> wrote:
> >
> > Replaced the driver in my 820S, still no ALC in TUN mode, want to run the TX level measurements. Anyone have a spare RF probe?

> > Thx,
> > Paul
> > AD5FT
> >
>

42207. VTVM/RF Probe Reality Check-

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-23 03:30:31 UTC
From: Jim
Topic: 42207 Message: 42207

All this chatter about RF probes and VTVMs made me pull my Heathkit out of the cabinet. I've been using my scope for most measurements so I wanted to see how closely the scope and the VTVM tracked one another with respect to RF levels. Hoping someone can set me straight on what I am seeing-

I have a Heathkit IM-11, Heathkit PK-3 RF Probe, Fluke Model 77, a Wavetek sig gen and my trusty Tektronix 380 Oscope.

I connected the my sig gen to the scope and set the sig gen for a 1 Mhz, 2V pk-pk signal. If I do the math, a 2 V pk-pk signal is .707 Vrms.

I now take the Heathkit IM-11 (which I just calibrated), PK-3 RF Probe and connect it in parallel with the scope. The scopes readings do not change, however the VTVM only measure about -0.550 VDC. I then disconnect the RF probe from the IM-11 and clip lead it into the Fluke 77. It measures about the same as the IM-11 -0.565 VDC.

So the question is why does the calculated value not match the meter readings? A 2V pk-pk signal should give a -0.707VDC reading on the meters, correct? Am I missing some scaling factor Or a diode drop somewhere due to the RF probe construction?

Thanks, Jim, KC1RM

42208. Re: VTVM/RF Probe Reality Check-

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-23 10:41:43 UTC
From: Terry Wagoner
Topic: 42207 Message: 42208

Learning and training is not "chatter".

You are looking at classic Electronics 101 2x scaling error.

Your Wavetek attenuator is only accurate when rf output is connected to a reasonably short 50 ohm cable terminated by 50 ohms.

I have my scope set up with Channel 1 for 1 meg ohm 10x probe input and Channel 2 terminated with a Tektronix 50 ohm 5 watt feed thru. A feed thru or terminator is available from ebay. Absent one can use a bnc tee and terminate the open tee with 50 ohm resistor.

You dont have 2v P-P output. You have 1.57v P-P output. 1.57/2 = 0.785 x .707 = 0.555v rms.

Look for Boonton Notebook 23 on web. It has a Thevenin Theorem explanation of what you are seeing.

Also, here is explanation:
http://www.effectivebits.net/2011/12/whats-wrong-with-my-function-generator.html

This affect has fooled all of us at one time or another and best way to avoid it is to have scope that has 50 ohm input or leave one channel set up as I do.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Jim <kc1rm@...> wrote:
>
> All this chatter about RF probes and VTVMs made me pull my Heathkit out
> of the cabinet. I've been using my scope for most measurements so I
> wanted to see how closely the scope and the VTVM tracked one another
> with respect to RF levels. Hoping someone can set me straight on what I
> am seeing-
>
> I have a Heathkit IM-11, Heathkit PK-3 RF Probe, Fluke Model 77, a
> Wavetek sig gen and my trusty Tektronix 380 Oscope.
>
> I connected the my sig gen to the scope and set the sig gen for a 1 Mhz,
> 2V pk-pk signal. If I do the math, a 2 V pk-pk signal is .707 Vrms.
>
> I now take the Heathkit IM-11 (which I just calibrated), PK-3 RF Probe
> and connect it in parallel with the scope. The scopes readings do not
> change, however the VTVM only measure about -0.550 VDC. I then
> disconnect the RF probe from the IM-11 and clip lead it into the Fluke
> 77. It measures about the same as the IM-11 -0.565 VDC.
>
> So the question is why does the calculated value not match the meter
> readings? A 2V pk-pk signal should give a -0.707VDC reading on the
> meters, correct? Am I missing some scaling factor Or a diode drop

> somewhere due to the RF probe construction?
>
> Thanks, Jim, KC1RM
>

42209. Re: RF Probe for IM-18 VTVM

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-23 11:25:32 UTC
From: Terry Wagoner
Topic: 42199 Message: 42209

Paul: Remind us again what are the current symptoms? For example: No ALC on all bands and no RF output on all bands? OR-- No RF output just in Tune mode OR--No ALC, but good rf output on 10 meters only?

OK sorry I launched. Getting tired of being blown off, ignored and/or undermined on the forum and by those who sneak around off list. I had guy tell me another guy wrote him off list and said all you need is a 2 diode probe and didnt matter what kind of diode. Well that is crap. We are talking RF voltage measurement and not rf voltage detection. Yes could use a 2 germanium diode probe at grids of finals, but will likely blow it up on plate of driver tube. What I am telling you limits the individual diode to measuring 30 rf volts. This gives you head room. Why risk wrecking your probes?

Yes forum is not easy to search on prior post. I do use the advanced search keyword and it does bring back a lot to sort thru. I should have asked Gordon if the RF probe diode primer merited being placed in the Files section. Would be nice to go thru files and weed out a lot of the low value stuff.

You have done some nice work. Remember the -57.5 on 6146 control grids. Now all you need to do is measure the RF drive level. You will need greater than 57.5/1.414 = 40.7 rms rf volts for any ALC indication.

Your Driver tube operating bias and sg voltage looks good. Be surprised if you do not have approx 5 vdc on the cathode. Appears driver tube is turned on and functioning fine. Cant tell for sure until you can measure rf in and rf out.

Your ALC reference voltage is OK. Now you can also measure it actually on the ALC bus where it is used, but best to do that with VTVM as easy to pull it down with most meters. Can try with your DMM. Go to RF board Conn RF-3 Pin 6 and measure with SG off and flip to send. Q5 can fail but start by measuring dc ALC voltage at Pin 6.

Sorry Jimmy did not respond. He did upgrade to Boontons and I know he had a couple of PK-3 probes and I think one was a new kit. He and his wife have had heart related health issues recently. I will try to contact him.

It is very unlikely that your adjustment of a Drive or Mixer coil during coil pack alignment is reason for no ALC indication and no RF output on all bands. Yes there is some degree of interaction but not to that degree. I suspect it is coincidental. Typically bad molex connector or dirty relay contact affects all bands. I would not go back to coil pack until you get ALC indication back.

Terry K9TW

>
>
>
> > >
> >

>

42210. Re: RF Probe for IM-18 VTVM

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-23 12:14:26 UTC
From: Terry Wagoner
Topic: 42199 Message: 42210

Are you talking about using a the RF detector circuit on a Heath Cantenna for an rf probe to run TX Level Diagram or troubleshoot low level RF circuits?

If so, I am sorry but there is no way you are using it on any boat anchor to measure low level rf drive voltages.

It is an RF detector circuit that measures the RF voltage across the 50 ohm dummy load. It is designed as a tuning/loading aid by providing a relative dc voltage that can be displayed on your multi-meter. It is a terrible test rf probe. We are talking about measuring the rf voltage levels at the input and output of IF crystal filters and TIF signal levels. These are in the 15 to 25 millivolt level range. The Cantenna detector wont even see them let alone accurately measure them.

The RF detector in a Cantenna is designed to detect and rectify high level voltage across the 50ohm dummy load (71 volts at 100 watts and 224 volts at 1000 watts). It is not designed to measure anything. First of all it has a 100:1 voltage divider at its input. It also uses a series diode which means it is fooled by the offset. Also as I previously reported it is very frequency sensitive.

If you placed a bnc on the SO-239 and connected a test lead to it and then connected it to the rf drive path in your Kenwood in an attempt to measure the drive levels you would have realized it wont register any dc voltage at its RCA jack at the levels we are dealing with until you get to the Plate of the Driver tube. There if you had nominal 65 rf volts you would see something on the order of approx 65/100 = 0.65 vdc - 0.25 diode barrier = 0.45 rf volts (not corrected for frequency). At most you could see 0.45 x 1.414 = 0.636 (peak of filter cap). What would reading approx 0.45vdc to 0.636vdc at the plate of the Drive tube tell the inexperienced owner about the state of his rig?

Assuming you are talking about a Cantenna or similar detector it is a very poor recommendation to make to a new person.

I would be interested to hear more about how it worked "fine"?

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, michael Miller <w9mvm@...> wrote:
>
> Hi Paul, when I needed a RF probe I went on line and made a simple one from plans that I found.Â Used and RCA connector on top of my dummy load, output side and worked fine or used elsewhere where measurement was needed.Â I also have 2ea. VTVM heathkit 18s.
>
> BEST 73 and GODS BLESSINGS, MIKE & Princess Ruth.
>
>
>
> >_____
> > From: paul.nussbaum <paul.nussbaum@...>

> >To: TS-520_820_530_830@yahoogroups.com
> >Sent: Wednesday, May 22, 2013 2:17 PM
> >Subject: [TS-520_820_530_830] RF Probe for IM-18 VTVM
> >
> >Â
> >
> >Replaced the driver in my 820S, still no ALC in TUN mode, want to run the TX level measurements. Anyone have a spare RF probe?
> >Thx,
> >Paul
> >AD5FT
> >
> >
> >
>
> [Non-text portions of this message have been removed]
>

42211. Re: RF Probe for IM-18 VTVM

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-23 12:24:24 UTC
From: Terry Wagoner
Topic: 42199 Message: 42211

Oh I forgot to mention I would not connect my Cantenna rf detector to the Plate of the Driver tube or any place where high DC voltage is present as the circuit has no DC blocking/coupling capacitor. If you do that the plate voltage could destroy your diode.

>
>

42212. Re: [TS-520_820_530_830] VTVM/RF Probe Reality Check-

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-23 14:25:46 UTC
From: Mark Gilger
Topic: 42207 Message: 42212

Anyone interested in a Heathkit comeback, there is a survey everyone can take.

I took it yesterday and was fairly long, but if
it helps them with their comeback it will be well worth it.

<http://heathkit.com/survey/index.php/278489/lang-en>http://heathkit.com/survey/index.php/278489/lang-en

Mark

At 11:30 PM 5/22/2013, Jim wrote:
>
>
>All this chatter about RF probes and VTVMs made me pull my Heathkit out
>of the cabinet. I've been using my scope for most measurements so I
>wanted to see how closely the scope and the VTVM tracked one another
>with respect to RF levels. Hoping someone can set me straight on what I
>am seeing-
>
>I have a Heathkit IM-11, Heathkit PK-3 RF Probe, Fluke Model 77, a
>Wavetek sig gen and my trusty Tektronix 380 Oscope.
>
>I connected the my sig gen to the scope and set the sig gen for a 1 Mhz,
>2V pk-pk signal. If I do the math, a 2 V pk-pk signal is .707 Vrms.
>
>I now take the Heathkit IM-11 (which I just calibrated), PK-3 RF Probe
>and connect it in parallel with the scope. The scopes readings do not
>change, however the VTVM only measure about -0.550 VDC. I then
>disconnect the RF probe from the IM-11 and clip lead it into the Fluke
>77. It measures about the same as the IM-11 -0.565 VDC.
>
>So the question is why does the calculated value not match the meter
>readings? A 2V pk-pk signal should give a -0.707VDC reading on the
>meters, correct? Am I missing some scaling factor Or a diode drop
>somewhere due to the RF probe construction?
>
>Thanks, Jim, KC1RM
>
>

[Non-text portions of this message have been removed]

42213. Re: [TS-520_820_530_830] VTVM/RF Probe Reality Check-

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-23 14:44:49 UTC
From: Joe - W7RKN
Topic: 42207 Message: 42213

I thought they did try a comeback and failed...about 2 years ago.....

Joe W7RKN

----- Original Message -----
From: "Mark Gilger" <mgilger@...>
Subject: Re: [TS-520_820_530_830] VTVM/RF Probe Reality Check-

> Anyone interested in a Heathkit comeback, there is a survey everyone can
> take.

42214. Re: TS-520 with heil mics

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-23 04:34:11 UTC
From: hsumaverick01
Topic: 42183 Message: 42214

I did talk with Heil today and they have a part called the xt-1 high to low impedence matching transformer that can be wired into the main cord, I'm looked at the price on it and it is only so I am going to go ahead and figure on getting it along with the proset 6. Chris N5HSU.

--- In TS-520_820_530_830@yahoogroups.com, "Brad Allen" <kb2chy@...> wrote:
>
> You do not have to go to Heil only, you can hit any audio store and ask for
> a matching transformer for the Mic. It is a device that goes inline. I have
> a few of them for my sound system to provide the conversion. As far as the
> headphones, that can be repaired with the install a simple audio transformer
> 8 ohms to 200, probably at radio shack. I believe they may have some mic
> devices as well. Brad KB2CHY
>
>
>
> _____
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Mike
> Sent: Wednesday, May 22, 2013 8:23 AM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [TS-520_820_530_830] TS-520 with heil mics
>
>
>
>
>
> Chris,
>
> I see this request quite often on this group and other ham forums. You
> must provide a means to match the differences in the speaker/headphone
> and microphone impedance between the Pro 6 and the TS-520.
>
> The TS-520 has an "4 to 16 ohm" speaker/headphone impedance range while
> the Pro 6 headphone speaker has a "200 ohms" impedance.
> The TS-520 has a "50,000 ohm" microphone impedance while the Pro 6 has a
> "600 ohm" microphone impedance.
>
> I do not see any "accessories" indicated in the Pro 6 Product sheet link
> to "headset adapters" that will allow the Pro 6 to work properly with
> the TS-520. If you ignore the microphone and headphone/speaker impedance
> differences between the Pro 6 and the TS-520 I am sure you will NOT be
> satisfied. My advice for you is to write Heil Sound and ask them if they
> have impedance matching accessories for the Pro 6 that will allow it to

> work with the TS-520.
>
> The Heil Sound Pro 6 set "Product sheet" is available at the following
> link.
>
> http://www.heilsound.com/amateur/products/prosetelite/
>
> Scroll down the page and click on "Product Sheet".
>
> Mike W5RKL
>
> On 5/21/2013 8:09 PM, Christopher Lagrone wrote:
> >
> > Would I need the optional transormer that heil makes to solve it?
> >
> > Chris
> > N5HSU
> >
> > Sent from my iPhone
> >
> > Sent from my iPhone
> >
> > On May 21, 2013, at 7:31 PM, Mike <w5rkl@...
> <mailto:w5rkl%40yahoo.com>
> > <mailto:w5rkl%40yahoo.com>> wrote:
> >
> > > Chris,
> > >
> > > The TS-520 requires a "high impedance" microphone, 50K ohms (see the
> > > TS-520 operator's manual). The Heil pro 6 microphone is a "low
> > > impedance", 600 ohm, microphone.
> > >
> > > 73
> > > Mike
> > >
> > > On 5/21/2013 4:53 PM, hsumaverick01 wrote:
> > > >
> > > > Just wondering if anyone out there has had any luck running a heil
> > > > mic/headset on a TS-520? I am looking at possibly getting the proset
> > > > elite 6 to use with my unit at home at times.
> > > >
> > > > Thanks,
> > > > Chris
> > > > N5HSU
> > > >
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42215. Re: INTERMITTANT RX SENS

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-23 08:41:05 UTC
From: john_zs1zc
Topic: 26 Message: 42215

Now that it's resolved, I have no regrets that it happened... what a beautiful piece of kit to get your hands into! :-)

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> I agree with you 100% Dave.
>
> If the solder never really wetted to the pin I have never been able to get it to re-flow very well. The pin has oxidized over the years. I always remove all old solder (I use a Hakko 808 but solder wick will work) and then remove the oxidation off the pin either with lite sanding or filing and then apply new solder. Makes a very big difference in quality of the soldering. Yes the Pins are plated, but no concern about removing it where you will be applying solder. Clean bright connection is what you need for a good solder connection. Plating only matters at the male/female socket to pin interface.
>
> I also take good look under magnification to make sure no hair line crack between the trace and the pad. This does happen and can give you fits.
>
> I never remove and install any board without inspecting every molex connector under bright light and magnification. I always re-insert the plug back in to the connector body so that all the pins are fully seated and then I rock connector side to side and watch to make sure I dont see any pin movement or any circumferential crack running around the solder cone. Very easy to see.
>
> I have pulled off my share of connectors and not a fun thing.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@> wrote:
> >
> > John,
> >
> >
> >
> > The molex plugs are a constant source of many problems, this is why when fault finding it is suggested to pull the molex plugs or give them a slight wiggle. The band switch is also an issue, most of the time it is a build up of dirt\corrosion or a finger on one of the waffer switches has bent out of the way. Best method that has been devised is when finding a dry joint is to remove all old solder sand back the pins and start with fresh solder.
> >
> >
> >
> > 73s
> >

> > Dave
> >
> > VK5PDL
> >
> >
> >
> >
> >
> >
> >
> >
> > To: TS-520_820_530_830@yahoogroups.com
> > From: johng1409@
> > Date: Tue, 21 May 2013 11:39:51 +0000
> > Subject: [TS-520_820_530_830] Re: INTERMITTANT RX SENS
> >
> >
> >
> >
> >
> > I just picked up a TS-830S and the receiver had the intermittence problem. The peculiar thing was that normal reception returned when I gave my antenna rotator a kick (it's a windscreen wiper motor switched by relays) and then faded again after a minute or so.
> >
> > I went through the basic cleaning and servicing of contacts on the RF board and found to my surprise that when I tried to remove the vertical connectors for input and output of the RF board, the entire assemblies came away from the PCB leaving neat little holes in the solder joints under the PCB - there were dry joints! Removing the RF board and reflowing connector joints seems to have cured the problem.
> >
> > As for the rotator switching? I can only assume there was enough of a transient induced in the antenna, and therefore in the RF board input, to temporarily close the circuit where corrosion had formed in the dry joint (not sure what the physics are, but this is occurring at a very small physical scale). These dry joints have been in there for 35 years, so it's anyone's guess as to what was going on chemically in terms of conductivity.
> >
> > So my advice: reflow the main connectors and components on the main RF signal path if you're getting partial sensitivity loss, and work your way outwards to the receiver control and drive circuitry (AGC, VFO etc.) depending on the severity of sensitivity loss. As well as good cleaning and lubrication of contacts, of course! Then you could be looking at actual component failure after that.
> >
> > 73,
> >
> > John ZS1ZC.
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]

> >
>

42216. Re: [TS-520_820_530_830] Re: VTVM/RF Probe Reality Check-

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-23 12:09:27 UTC
From: Jim
Topic: 42207 Message: 42216

I didn't realize the word 'chatter' had such negative connotations until
I looked at the definition- I guess I should of used the word
'discussion', which is what I meant.

My question was not with respect to the attenuator setting, it was more
to do with voltage at the end of the wire. Whether it is terminated in
a 50 ohm load or not, if I adjust the vernier on the sig gen to deliver
a 2V pk-pk sine wave as displayed on the scope, shouldn't the VTVM/RF
Probe combination indicate a -0.707 VDC (or there about)?

Jim

> Learning and training is not "chatter".
>
> You are looking at classic Electronics 101 2x scaling error.
>
> Your Wavetek attenuator is only accurate when rf output is connected
> to a reasonably short 50 ohm cable terminated by 50 ohms.
>
> I have my scope set up with Channel 1 for 1 meg ohm 10x probe input
> and Channel 2 terminated with a Tektronix 50 ohm 5 watt feed thru. A
> feed thru or terminator is available from ebay. Absent one can use a
> bnc tee and terminate the open tee with 50 ohm resistor.
>
> You dont have 2v P-P output. You have 1.57v P-P output. 1.57/2 = 0.785
> x .707 = 0.555v rms.
>
> Look for Boonton Notebook 23 on web. It has a Thevenin Theorem
> explanation of what you are seeing.
>
> Also, here is explanation:
> http://www.effectivebits.net/2011/12/whats-wrong-with-my-function-generator.html
>
> This affect has fooled all of us at one time or another and best way
> to avoid it is to have scope that has 50 ohm input or leave one
> channel set up as I do.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Jim <kc1rm@...> wrote:
> >
> > All this chatter about RF probes and VTVMs made me pull my Heathkit out
> > of the cabinet. I've been using my scope for most measurements so I
> > wanted to see how closely the scope and the VTVM tracked one another
> > with respect to RF levels. Hoping someone can set me straight on what I

> > am seeing-
> >
> > I have a Heathkit IM-11, Heathkit PK-3 RF Probe, Fluke Model 77, a
> > Wavetek sig gen and my trusty Tektronix 380 Oscope.
> >
> > I connected the my sig gen to the scope and set the sig gen for a 1
> Mhz,
> > 2V pk-pk signal. If I do the math, a 2 V pk-pk signal is .707 Vrms.
> >
> > I now take the Heathkit IM-11 (which I just calibrated), PK-3 RF Probe
> > and connect it in parallel with the scope. The scopes readings do not
> > change, however the VTVM only measure about -0.550 VDC. I then
> > disconnect the RF probe from the IM-11 and clip lead it into the Fluke
> > 77. It measures about the same as the IM-11 -0.565 VDC.
> >
> > So the question is why does the calculated value not match the meter
> > readings? A 2V pk-pk signal should give a -0.707VDC reading on the
> > meters, correct? Am I missing some scaling factor Or a diode drop
> > somewhere due to the RF probe construction?
> >
> > Thanks, Jim, KC1RM
> >
>
>
> <http://groups.yahoo.com/group/TS-520_820_530_830/post;_ylc=X3oDMTJxNTE1OW1kBF9TAzk3MzU5
NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BG1zZ0lkAzQyMjA4BHNlYwNmdHIEc2xrA3JwbHkEc3
RpbWUDMTM2OTMwNTcwNg--?act=reply&messageNum=42208>
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42217. Re: [TS-520_820_530_830] Re: TS-520 with heil mics

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-23 15:01:44 UTC
From: Mike
Topic: 42183 Message: 42217

You are doing the right thing Chris, stick with Heil accessories.

73
Mike W5RKL

On 5/22/2013 11:34 PM, hsumaverick01 wrote:
>
> I did talk with Heil today and they have a part called the xt-1 high
> to low impedence matching transformer that can be wired into the main
> cord, I'm looked at the price on it and it is only so I am going to go
> ahead and figure on getting it along with the proset 6. Chris N5HSU.
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Brad Allen"
> <kb2chy@...> wrote:
> >
> > You do not have to go to Heil only, you can hit any audio store and
> ask for
> > a matching transformer for the Mic. It is a device that goes inline.
> I have
> > a few of them for my sound system to provide the conversion. As far
> as the
> > headphones, that can be repaired with the install a simple audio
> transformer
> > 8 ohms to 200, probably at radio shack. I believe they may have some mic
> > devices as well. Brad KB2CHY
> >
> >
> >
> > _____
> >
> > From: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > [mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Mike
> > Sent: Wednesday, May 22, 2013 8:23 AM
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Subject: Re: [TS-520_820_530_830] TS-520 with heil mics
> >
> >
> >
> >
> >
> > Chris,

> >
> > I see this request quite often on this group and other ham forums. You
> > must provide a means to match the differences in the speaker/headphone
> > and microphone impedance between the Pro 6 and the TS-520.
> >
> > The TS-520 has an "4 to 16 ohm" speaker/headphone impedance range while
> > the Pro 6 headphone speaker has a "200 ohms" impedance.
> > The TS-520 has a "50,000 ohm" microphone impedance while the Pro 6
> has a
> > "600 ohm" microphone impedance.
> >
> > I do not see any "accessories" indicated in the Pro 6 Product sheet
> link
> > to "headset adapters" that will allow the Pro 6 to work properly with
> > the TS-520. If you ignore the microphone and headphone/speaker
> impedance
> > differences between the Pro 6 and the TS-520 I am sure you will NOT be
> > satisfied. My advice for you is to write Heil Sound and ask them if
> they
> > have impedance matching accessories for the Pro 6 that will allow it to
> > work with the TS-520.
> >
> > The Heil Sound Pro 6 set "Product sheet" is available at the following
> > link.
> >
> > http://www.heilsound.com/amateur/products/prosetelite/
> >
> > Scroll down the page and click on "Product Sheet".
> >
> > Mike W5RKL
> >
> > On 5/21/2013 8:09 PM, Christopher Lagrone wrote:
> > >
> > > Would I need the optional transormer that heil makes to solve it?
> > >
> > > Chris
> > > N5HSU
> > >
> > > Sent from my iPhone
> > >
> > > Sent from my iPhone
> > >
> > > On May 21, 2013, at 7:31 PM, Mike <w5rkl@...
> > <mailto:w5rkl%40yahoo.com>
> > > <mailto:w5rkl%40yahoo.com>> wrote:
> > >
> > > > Chris,
> > > >
> > > > The TS-520 requires a "high impedance" microphone, 50K ohms (see the
> > > > TS-520 operator's manual). The Heil pro 6 microphone is a "low

> > > > impedance", 600 ohm, microphone.
> > > >
> > > > 73
> > > > Mike
> > > >
> > > > On 5/21/2013 4:53 PM, hsumaverick01 wrote:
> > > > >
> > > > > Just wondering if anyone out there has had any luck running a heil
> > > > > mic/headset on a TS-520? I am looking at possibly getting the
> proset
> > > > > elite 6 to use with my unit at home at times.
> > > > >
> > > > > Thanks,
> > > > > Chris
> > > > > N5HSU
> > > > >
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42218. Re: [TS-520_820_530_830] Re: TS-520 with heil mics

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-23 15:05:18 UTC
From: Christopher Lagrone
Topic: 42183 Message: 42218

I'm pretty excited about going for the heil proset. I called heil directly and the gentleman I spoke with was real quick to tell me what I needed when I explained what I was looking for. I was able to order the headset and the xt-1 both from giga parts. The xt-1 was only $14.

Chris
N5HSU

Sent from my iPhone

On May 23, 2013, at 10:01 AM, Mike <w5rkl@...> wrote:

> You are doing the right thing Chris, stick with Heil accessories.
>
> 73
> Mike W5RKL
>
> On 5/22/2013 11:34 PM, hsumaverick01 wrote:
> >
> > I did talk with Heil today and they have a part called the xt-1 high
> > to low impedence matching transformer that can be wired into the main
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> > ahead and figure on getting it along with the proset 6. Chris N5HSU.
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> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Brad Allen"
> > <kb2chy@...> wrote:
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> > > You do not have to go to Heil only, you can hit any audio store and
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> > I have
> > > a few of them for my sound system to provide the conversion. As far
> > as the
> > > headphones, that can be repaired with the install a simple audio
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> > >
> > >
> > > _____
> > >
> > > From: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > [mailto:TS-520_820_530_830@yahoogroups.com

> > <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Mike
> > > Sent: Wednesday, May 22, 2013 8:23 AM
> > > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Subject: Re: [TS-520_820_530_830] TS-520 with heil mics
> > >
> > >
> > >
> > >
> > >
> > > Chris,
> > >
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> > > and microphone impedance between the Pro 6 and the TS-520.
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> > > differences between the Pro 6 and the TS-520 I am sure you will NOT be
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> > > > >
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> > > > > > Just wondering if anyone out there has had any luck running a heil
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> > > > > >
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42219. Re: VTVM/RF Probe Reality Check-

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-23 16:21:32 UTC
From: Terry Wagoner
Topic: 42207 Message: 42219

Jim:

Use your PK-3 to set the open circuit voltage of your Wavetek on 2 mhz. Use low freq to take any bandwidth limitations of the scope out of the equation. With the attenuator set at +13dBm you should read close to 1.0 rms volts with your RF probe/Fluke combo. It will be low by the 25mv to 30mv barrier voltage of the germanium diodes so if you have one diode will read approx 980mv and if 3 diodes then will read approx 900mv. It may also be off if your scaling resistor is 4.7meg which is used for 11 meg meter and your Fluke may be 10 meg. But it should be close to 1.0 rms volts.

Now with your RF probe/voltmeter having verified that your Wavetek open circuit voltage is close to 1.0 rms volts go ahead and measure the Wavetek open circuit voltage (without touching the attenuator) with your O-scope using a 10x 1 meg probe.

My new Rigol DS1102E reads approx 6.0 volts P-P and the Rigol also measures voltages and displays them on the screen and it displays 2.0 rms volts. Note that this is exactly twice the 1.0 rms volts measured by the RF probe. Different scopes will read different P-P levels. To avoid this I always use a Tek 50 ohm feed thru on my Channel 2 vertical input and have it set for 1x. The P-P and RMS voltages then will read correctly

Now terminate your Wavetek test lead with 50 ohm resistor. My Rigol now reads 2.84 P-P volts and the Rigol displays 1.0 rms volts. Right where it should be. By the way same with my 475A with exception of no digital display of measured voltages. I have to convert the 2.84 P-P it is displaying.

To understand this you can draw sig gen equivalent circuit on paper. Use Gen symbol with 2E in the circle and add a 50 ohm resistor in series with the output and bring out a plus lead at top and minus lead at bottom. Then connect different impedances across the plus and minus terminals representing your scope 1 meg ohm probe and 50 ohm terminator. You will be paralleling these two loads across the generator. The generator impedance will be in series with what ever load resistance you place across it. With 1 meg across generator there will be majority of the output voltage dropped across it. With 50 ohms across it the 2E output voltage will divide exactly in half. Half across the internal resistance of the signal generator and half across the load. The Generator voltage will be 2E and the voltage across the 50 ohm terminator will be E.

It is not easy to understand and I am not good at explaining. For now understand it occurs and do as I do and keep one channel of your scope reserved for 50 ohm feedthru for accurate RF signal generator measurements.

As I mentioned the Boonton Note 23 on the web gives a good explanation of this using Thevenin Theorem. Look at Fig d and study it.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Jim <kc1rm@...> wrote:
>

> I didn't realize the word 'chatter' had such negative connotations until
> I looked at the definition- I guess I should of used the word
> 'discussion', which is what I meant.
>
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> to do with voltage at the end of the wire. Whether it is terminated in
> a 50 ohm load or not, if I adjust the vernier on the sig gen to deliver
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> Probe combination indicate a -0.707 VDC (or there about)?
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> Jim
>
>
>
>
> > Learning and training is not "chatter".
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> > Also, here is explanation:
> > http://www.effectivebits.net/2011/12/whats-wrong-with-my-function-generator.html
> >
> > This affect has fooled all of us at one time or another and best way
> > to avoid it is to have scope that has 50 ohm input or leave one
> > channel set up as I do.
> >
> > Terry K9TW
> >
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> > > I have a Heathkit IM-11, Heathkit PK-3 RF Probe, Fluke Model 77, a
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> > > 2V pk-pk signal. If I do the math, a 2 V pk-pk signal is .707 Vrms.
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> > > meters, correct? Am I missing some scaling factor Or a diode drop
> > > somewhere due to the RF probe construction?
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> > > Thanks, Jim, KC1RM
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> >
> > <http://groups.yahoo.com/group/TS-520_820_530_830/post;_ylc=X3oDMTJxNTE1OW1kBF9TAzk3Mz
U5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BG1zZ0lkAzQyMjA4BHNlYwNmdHIEc2xrA3JwbHkE
c3RpbWUDMTM2OTMwNTcwNg--?act=reply&messageNum=42208>
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> [Non-text portions of this message have been removed]
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42220. Re: ts-820. CAR control cranked = probably the filter itself.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-23 16:52:01 UTC
From: kd0fds
Topic: 42178 Message: 42220

Terry.

I have read some of the hybrid required test equipment posts. I will search and read up on it more today.

Today I use what I have and wish I had more. (I have used my guitar tuner as an AF signal generator for example.)

I worked on the TS-820 last night with my oscillospoce and my frequency counter, the Kenwood service manual, a DMM, and my new TS-820s notebook.

I slipped up on this project from the start. I didn't ask the universal repair question:

"OK. Who worked on this bucket last and what did they do?"
Last action: I added the CW filter.

After checking/adjusting a bunch of stuff, I still had to tune up with the CAR control cranked last night.

I moved the IF1 connector on the RF board to to position "A." Ta-da. No more CW filter in use and no more full clockwise CAR control requirement to get full output. Rig is back to "normal."

I got out the schematic and walked along the CW path so I knew what to try to test. There isn't much on that circuit to look. My current guess? The used filter itself is at fault. I'll re-read Mike's testing the filter stuff in this tread. (Loved the "adjust with hammer" comment.) and the INRAD alignment instructions in the "files" section to learn more.

THE PLAN:

Read up on the INRAD stuff in the files section.
Research bench gear for properly maintaining my hybrid.
I'll order up parts so I can work on the radio in June.

More news in June.
Thanks again, Stephen

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Stephen:
>
> Yes you could remove it and see if rig tunes as it did before and does not require significantly more CAR level. This would tell you that Carrier Oscillator level is close to spec. However, tells you nothing about the CW filter or its switching diodes.
>
> All of us had to start building test bench slowly over time. I and Mike and others have posted many times on what is needed at a minimum to troubleshoot and maintain a Kenwood Hybrid and in what order to buy each piece. You dont need a lab grade RF bench, but

something on order of Heathkit level is needed at a minimum. Sometimes there are alternate methods to accomplish the steps and other times you have to bite the bullet and realize the easiest and best method is to use the service manual prescribed test gear. There is no "only one way" but very often one way is clearly superior to others.
>
> Filters can be swept manually and the response shapes plotted on graph paper. I bit tedious but was done that way for years. I have notebook full of graphs before I got a decent sweep generator. Now I am lusting for VNA and/or Spectrum Analyzer and Tracking Generator. Even the old manual method requires a rf signal generator and a means to detect the RF output voltage at the frequency steps you inject.
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> I dont know any way to measure the filter insertion loss without a means to measure the RF voltage at the input and at the output of the filter. Can use the rigs internal Carrier Osc signal, but still need a RF millivolt meter or an O-scope. No way around it.
>
> If you want to test the filter on the bench you can do that but you should terminate the input and output. I wont go into that test procedure here. Once you get correct gear I highly recommend you sweep any used filter on the bench before installing in rig.
>
> Absent a RF signal generator I think it is best for you to leave filter in the rig and use the Car Oscillator as your signal source. If you have a near by club might ask if someone will loan you an O-scope or RF millivolt meter or let you bring rig to their bench.
>
> I freely do that for folks who are really trying to help themselves.
>
> Take Care
> Terry K9TW
>

42221. Re: ts-820. CAR control cranked. Wow thanks Terry.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-23 17:09:39 UTC
From: kd0fds
Topic: 42178 Message: 42221

Terry.

I have read some of the hybrid required test equipment posts. I will search and read up on it more today.

Today I use what I have and wish I had more. (I have used my guitar tuner as an AF signal generator for example.)

I worked on the TS-820 last night with my oscillospoce and my frequency counter, the Kenwood service manual, a DMM, and my new TS-820s notebook.

I slipped up on this project from the start. I didn't ask the universal repair question:

"OK. Who worked on this bucket last and what did they do?"
Last action: I added the CW filter.

After checking/adjusting a bunch of stuff, I still had to tune up with the CAR control cranked last night.

I moved the IF1 connector on the RF board to to position "A." Ta-da. No more CW filter in use and no more full clockwise CAR control requirement to get full output. Rig is back to "normal."

I got out the schematic and walked along the CW path so I knew what to try to test. There isn't much on that circuit to look at. My current guess? The used filter itself is at fault. I'll re-read Robert's testing the filter stuff in this thread. (Loved the "adjust with hammer" comment.) and the INRAD alignment instructions in the "files" section to learn more.

THE PLAN:

Read up on the INRAD alignment stuff in the files section.
Research bench gear for properly maintaining my hybrid.
I'll order up parts so I can work on the radio in June.

More news in June.
Thanks again, Stephen

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Stephen:
>
> Yes you could remove it and see if rig tunes as it did before and does not require significantly more CAR level. This would tell you that Carrier Oscillator level is close to spec. However, tells you nothing about the CW filter or its switching diodes.
>
> All of us had to start building test bench slowly over time. I and Mike and others have

posted many times on what is needed at a minimum to troubleshoot and maintain a Kenwood Hybrid and in what order to buy each piece. You dont need a lab grade RF bench, but something on order of Heathkit level is needed at a minimum. Sometimes there are alternate methods to accomplish the steps and other times you have to bite the bullet and realize the easiest and best method is to use the service manual prescribed test gear. There is no "only one way" but very often one way is clearly superior to others.
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> Filters can be swept manually and the response shapes plotted on graph paper. I bit tedious but was done that way for years. I have notebook full of graphs before I got a decent sweep generator. Now I am lusting for VNA and/or Spectrum Analyzer and Tracking Generator. Even the old manual method requires a rf signal generator and a means to detect the RF output voltage at the frequency steps you inject.
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> I dont know any way to measure the filter insertion loss without a means to measure the RF voltage at the input and at the output of the filter. Can use the rigs internal Carrier Osc signal, but still need a RF millivolt meter or an O-scope. No way around it.
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>
> I freely do that for folks who are really trying to help themselves.
>
> Take Care
> Terry K9TW
>

42222. New Taylor 6146B finals for sale...

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-23 17:56:32 UTC
From: Bob
Topic: 42222 Message: 42222

I bought a 830S yesterday & it came with a pair of New Taylor 6146B finals...
Past owner paid $47.00 each plus $10.85 shipping...
Thought I would offer them to the hybrid group before I post on QTH...
Would sell the pair for $80.00 plus $8.00 to mail...
Would use First Class Package with $100 of insurance...
They are New, never installed...
Will include RF Parts Co's invoice...
I also have a new GE 12BY7A driver, has the new box (from RF Parts)...
Would sell it for $20.00 (RF Parts sold for $22.95)
Thanks,
Bob
****

42223. Re: [TS-520_820_530_830] New Taylor 6146B finals for sale...

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-23 18:09:46 UTC
From: n6wk@...
Topic: 42222 Message: 42223

Bob,
They are only $23.00 each from RF Parts. $46.00 per pair!
That guy paid WAY too much for them.

73,
Gordon
N6WK

On 5/23/2013 10:56 AM, Bob wrote:
>
> I bought a 830S yesterday & it came with a pair of New Taylor 6146B
> finals...
> Past owner paid $47.00 each plus $10.85 shipping...
> Thought I would offer them to the hybrid group before I post on QTH...
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> I also have a new GE 12BY7A driver, has the new box (from RF Parts)...
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> Thanks,
> Bob
> **********
>
>

"Faced with the choice between changing one's mind and proving that there is no need to do so, almost everyone gets busy on the proof."
- John Kenneth Galbraith -

--
E-Mail Disclaimer This communication and any documents, files, or previous e-mail messages attached to it constitute an electronic communication within the scope of the Electronic Communication Privacy Act, 18 USCA 2510.This communication may contain non-public, confidential, or legally privileged information intended for the sole use of the intended recipient(s). The unlawful interception, use or disclosure of such information is strictly prohibited under 18 USCA 2511. Any review, reliance, or distribution by others or forwarding without expressed permission is strictly prohibited. If you are not the intended recipient, please contact the sender and delete all copies.

42224. Re: ts-820. CAR control cranked = probably the filter itself.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-23 18:20:05 UTC
From: Terry Wagoner
Topic: 42178 Message: 42224

I have a nice audio generator and it is required for some of the alignment, but today I doubt I would buy one. As you used your guitar tuner for audio lots of ways to get accurate audio signal tones and levels today with a lap-top pc and sound card and wide range of tone generator soft ware (some free) available to us.

Yes not likely that switching diodes or bias to turn them on was the problem but needed to check the entire change you made.

O-scope would have shown you filter input and output signals so pretty easy to tell that filter was causing high level of insertion loss requiring higher level of Carrier Oscillator output from Balanced Modulator.

We all take a chance when we buy used part either off internet or hamfesting. Use to be a little more integrity. Very different times.

Take Care
Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "kd0fds" <kd0fds@...> wrote:
>
> Terry.
>
> I have read some of the hybrid required test equipment posts. I will search and read up on it more today.
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> Today I use what I have and wish I had more. (I have used my guitar tuner as an AF signal generator for example.)
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> I worked on the TS-820 last night with my oscillospoce and my frequency counter, the Kenwood service manual, a DMM, and my new TS-820s notebook.
>
> I slipped up on this project from the start. I didn't ask the universal repair question:
>
> "OK. Who worked on this bucket last and what did they do?"
> Last action: I added the CW filter.
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> After checking/adjusting a bunch of stuff, I still had to tune up with the CAR control cranked last night.
>
> I moved the IF1 connector on the RF board to to position "A." Ta-da. No more CW filter in use and no more full clockwise CAR control requirement to get full output. Rig is back to "normal."
>
> I got out the schematic and walked along the CW path so I knew what to try to test. There isn't much on that circuit to look. My current guess? The used filter itself is at fault. I'll re-read Mike's testing the filter stuff in this tread. (Loved the "adjust with hammer"

comment.) and the INRAD alignment instructions in the "files" section to learn more.
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> THE PLAN:
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> Research bench gear for properly maintaining my hybrid.
> I'll order up parts so I can work on the radio in June.
>
> More news in June.
> Thanks again, Stephen
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Stephen:
> >
> > Yes you could remove it and see if rig tunes as it did before and does not require significantly more CAR level. This would tell you that Carrier Oscillator level is close to spec. However, tells you nothing about the CW filter or its switching diodes.
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> > All of us had to start building test bench slowly over time. I and Mike and others have posted many times on what is needed at a minimum to troubleshoot and maintain a Kenwood Hybrid and in what order to buy each piece. You dont need a lab grade RF bench, but something on order of Heathkit level is needed at a minimum. Sometimes there are alternate methods to accomplish the steps and other times you have to bite the bullet and realize the easiest and best method is to use the service manual prescribed test gear. There is no "only one way" but very often one way is clearly superior to others.
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> > If you want to test the filter on the bench you can do that but you should terminate the input and output. I wont go into that test procedure here. Once you get correct gear I highly recommend you sweep any used filter on the bench before installing in rig.
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> > Absent a RF signal generator I think it is best for you to leave filter in the rig and use the Car Oscillator as your signal source. If you have a near by club might ask if someone will loan you an O-scope or RF millivolt meter or let you bring rig to their bench.
> >
> > I freely do that for folks who are really trying to help themselves.
> >
> > Take Care
> > Terry K9TW

> >
>

42225. Re: New Taylor 6146B finals for sale...

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-23 19:35:48 UTC
From: Bob
Topic: 42222 Message: 42225

Ooopps,
Read the RF Parts invoice wrong...
Your right...
Sell them for $38.00 for the pair plus the $8.00 to ship......
Bob
****

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Bob,
> They are only $23.00 each from RF Parts. $46.00 per pair!
> That guy paid WAY too much for them.
>
> 73,
> Gordon
> N6WK
>
>
> On 5/23/2013 10:56 AM, Bob wrote:
> >
> > I bought a 830S yesterday & it came with a pair of New Taylor 6146B
> > finals...
> > Past owner paid $47.00 each plus $10.85 shipping...
> > Thought I would offer them to the hybrid group before I post on QTH...
> > Would sell the pair for $80.00 plus $8.00 to mail...
> > Would use First Class Package with $100 of insurance...
> > They are New, never installed...
> > Will include RF Parts Co's invoice...
> > I also have a new GE 12BY7A driver, has the new box (from RF Parts)...
> > Would sell it for $20.00 (RF Parts sold for $22.95)
> > Thanks,
> > Bob
> > **********
> >
> >
>
> "Faced with the choice between changing one's mind and proving that there is no need to
do so, almost everyone gets busy on the proof."
> - John Kenneth Galbraith -
>
> --
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non-public, confidential, or legally privileged information intended for the sole use of

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>

42226. Face plate for ts 520se.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-23 23:47:35 UTC
From: Paul Jones
Topic: 42226 Message: 42226

Just a quick message ,i require a unmarked front facia plate for my 520se.Any one out there can help me acquiring one of these items i would be very appreciative. UK based ham ,MW0ICO,Paul.

42227. Re: New Taylor 6146B finals for sale...

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-24 02:54:40 UTC
From: Bob
Topic: 42222 Message: 42227

Taylors have been sold...
Bob
****

--- In TS-520_820_530_830@yahoogroups.com, "Bob" <ke5ftf@...> wrote:
>
> Ooopps,
> Read the RF Parts invoice wrong...
> Your right...
> Sell them for $38.00 for the pair plus the $8.00 to ship......
> Bob
> **********
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> > On 5/23/2013 10:56 AM, Bob wrote:
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> >
>

42228. TS820 MODDED

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-24 16:02:51 UTC
From: Rob
Topic: 42228 Message: 42228

Hola group:

A fellow here in Guadalajara gave me a TS820S as it was lying around in his shop (T.V. repairman). The radio was modded for the Chicken Band. I want to "un-mod" it. Please turn me on to the appropriate links and procedures.

thanks much and 73

Roberto
XE1GXG WB7AVF

42229. Re: TS820 MODDED

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-24 16:46:21 UTC
From: Terry Wagoner
Topic: 42228 Message: 42229

Rob:

If you are lucky all they did was change the Het Osc xtal for the 28 mhz bandswitch position. Do the other 10 meter bandswitch positions still work on 10 meters? If so, then most likely thing to look for is Crystal X7 33.5 mhz on the PD board was replaced with a 32.5 mhz crystal. Can buy a new replacement from International Crystal.
You may have to do re-alignment after replacing the crystal.

I would also do a visual inspection of the PA cage and rectifier board. Sometimes these fellows also QRO or badly abuse the rig. There are several things they can do for QRO, but most common is to move 300 to 210A or PD2 to increase screen grid voltage. Sometimes they short out R6 470 ohm on Rect Board with a jumper wire or install a 47 ohm in its place.

Take a good look at the main plate choke L3 in the PA cage to make sure not darkened (sometimes burned black). Also look at small right angle choke L1 at base of main choke for discoloration and look at the bypass cap C2. I have seen it burned and split open.

Make sure rig is unplugged and HV filter caps discharged before you poke around inside the PA cage or Rectifier Board.

Terry K9TW

--- In TS-520_820_530_830@...m, "Rob" <barnardbaca@...> wrote:
>
> Hola group:
>
> A fellow here in Guadalajara gave me a TS820S as it was lying around in his shop (T.V. repairman). The radio was modded for the Chicken Band. I want to "un-mod" it. Please turn me on to the appropriate links and procedures.
>
> thanks much and 73
>
> Roberto
> XE1GXG WB7AVF
>

42230. Re: [TS-520_820_530_830] Re: TS820 MODDED

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-24 17:28:05 UTC
From: Joseph Stiles
Topic: 42228 Message: 42230

Buenos Diaz Roberto,

Sorry to hear that you have the CB hack. I have had several pass over my bench over the past 2 years. I am NOT a professional repair person...just a hobby. I thing more than likely that crystals 9 & 10 on the VCO board have been changed. I up-loaded some pictures showing what I found on another 820(S): go to the FILES section of this board....then PHOTOS...look for TS820(S) CB HACK VCO MOD by wb7uqu.

Also, I agree with Terry. Compare wiring from the power transformer to the HV & rectifier board...as Terry stated..mods are easily done to QRO, just by moving a wire from one post to another...increasing the voltage to the final tubes...excessive voltage...running rig out of efficient operating parameters...will over heat the plate choke...and other components in the final cage...not to mention the HV and/or rectifier board...result...very sick...or dead rig.....

SALUD!

73 Joe
WB7UQU

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 24, 2013 9:46 AM
Subject: [TS-520_820_530_830] Re: TS820 MODDED

Rob:

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Terry K9TW

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> Hola group:
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> A fellow here in Guadalajara gave me a TS820S as it was lying around in his shop (T.V. repairman). The radio was modded for the Chicken Band. I want to "un-mod" it. Please turn me on to the appropriate links and procedures.
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> thanks much and 73
>
> Roberto
> XE1GXG WB7AVF
>

[Non-text portions of this message have been removed]

42231. New to the group. Repairing a 520SE. Rectifier board.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-25 00:34:13 UTC
From: Wes Will
Topic: 42231 Message: 42231

Per the big schematic file, it's the "X43-1090-02" board, and the one that arrived in my shack was absolutely crispy. Purchased it "working" from a supposed friend, and when it got to my door it was no longer working; he was no longer my friend when I told him about it.

Long story short, I've got a bit of a rebuild job on my hands now. The DG-5 that came with it is in fine shape, likewise the nice Shure desk mike, all copacetic. Just the radio that won't work. Sigh.

(Limited budget, retired, ex-military, all that load of hu-hu. Spent all the savings I had earmarked for ham gear to get this rig, and now the boat doesn't mote, and the XYL is looking at me in "THAT" way for spending the cash. Oh well... C'est la vie, eh?)

Anyway, if anyone knows of a source for a replacement board that is in reasonable condition (or isn't in as bad a shape as this one in my hand - which wouldn't be hard - foil lifted off the phenolic, where it isn't just black char, popped capacitors, diodes cracked in half, etc.) I would be obliged. Otherwise I am going to have to etch and drill and populate a new one, by hand and it has been a long time since I've done any of that kind of work.

I -have- found a really great way to get the etch design onto the blank board, using my old LJ-4 printer and a clothes iron. But that's only the beginning. (I know the over-voltage probably damaged other things, but I have to have juice to the rest of the box to find them. A new rectifier board has to be the opening salvo in this war.)

Besides, if I have to make a new one I'm likely to redesign the sucker, putting in some filtering in the 14VDC line and such for one thing. Cleaning up the 120Hz pulsating DC that comes out of there HAS to help with the rest of the system, might even improve the receiver noise figures a bit.

So if there is any place to get a pulled rectifier board, I'd be much obliged to know about it.

Also, before I dive into the archives at random, would there be a specific place to look for a FULL-COLOUR photo, showing THAT rectifier board in sufficient detail to be certain of the wire colour that is on all of the various connections?

I want to be VERY sure when I hook this sucker back up, scavenged board or new-made one, that all the wires are in the correct place. Call me lazy, and don't want to have to follow EVERY one of the dozen and a half connections to this board BACK to the other end to make sure.

I will do so if there is no other recourse, and yes, I did make notes of what was where before I pulled the thing out of the chassis. I am a "belt AND suspenders" type, particularly when mucking about with 800VDC from a diode doubler circuit. That stuff can bite hard.

Anyhow, thanks in advance, and see you all on the radio. Once I get it fixed.

--
Wes Will
N9KDY

42232. Re: New to the group. Repairing a 520SE. Rectifier board.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-25 01:10:13 UTC
From: Bob
Topic: 42231 Message: 42232

I have the

I have the X43-1090-00 Rect. Bd. from a 520_...
Also have the HV Bd. & Final Bd...
Pricing is low since I have plenty of them...
Have you ohmed out the transformer??
Bob
I also have a 520SE chasis that should have the boards on it...
Bob
****

--- In TS-520_820_530_830@yahoogroups.com, Wes Will <wwill@...> wrote:
>
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>
> (Limited budget, retired, ex-military, all that load of hu-hu. Spent
> all the savings I had earmarked for ham gear to get this rig, and now
> the boat doesn't mote, and the XYL is looking at me in "THAT" way for
> spending the cash. Oh well... C'est la vie, eh?)
>
> Anyway, if anyone knows of a source for a replacement board that is in
> reasonable condition (or isn't in as bad a shape as this one in my hand
> - which wouldn't be hard - foil lifted off the phenolic, where it isn't
> just black char, popped capacitors, diodes cracked in half, etc.) I
> would be obliged. Otherwise I am going to have to etch and drill and
> populate a new one, by hand and it has been a long time since I've done
> any of that kind of work.
>
> I -have- found a really great way to get the etch design onto the blank
> board, using my old LJ-4 printer and a clothes iron. But that's only
> the beginning. (I know the over-voltage probably damaged other things,
> but I have to have juice to the rest of the box to find them. A new
> rectifier board has to be the opening salvo in this war.)
>
> Besides, if I have to make a new one I'm likely to redesign the sucker,
> putting in some filtering in the 14VDC line and such for one thing.
> Cleaning up the 120Hz pulsating DC that comes out of there HAS to help
> with the rest of the system, might even improve the receiver noise

> figures a bit.
>
> So if there is any place to get a pulled rectifier board, I'd be much
> obliged to know about it.
>
> Also, before I dive into the archives at random, would there be a
> specific place to look for a FULL-COLOUR photo, showing THAT rectifier
> board in sufficient detail to be certain of the wire colour that is on
> all of the various connections?
>
> I want to be VERY sure when I hook this sucker back up, scavenged board
> or new-made one, that all the wires are in the correct place. Call me
> lazy, and don't want to have to follow EVERY one of the dozen and a half
> connections to this board BACK to the other end to make sure.
>
> I will do so if there is no other recourse, and yes, I did make notes of
> what was where before I pulled the thing out of the chassis. I am a
> "belt AND suspenders" type, particularly when mucking about with 800VDC
> from a diode doubler circuit. That stuff can bite hard.
>
> Anyhow, thanks in advance, and see you all on the radio. Once I get it
> fixed.
>
> --
> Wes Will
> N9KDY
>

42233. Re: TS820 MODDED

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-25 01:23:35 UTC
From: Bob
Topic: 42228 Message: 42233

I have the complete X50--1340-00 PD board with all of the correct blue jacket crystals...
Also have the VCO bd. X50-1330-00...
I normally sell both of these boards inside the metal box for $75 plus mailing cost...
Bob
****

--- In TS-520_820_530_830@yahoogroups.com, "Rob" <barnardbaca@...> wrote:
>
> Hola group:
>
> A fellow here in Guadalajara gave me a TS820S as it was lying around in his shop (T.V. repairman). The radio was modded for the Chicken Band. I want to "un-mod" it. Please turn me on to the appropriate links and procedures.
>
> thanks much and 73
>
> Roberto
> XE1GXG WB7AVF
>

42234. Re: [TS-520_820_530_830] Re: New to the group. Repairing a 520SE. Rectifier board.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-25 01:23:47 UTC
From: Wes Will
Topic: 42231 Message: 42234

On 05/24/2013 08:10 PM, Bob wrote:
> I have the
>
> I have the X43-1090-00 Rect. Bd. from a 520_...
> Also have the HV Bd. & Final Bd...
> Pricing is low since I have plenty of them...
> Have you ohmed out the transformer??
> Bob
> I also have a 520SE chasis that should have the boards on it...
> Bob

I have checked the transformer, both ohmed it out and powered it up to check the actual output voltages. Well within spec, all coils.

the 1090-00 would be just fine, or the one from the SE chassis, I'm easy.

"Pricing is low" is a good thing. OK, -how- low? The sooner I get this thing operational the sooner the evil eye gets turned down a notch.

I'll make one out of bark and twigs before I get taken to the cleaners, but if there is really a board for a reasonable price to be had, well, call me sold.

Also, how much for the SE chassis? I haven't any idea what the surge did to the rest of this poor thing, so I'd like a fall-back position in case there are other things needing repair.

Thanks for the reply.

--
Wes Will
N9KDY

42235. Re: New to the group. Repairing a 520SE. Rectifier board.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-25 02:27:18 UTC
From: Bob
Topic: 42231 Message: 42235

I sell the Rectifier boards for $22.00 but just $18.00 here on the Hybrid board... Add $3.00 to mail to you...

I would have to find the 520SE chassis & see what's still on it...
I'll get back to you on that on Saturday...
Bob
****

--- In TS-520_820_530_830@yahoogroups.com, Wes Will <wwill@...> wrote:
>
> On 05/24/2013 08:10 PM, Bob wrote:
> > I have the
> >
> > I have the X43-1090-00 Rect. Bd. from a 520_...
> > Also have the HV Bd. & Final Bd...
> > Pricing is low since I have plenty of them...
> > Have you ohmed out the transformer??
> > Bob
> > I also have a 520SE chasis that should have the boards on it...
> > Bob
>
> I have checked the transformer, both ohmed it out and powered it up to
> check the actual output voltages. Well within spec, all coils.
>
> the 1090-00 would be just fine, or the one from the SE chassis, I'm easy.
>
> "Pricing is low" is a good thing. OK, -how- low? The sooner I get this
> thing operational the sooner the evil eye gets turned down a notch.
>
> I'll make one out of bark and twigs before I get taken to the cleaners,
> but if there is really a board for a reasonable price to be had, well,
> call me sold.
>
> Also, how much for the SE chassis? I haven't any idea what the surge
> did to the rest of this poor thing, so I'd like a fall-back position in
> case there are other things needing repair.
>
> Thanks for the reply.
>
> --
> Wes Will
> N9KDY
>

42236. Re: [TS-520_820_530_830] Re: TS820 MODDED

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-25 03:14:42 UTC
From: JIM LYNCH
Topic: 42228 Message: 42236

Terry: I have a discolored L1 choke as you described below.Continuity checks OK but can't tell if its shorted.Cap seems ok. This monster will get hot as heck if I turn SG on.The foil side looks like it has been hot, the big resistors are dark colored but ohm out all right. Any way to check the L1 choke without getting the soldering gun out? Thanks for all the info, I'm brand new into component levels and just got a Tectronics 2213. Sad to say my Tripplet VOM has seen better days so looking for something to take it's place. jim

---
From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 24, 2013 8:46 AM
Subject: [TS-520_820_530_830] Re: TS820 MODDED

Rob:

If you are lucky all they did was change the Het Osc xtal for the 28 mhz bandswitch position. Do the other 10 meter bandswitch positions still work on 10 meters? If so, then most likely thing to look for is Crystal X7 33.5 mhz on the PD board was replaced with a 32.5 mhz crystal. Can buy a new replacement from International Crystal.
You may have to do re-alignment after replacing the crystal.

I would also do a visual inspection of the PA cage and rectifier board. Sometimes these fellows also QRO or badly abuse the rig. There are several things they can do for QRO, but most common is to move 300 to 210A or PD2 to increase screen grid voltage. Sometimes they short out R6 470 ohm on Rect Board with a jumper wire or install a 47 ohm in its place.

Take a good look at the main plate choke L3 in the PA cage to make sure not darkened (sometimes burned black). Also look at small right angle choke L1 at base of main choke for discoloration and look at the bypass cap C2. I have seen it burned and split open.

Make sure rig is unplugged and HV filter caps discharged before you poke around inside the PA cage or Rectifier Board.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Rob" <barnardbaca@...> wrote:
>
> Hola group:
>
> A fellow here in Guadalajara gave me a TS820S as it was lying around in his shop (T.V. repairman). The radio was modded for the Chicken Band. I want to "un-mod" it. Please turn me on to the appropriate links and procedures.
>
> thanks much and 73
>
> Roberto
> XE1GXG WB7AVF

>

Yahoo! Groups Links

[Non-text portions of this message have been removed]

42237. Re: [TS-520_820_530_830] Re: New to the group. Repairing a 520SE. Rectifier board.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-25 02:35:10 UTC
From: Wes Will
Topic: 42231 Message: 42237

On 05/24/2013 09:27 PM, Bob wrote:
> I sell the Rectifier boards for $22.00 but just $18.00 here on the
> Hybrid board... Add $3.00 to mail to you...

$21? Where do I mail the checque or postal money order? Or how would
you like to be payed if you prefer other payment?

--
Wes Will
N9KDY

42238. Re: TS820 MODDED

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-25 11:53:45 UTC
From: Terry Wagoner
Topic: 42228 Message: 42238

Jim: Continuity as you know doesnt tell you much about L1 or any choke. Need inductance bridge to measure it. In the 520s thru 820s it is approx 3.0uhy. In the 530 and 830 it was increased to 6.8uhy.

Is the value critical? I would not go much above 6.8uhy. I have seen some with 4.7uhy installed. It is there primarily for VHF parasitic suppression, but it also facilitates 160 meter operation by supplying additional inductance for adequate Xl on 160 meters. That is why it is in series and at a right angle to reduce mutual coupling with main choke winding. It is very difficult to make an effective solenoid wound choke to cover the wide frequency range without having series holes fall into ham bands. So instead of using space windings on the big choke and adding this additional inductance value that would have made it too tall physically for the PA cage Kenwood added the small choke at the base.

My advice is to buy a PA cage rebuild kit from K4EAA or HybridRestore.
Good idea to replace the bypass cap even if it doesnt appear to be physically damaged. Has had lots of hours of use and is in pretty severe duty application.

What do you mean gets HOT with SG on? Are you talking heat from the 6146 finals? If so, what is the resting plate current doing? If rig isnt keyed should be no plate current or additional heat anywhere when you turn on the SG switch.

Also, what board has discolored foil side and dark colored BIG resistors? Are you talking about the Final Board with the two 10 ohm Brwn-Blk-Blk Cathode meter shunt resistors? If so, I would replace these resistors if they appear overheated. You can measure across them and should be approx 5.0 ohms but common to read approx 5.5 ohms or so. If much higher than that I would replace them. The two sources I mentioned above sell a kit for couple of bucks that has the cathode and screen grid resistors. Mouser and many other suppliers also sell resistors.

Of course with your VOM broken you will need to buy a meter. If I was to buy only one meter it would be a old Heath VTVM analog like a IM-11 or IM-18. If can afford two meters then get a low cost DMM for dc voltage and resistance measurements and the VTVM for rf and alignment work.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, JIM LYNCH <lynchjl@...> wrote:
>
> Terry: I have a discolored L1 choke as you described below.Continuity checks OK but can't tell if its shorted.Cap seems ok. This monster will get hot as heck if I turn SG on.The foil side looks like it has been hot, the big resistors are dark colored but ohm out all right. Any way to check the L1 choke without getting the soldering gun out? Thanks for all the info, I'm brand new into component levels and just got a Tectronics 2213. Sad to say my Tripplet VOM has seen better days so looking for something to take it's place. jim
>
>
>

> _____
> From: Terry Wagoner <wagstw46@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Friday, May 24, 2013 8:46 AM
> Subject: [TS-520_820_530_830] Re: TS820 MODDED
>
>
> Rob:
>
> If you are lucky all they did was change the Het Osc xtal for the 28 mhz bandswitch position. Do the other 10 meter bandswitch positions still work on 10 meters? If so, then most likely thing to look for is Crystal X7 33.5 mhz on the PD board was replaced with a 32.5 mhz crystal. Can buy a new replacement from International Crystal.
> You may have to do re-alignment after replacing the crystal.
>
> I would also do a visual inspection of the PA cage and rectifier board. Sometimes these fellows also QRO or badly abuse the rig. There are several things they can do for QRO, but most common is to move 300 to 210A or PD2 to increase screen grid voltage. Sometimes they short out R6 470 ohm on Rect Board with a jumper wire or install a 47 ohm in its place.
>
> Take a good look at the main plate choke L3 in the PA cage to make sure not darkened (sometimes burned black). Also look at small right angle choke L1 at base of main choke for discoloration and look at the bypass cap C2. I have seen it burned and split open.
>
> Make sure rig is unplugged and HV filter caps discharged before you poke around inside the PA cage or Rectifier Board.
>
> Terry K9TW
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Rob" <barnardbaca@> wrote:
> >
> > Hola group:
> >
> > A fellow here in Guadalajara gave me a TS820S as it was lying around in his shop (T.V. repairman). The radio was modded for the Chicken Band. I want to "un-mod" it. Please turn me on to the appropriate links and procedures.
> >
> > thanks much and 73
> >
> > Roberto
> > XE1GXG WB7AVF
> >
>
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> ------------------------------------
>
> Yahoo! Groups Links

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>
> [Non-text portions of this message have been removed]
>

42239. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-25 16:46:19 UTC
From: adrian.langford@ymail.com
Topic: 42105 Message: 42239

Well I've spent a happy hour probing my 520SE to measure the readings you suggested taking to diagnose my "no ALC on 10m". I can see why I'm not getting any ALC...

- On 28MHz I get no ALC, and only 5W indicated on external power meter when I tune the Plate and Load for max output.

- Loaded on 28MHz using peak receive noise, I have -84.5vdc cutoff bias in RX at pin 5 control grid

- In TX mode I have -53.2vdc operating bias

- RF drive voltage (measured with Tektronix 50MHz scope)is 36.0 peak rf volts

So using your workings I have 36-53.2 = -17.2V delta in TX mode, whereas I need a decent positive delta!

Please advise on next place to look for why the rf volts are too low (you were getting 60.8V peak rf compared with my 36V).

I haven't done any alignment yet as I'm waiting for correct tool to arrive, and don't want to crack any slugs through impatience.

Oh while I had the rig open I looked in the finals cage. Was interested to see the original Japanese valves had been replaced at some stage by 6146Ws.

73s from Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Here are my readings from my personal TS-520 serial number 040234:
>
> 1. Full load on 28.500 Mhz = 85 watts output @200 ma into 50 ohm dummy load.
> 2. ALC indication is full scale deflection(FSD)ie the needle is far right at "350 ma" with Car Level Pot at position "8" and Drive Control peaked at 1230.
> 3. DC bias voltage at 6146 control grid Pin 5 = -85.6vdc cutoff bias in RX mode and -51.4 vdc operating bias in TX mode.
> 4. RF drive voltage at 6146 control grid Pin 5 = 43.0 rms volts measured with a Boonton 92E RF millivolt meter.
>
> 43 x 1.414 = 60.8 peak rf volts
> 60.8 - 51.4 vdc bias = 9.4 volts difference. This is reason why I have FSD ALC indication. It is normal to require more Car Level voltage on 10 meters. If unsure just set it Full CW to start with.
>
> -51.4/1.414 = 36.0 rf volts. You must have greater than 36.0 rf volts at -51.4vdc operating bias to get any ALC indication. The Rf drive signal must make the 6146 control grid positive with respect to the cathode so that ua grid current flows to produce any ALC

indication. The greater the delta between dc bias and RF drive voltage on positive swing of the RF envelope the higher the ALC deflection will be.
>
> So you need to load your rig on 10 meters into dummy load. Since you have no ALC indication use a workaround like peaking the Drive Control on receiver back ground noise or use the Marker. After loading to full load flip the SG switch off and make the RF drive and DC bias voltage measurements on the 6146 control grid as I did above.
>
> You will need a 3 diode RF probe and VTVM, or an O-scope, or an RF Millivolt meter to make the RF drive measurements.
>
> Report back the RF output level, the operating bias voltage, and RF drive voltage and based on those I can point you to next place to look.
>
> Terry
> K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> >
> > Well I popped in "new" 12BY7A driver.
> >
> > Rewarded with much healthier ALC on 15m (before had been unstable on that band) but still no ALC whatsoever on 10m. I also used switch cleaner on band switch and worked it in, in case of contact problem on 10m.
> >
> > Next I will check the grid volatfes and cathode resistors as Terry suggested.
> >
> > I also wondered if coil alignment may be part of answer so alsomtook off bottom of case.
> >
> > The bad news is that the nylon hex toool I got on ebay was too big for the cores (have ordered one from Ken K4EAA).
> >
> > The good news is that I examined all the slugs very carefully under bright light. Only one appears crackdd - the 3.5MHz oscillator coil. So when proper tool arrives I can align rig properly.
> >
> > 73 Adrian G4IQW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> > >
> > >
> > > Many thanks for valuable info Terry.
> > >
> > > Different views from similarly experienced owners, so what I'll do is test whether a new driver valve - after checking voltages described here - makes any difference to 10m ALC.
> > >
> > > Plenty of time anyway till 10m shows signs of life!
> > >
> > > 73 Adrian G4IQW

> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > > >
> > > > Robert:
> > > >
> > > > I will probably regret wading in to this pond!
> > > >
> > > > I do not doubt that you have no ALC indication on 10 meters on your TS-520. In my experience it is "common", but not "normal". I would also be very careful citing and observing any of these "service bulletins". I am very skeptical of most of these as some are just flat wrong. Putting star lock washers on circuit board to cure VFO drift isnt first thing I will ever reach for! They appear to me to be nothing more than a list of one line anecdotal entries submitted by owners and perhaps Kenwood service center bench techs? One line entries with no details, no basis, no explanations are not what I would expect from a factory authorized service bulletin.
> > > >
> > > > I have worked on probably 30 or so TS520s in a 10 year period. Not an exhaustive number, but enough to know that all but one left my bench with adequate ALC indication on 10 meters. That one would get approx 1/4 scale deflection and was very touchy and owner was in a hurry to get it back. In my experience can typically get at least 1/2 scale deflection with Car Level pot at 1400 to 1500 position. My own personal TS-520 ALC indication on 10 meters is a little bit better than 1/2 scale deflection. It had none when I got it.
> > > >
> > > > I once had a fellow call me(some how got my home phone) and he was mad as hell. He told me he saw where I responded on some forum just as I am to you and that he had purchased his TS520 new from big west coast dealer and it had no ALC on 10 meters out of the box and he called Kenwood and they told him it was "normal". Now I dont want to call anyone a liar, but I suggested that I doubted he had actually called Kenwood factory design engineer in Japan. If so what did that engineer say was the reason? Would there not have been a discussion and some additional probing questions? I suggested that perhaps he had called the dealer and maybe even talked to a dealer bench tech who said something like " I see that all the time". Very different from a design engineer explaining why it was "normal". I then suggested that had it been me I would have taken the rig back to dealer and told them when they can sell me a new in the box one that has ALC indication on all bands I will take it. He was fuming by time conversation ended.
> > > >
> > > > I closed the conversation this way. The compelling question you need to ask yourself is....."IF ONE OR MORE TS-520 HAVE SOME LEVEL OF ALC INDICATION ON 10 METERS WHY CANNOT ALL"? If later serial number production runs did not have this problem, wouldnt a mod have been issued? I know of no such Kenwood fix.
> > > >
> > > > Would Ford make a car that the speed-o-meter worked in 1st, 2nd, and 3rd gear, but in 4th gear you had to use some kind of work around to tell how fast your were going (maybe timing mile marker post with your wrist watch)? Would customers really live with that and call it normal? I dont think so.
> > > >
> > > > Also the manual does not say it is normal. I get that thrown at me. The operating manual clearly states that "Note: If there is no ALC reading indicated, increase the CAR control until there is an ALC reading" There is no disclaimer that follows that says "with

the exception of on 10 meters". I think what confuses people is the statement later under the CW loading that says at 200 ma of Ip there may be no ALC indication. Too bad Kenwood had to make that statement, but apparently people were loading rig for max RF output using the RF detector position and for some odd reason then flipping meter back to ALC position instead of back to Ip. Maybe old timers who were use to loading the old Class C CW grid leak bias transmitters? Maybe they thought they needed to check and re-peak grid current? A Class AB1 Kenwood doesnt operate that way. We have essentially no grid current and no reason to keep checking ALC indication in the loading procedure. I dont understand it. Kenwood even followed this note by adding a chart that shows the preferred meter positions and it clearly shows that you should use Ip position when loading in CW. At 200 ma you are done and no reason to see if ALC has fallen off.
> > > >
> > > > There is a reason that you may have no ALC indication in CW Mode at 200 ma Ip and it has to do with degenerative RF feedback, but I wont go into it in this response.
> > > >
> > > > Sorry so long, but this is not easy subject to cover briefly.
> > > >
> > > > If you want to work on your no ALC indication on 10 meters start with a fresh 12BY7A and make sure you have spec DC voltages and make sure your cathode resistors are all at design value.
> > > >
> > > > Then in order to have ALC indication you need two key voltages. Start by checking your 6146 control grid Pin 5 operating DC bias voltage with 60 ma resting plate current. Also measure your RF drive voltage. If one or both of these are not to spec on 10 meters you will have no ALC indication. Need to be able to accurately measure these with a calibrated RF millivolt meter or O-scope. If you have -55vdc operating bias then you will need greater than 55/1.414 = 38.89 rms or 110.4 P-P rf drive volts. At 39 rf volts you will have just barely overcome the DC bias offset. The control grid of the 6146 must go positive on the positive half of the RF drive envelope in order for Ua grid current to flow. If 6146 control grid never goes positive relative to the cathode then there will be no Ua grid current. No Ua grid current means no ALC indication. This is the first place to start.
> > > >
> > > > Not just my experience. You might contact Jimmy Lamanteer WB2KNR who still operates his original dealer purchased new TS520 as his main rig and collects them and has 8 or 10 at all times and he reports to me that they all have some level of ALC indication on 10 meters.
> > > >
> > > > Not being critical of you Robert. Just trying to help.
> > > >
> > > > 73s Terry K9TW
> > > >
> > > >
> > > > >
> > > > > According to the TS-520 service bulletins, no ALC indication on 10M is "normal." And that is the way it is with my 520. I assume the 520SE is the same, although there are 520 owners who say they do get ALC on 10M.
> > > > > >
> > > > > >
> > > > > >
> > > > >
> > >

> >
>

42240. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-25 16:55:19 UTC
From: adrian.langford@ymail.com
Topic: 42105 Message: 42240

I meant to add that to see any ALC, I need rf volts greater than 53.2/1.414=37.6V, so my 36V peak doesn't cut it!

--- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@..." <adrian@...> wrote:
>
> Well I've spent a happy hour probing my 520SE to measure the readings you suggested taking to diagnose my "no ALC on 10m". I can see why I'm not getting any ALC...
>
> - On 28MHz I get no ALC, and only 5W indicated on external power meter when I tune the Plate and Load for max output.
>
> - Loaded on 28MHz using peak receive noise, I have -84.5vdc cutoff bias in RX at pin 5 control grid
>
> - In TX mode I have -53.2vdc operating bias
>
> - RF drive voltage (measured with Tektronix 50MHz scope)is 36.0 peak rf volts
>
> So using your workings I have 36-53.2 = -17.2V delta in TX mode, whereas I need a decent positive delta!
>
> Please advise on next place to look for why the rf volts are too low (you were getting 60.8V peak rf compared with my 36V).
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> I haven't done any alignment yet as I'm waiting for correct tool to arrive, and don't want to crack any slugs through impatience.
>
> Oh while I had the rig open I looked in the finals cage. Was interested to see the original Japanese valves had been replaced at some stage by 6146Ws.
>
> 73s from Adrian G4IQW
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Here are my readings from my personal TS-520 serial number 040234:
> >
> > 1. Full load on 28.500 Mhz = 85 watts output @200 ma into 50 ohm dummy load.
> > 2. ALC indication is full scale deflection(FSD)ie the needle is far right at "350 ma" with Car Level Pot at position "8" and Drive Control peaked at 1230.
> > 3. DC bias voltage at 6146 control grid Pin 5 = -85.6vdc cutoff bias in RX mode and -51.4 vdc operating bias in TX mode.
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> >
> > 43 x 1.414 = 60.8 peak rf volts

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> > > > > There is a reason that you may have no ALC indication in CW Mode at 200 ma Ip and it has to do with degenerative RF feedback, but I wont go into it in this response.
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> > > > > Sorry so long, but this is not easy subject to cover briefly.
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> > > > > If you want to work on your no ALC indication on 10 meters start with a fresh 12BY7A and make sure you have spec DC voltages and make sure your cathode resistors are all at design value.
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> > > > > Then in order to have ALC indication you need two key voltages. Start by checking your 6146 control grid Pin 5 operating DC bias voltage with 60 ma resting plate current. Also measure your RF drive voltage. If one or both of these are not to spec on 10 meters you will have no ALC indication. Need to be able to accurately measure these with a calibrated RF millivolt meter or O-scope. If you have -55vdc operating bias then you will need greater than 55/1.414 = 38.89 rms or 110.4 P-P rf drive volts. At 39 rf volts you will have just barely overcome the DC bias offset. The control grid of the 6146 must go positive on the positive half of the RF drive envelope in order for Ua grid current to flow. If 6146 control grid never goes positive relative to the cathode then there will be no Ua grid current. No Ua grid current means no ALC indication. This is the first place to start.
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> > > > > Not being critical of you Robert. Just trying to help.
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42241. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-25 17:41:26 UTC
From: Terry Wagoner
Topic: 42105 Message: 42241

Just remember a 50mhz BW scope on 28 mhz will read P-P voltage approx 8% to 9% low.

As far as where to go next. Well with your scope you can measure all the key TX Level Diagram test points for RF drive. Just multiply the Rms values listed by 2.828 for P-P that your scope will display.

Probably easiest is to take a look at Transmit Mixer output at the MD terminal or I believe you also have a TP-1 on the RF board. Should see something close to 2 rms volts or 6 volts P-P. If low there take a look at your Het Osc input. Het Osc serves as the LO for the Mixer and TIF as the RF input. TIF seldom problem but it could be. Output at MD is the actual transmit frequency which will be Het minus TIF. Should have about 1 volt of Het at TP-3. If low try adjusting the Het Osc coil. Make sure you peak it on slow side of the response curve and back off a little.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@..." <adrian@...> wrote:
>
> Well I've spent a happy hour probing my 520SE to measure the readings you suggested taking to diagnose my "no ALC on 10m". I can see why I'm not getting any ALC...
>
> - On 28MHz I get no ALC, and only 5W indicated on external power meter when I tune the Plate and Load for max output.
>
> - Loaded on 28MHz using peak receive noise, I have -84.5vdc cutoff bias in RX at pin 5 control grid
>
> - In TX mode I have -53.2vdc operating bias
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> - RF drive voltage (measured with Tektronix 50MHz scope)is 36.0 peak rf volts
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> So using your workings I have 36-53.2 = -17.2V delta in TX mode, whereas I need a decent positive delta!
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> Please advise on next place to look for why the rf volts are too low (you were getting 60.8V peak rf compared with my 36V).
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> I haven't done any alignment yet as I'm waiting for correct tool to arrive, and don't want to crack any slugs through impatience.
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> Oh while I had the rig open I looked in the finals cage. Was interested to see the original Japanese valves had been replaced at some stage by 6146Ws.
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> > 1. Full load on 28.500 Mhz = 85 watts output @200 ma into 50 ohm dummy load.
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42242. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-25 18:10:26 UTC
From: Terry Wagoner
Topic: 42105 Message: 42242

If you have good RF drive at output of the Transmit Mixer then look at the output at the Plate of the Driver Tube @DP on RF board. Just be aware you have 300 vdc here. Make sure you Scope probe and vertical amp can handle that level DC. Should have approx 160 v P-P.

Sometimes you may have to re-peak the Drive control depending on what instrument you are using to measure RF drive levels with as it can de-tune the tank circuits and cause a lower reading.

To keep from long responses I will wait to tell you where to look next based on your findings at MD and DP.

Terry K9TW

42243. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-25 19:13:04 UTC
From: adrian.langford@ymail.com
Topic: 42105 Message: 42243

Thanks Terry for pointers. I will work way back and study level diagram alongside your instructions.

Oh I also tried to improve the VFO tracking but even going backband forth many times I couldn't get it really accurate at both ends 0 and 600. It's a slight improvement on how it was tracking before, and if Inuse calibrator again at 600 end then it's spot on. Without recalibrating against marker I can get it to 5.5000 at 0 end and 4.9004 at 600 end which will do for me.

73 Adrian G4IQW

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> > > > > > Robert:
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> > > > > > I will probably regret wading in to this pond!
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> > > > > > Would Ford make a car that the speed-o-meter worked in 1st, 2nd, and 3rd gear, but in 4th gear you had to use some kind of work around to tell how fast your were going (maybe timing mile marker post with your wrist watch)? Would customers really live with that and call it normal? I dont think so.
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> > > > > > Then in order to have ALC indication you need two key voltages. Start by checking your 6146 control grid Pin 5 operating DC bias voltage with 60 ma resting plate current. Also measure your RF drive voltage. If one or both of these are not to spec on 10 meters you will have no ALC indication. Need to be able to accurately measure these with a calibrated RF millivolt meter or O-scope. If you have -55vdc operating bias then you will need greater than 55/1.414 = 38.89 rms or 110.4 P-P rf drive volts. At 39 rf volts you will have just barely overcome the DC bias offset. The control grid of the 6146 must go positive on the positive half of the RF drive envelope in order for Ua grid current to flow. If 6146 control grid never goes positive relative to the cathode then there will be no Ua grid current. No Ua grid current means no ALC indication. This is the first place to start.
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42244. Re: [TS-520_820_530_830] Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-25 17:33:16 UTC
From: Jerry Barr
Topic: 42105 Message: 42244

it was my understanding the 6146 w didnt do well in place of the 6146 or the 6146a or is that not correct/ they were very different

Jerry KJ6NTL

From: "adrian.langford@..." <adrian@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, May 25, 2013 9:55 AM
Subject: [TS-520_820_530_830] Re: Progress report new 520SE acquisition

I meant to add that to see any ALC, I need rf volts greater than 53.2/1.414=37.6V, so my 36V peak doesn't cut it!

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> - On 28MHz I get no ALC, and only 5W indicated on external power meter when I tune the Plate and Load for max output.
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[Non-text portions of this message have been removed]

42245. Re: [TS-520_820_530_830] Re: TS820 MODDED

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-25 05:48:59 UTC
From: Wes Will
Topic: 42228 Message: 42245

On 05/24/2013 10:14 PM, JIM LYNCH wrote:
> Any way
> to check the L1 choke without getting the soldering gun out?

Nope. Sorry. You cannot test the coil (or most any other part) without removing it from the circuit. At least one lead of any coil, capacitor, resistor, diode, or any other 2-lead device has to be out of the circuit to check it.

And use a soldering pencil and not a gun. About 35 to 50 watts should do just fine. Soldering guns are always much too hot for circuit boards. You'll melt the traces right off the phenolic.

You don't need to spend a load of cash to get something like a Weller temp-controlled soldering / desoldering station.

Now if money isn't an object, GET a Weller temperature-controlled soldering and desoldering station with the vacuum pump and all the fixings. (Sadly for me, I live on a retiree's tight budget, and money IS an object.) A decent pencil iron with replaceable tips should last for years, for -well- under thirty dollars.

Get a teflon-tipped solder-sucker bulb, too. Works better than solder-wick braid, for removing soldered-in components.

> Tectronics 2213. Sad to say my Tripplet VOM has seen better days so
> looking for something to take it's place. jim

Any of the Fluke DVM's are highly recommended. BEST is the industrial model 87V, but we're usually talking serious coin for one of them, in the $400 and up range. But a model 113 or 114 will do everything you will need when repairing a radio and costs a fourth of the price of the 87V.

The Fluke will last you the rest of your life. Put it in your will, it will still be going when you're gone silent key.

Or get an off-brand one that looks a lot like a Fluke, and will probably last you three or four years at least for $40 or $50.

Haunt places that have old gear for sale, if you've got any in your area, and find a VTVM instead of a digital multimeter, if you're going to work on tube stuff very much. The swing needle meters are quite good, and you can get very good at reading one quite soon. High input impedance, and they can be repaired by the owner, where a digital one cannot.

A Simpson 303 or something old by BK Precision (a model 177 for choice, were it me) won't do you wrong. And you'll probably be able to leave IT

to someone in your will, too. If they don't get dropped or dunked in something, they tend to just keep on truckin'.

(ALL METERS need to be checked for calibration once in awhile, against a standard known voltage source. Don't let anyone tell you otherwise, digital meters can get out of kilter too. But a VTVM, being a 'ball-park' sort of meter anyway, can be re-calibrated to 'close enough' at home, without sending it back to the factory for the job.)

Hope you get your rig un-modified without too much angst.

--
Wes Will
N9KDY

42246. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-25 20:30:35 UTC
From: adrian.langford@ymail.com
Topic: 42105 Message: 42246

Thanks Jerry. I do have a pair of new RCA 6146Bs as spare, but the 6146W are putting out 100+ W on all bands except 10m where I have no alc indication

73 Adrian G4IQW
--- In TS-520_820_530_830@yahoogroups.com, Jerry Barr <kj6ntl@...> wrote:
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> Jerry KJ6NTL
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> > > > > > I do not doubt that you have no ALC indication on 10 meters on your TS-520. In my experience it is "common", but not "normal". I would also be very careful citing and observing any of these "service bulletins". I am very skeptical of most of these as some are just flat wrong. Putting star lock washers on circuit board to cure VFO drift isnt first thing I will ever reach for! They appear to me to be nothing more than a list of one line anecdotal entries submitted by owners and perhaps Kenwood service center bench techs? One line entries with no details, no basis, no explanations are not what I would expect from a factory authorized service bulletin.
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> > > > > > I have worked on probably 30 or so TS520s in a 10 year period. Not an exhaustive number, but enough to know that all but one left my bench with adequate ALC indication on 10 meters. That one would get approx 1/4 scale deflection and was very touchy and owner was in a hurry to get it back. In my experience can typically get at least 1/2

scale deflection with Car Level pot at 1400 to 1500 position. My own personal TS-520 ALC indication on 10 meters is a little bit better than 1/2 scale deflection. It had none when I got it.
> > > > > >
> > > > > > I once had a fellow call me(some how got my home phone) and he was mad as hell. He told me he saw where I responded on some forum just as I am to you and that he had purchased his TS520 new from big west coast dealer and it had no ALC on 10 meters out of the box and he called Kenwood and they told him it was "normal". Now I dont want to call anyone a liar, but I suggested that I doubted he had actually called Kenwood factory design engineer in Japan. If so what did that engineer say was the reason? Would there not have been a discussion and some additional probing questions? I suggested that perhaps he had called the dealer and maybe even talked to a dealer bench tech who said something like " I see that all the time". Very different from a design engineer explaining why it was "normal". I then suggested that had it been me I would have taken the rig back to dealer and told them when they can sell me a new in the box one that has ALC indication
> on all bands I will take it. He was fuming by time conversation ended.
> > > > > >
> > > > > > I closed the conversation this way. The compelling question you need to ask yourself is....."IF ONE OR MORE TS-520 HAVE SOME LEVEL OF ALC INDICATION ON 10 METERS WHY CANNOT ALL"? If later serial number production runs did not have this problem, wouldnt a mod have been issued? I know of no such Kenwood fix.
> > > > > >
> > > > > > Would Ford make a car that the speed-o-meter worked in 1st, 2nd, and 3rd gear, but in 4th gear you had to use some kind of work around to tell how fast your were going (maybe timing mile marker post with your wrist watch)? Would customers really live with that and call it normal? I dont think so.
> > > > > >
> > > > > > Also the manual does not say it is normal. I get that thrown at me. The operating manual clearly states that "Note: If there is no ALC reading indicated, increase the CAR control until there is an ALC reading" There is no disclaimer that follows that says "with the exception of on 10 meters". I think what confuses people is the statement later under the CW loading that says at 200 ma of Ip there may be no ALC indication. Too bad Kenwood had to make that statement, but apparently people were loading rig for max RF output using the RF detector position and for some odd reason then flipping meter back to ALC position instead of back to Ip. Maybe old timers who were use to loading the old Class C CW grid leak bias transmitters? Maybe they thought they needed to check and re-peak grid current? A Class AB1 Kenwood doesnt operate that way. We have essentially no grid current and no reason to keep checking ALC indication in the loading procedure. I
> dont understand it. Kenwood even followed this note by adding a chart that shows the preferred meter positions and it clearly shows that you should use Ip position when loading in CW. At 200 ma you are done and no reason to see if ALC has fallen off.
> > > > > >
> > > > > > There is a reason that you may have no ALC indication in CW Mode at 200 ma Ip and it has to do with degenerative RF feedback, but I wont go into it in this response.
> > > > > >
> > > > > > Sorry so long, but this is not easy subject to cover briefly.
> > > > > >
> > > > > > If you want to work on your no ALC indication on 10 meters start with a fresh 12BY7A and make sure you have spec DC voltages and make sure your cathode resistors are all at design value.
> > > > > >

> > > > > > Then in order to have ALC indication you need two key voltages. Start by checking your 6146 control grid Pin 5 operating DC bias voltage with 60 ma resting plate current. Also measure your RF drive voltage. If one or both of these are not to spec on 10 meters you will have no ALC indication. Need to be able to accurately measure these with a calibrated RF millivolt meter or O-scope. If you have -55vdc operating bias then you will need greater than 55/1.414 = 38.89 rms or 110.4 P-P rf drive volts. At 39 rf volts you will have just barely overcome the DC bias offset. The control grid of the 6146 must go positive on the positive half of the RF drive envelope in order for Ua grid current to flow. If 6146 control grid never goes positive relative to the cathode then there will be no Ua grid current. No Ua grid current means no ALC indication. This is the first place to start.
> > > > > >
> > > > > > Not just my experience. You might contact Jimmy Lamanteer WB2KNR who still operates his original dealer purchased new TS520 as his main rig and collects them and has 8 or 10 at all times and he reports to me that they all have some level of ALC indication on 10 meters.
> > > > > >
> > > > > > Not being critical of you Robert. Just trying to help.
> > > > > > >
> > > > > > 73s Terry K9TW
> > > > > > >
> > > > > > >
> > > > > > > >
> > > > > > According to the TS-520 service bulletins, no ALC indication on 10M is "normal." And that is the way it is with my 520. I assume the 520SE is the same, although there are 520 owners who say they do get ALC on 10M.
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42247. Re: [TS-520_820_530_830] Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-25 20:36:00 UTC
From: Jerry Barr
Topic: 42105 Message: 42247

well i thought they wd produce parsitics and overheat

Jerry KJ6NTL

From: "adrian.langford@..." <adrian@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, May 25, 2013 1:30 PM
Subject: [TS-520_820_530_830] Re: Progress report new 520SE acquisition

Thanks Jerry. I do have a pair of new RCA 6146Bs as spare, but the 6146W are putting out 100+ W on all bands except 10m where I have no alc indication

73 Adrian G4IQW
--- In mailto:TS-520_820_530_830%40yahoogroups.com, Jerry Barr <kj6ntl@...> wrote:
>
> it was my understanding the 6146 w didnt do well in place of the 6146 or the 6146aÂ or is that not correct/ they were very different
>
>
> Jerry KJ6NTL
>
> From: "adrian.langford@..." <adrian@...>
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Saturday, May 25, 2013 9:55 AM
> Subject: [TS-520_820_530_830] Re: Progress report new 520SE acquisition
>
> Â
> I meant to add that to see any ALC, I need rf volts greater than 53.2/1.414=37.6V, so my 36V peak doesn't cut it!
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> >
> > Well I've spent a happy hour probing my 520SE to measure the readings you suggested taking to diagnose my "no ALC on 10m". I can see why I'm not getting any ALC...
> >
> > - On 28MHz I get no ALC, and only 5W indicated on external power meter when I tune the Plate and Load for max output.
> >
> > - Loaded on 28MHz using peak receive noise, I have -84.5vdc cutoff bias in RX at pin 5 control grid
> >
> > - In TX mode I have -53.2vdc operating bias
> >
> > - RF drive voltage (measured with Tektronix 50MHz scope)is 36.0 peak rf volts
> >
> > So using your workings I have 36-53.2 = -17.2V delta in TX mode, whereas I need a

decent positive delta!
> >
> > Please advise on next place to look for why the rf volts are too low (you were getting 60.8V peak rf compared with my 36V).
> >
> > I haven't done any alignment yet as I'm waiting for correct tool to arrive, and don't want to crack any slugs through impatience.
> >
> > Oh while I had the rig open I looked in the finals cage. Was interested to see the original Japanese valves had been replaced at some stage by 6146Ws.
> >
> > 73s from Adrian G4IQW
> >
> > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > >
> > > Here are my readings from my personal TS-520 serial number 040234:
> > >
> > > 1. Full load on 28.500 Mhz = 85 watts output @200 ma into 50 ohm dummy load.
> > > 2. ALC indication is full scale deflection(FSD)ie the needle is far right at "350 ma" with Car Level Pot at position "8" and Drive Control peaked at 1230.
> > > 3. DC bias voltage at 6146 control grid Pin 5 = -85.6vdc cutoff bias in RX mode and -51.4 vdc operating bias in TX mode.
> > > 4. RF drive voltage at 6146 control grid Pin 5 = 43.0 rms volts measured with a Boonton 92E RF millivolt meter.
> > >
> > > 43 x 1.414 = 60.8 peak rf volts
> > > 60.8 - 51.4 vdc bias = 9.4 volts difference. This is reason why I have FSD ALC indication. It is normal to require more Car Level voltage on 10 meters. If unsure just set it Full CW to start with.
> > >
> > > -51.4/1.414 = 36.0 rf volts. You must have greater than 36.0 rf volts at -51.4vdc operating bias to get any ALC indication. The Rf drive signal must make the 6146 control grid positive with respect to the cathode so that ua grid current flows to produce any ALC indication. The greater the delta between dc bias and RF drive voltage on positive swing of the RF envelope the higher the ALC deflection will be.
> > >
> > > So you need to load your rig on 10 meters into dummy load. Since you have no ALC indication use a workaround like peaking the Drive Control on receiver back ground noise or use the Marker. After loading to full load flip the SG switch off and make the RF drive and DC bias voltage measurements on the 6146 control grid as I did above.
> > >
> > > You will need a 3 diode RF probe and VTVM, or an O-scope, or an RF Millivolt meter to make the RF drive measurements.
> > >
> > > Report back the RF output level, the operating bias voltage, and RF drive voltage and based on those I can point you to next place to look.
> > >
> > > Terry
> > > K9TW
> > >
> > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "adrian.langford@" <adrian@>

wrote:
> > > >
> > > > Well I popped in "new" 12BY7A driver.
> > > >
> > > > Rewarded with much healthier ALC on 15m (before had been unstable on that band) but still no ALC whatsoever on 10m. I also used switch cleaner on band switch and worked it in, in case of contact problem on 10m.
> > > >
> > > > Next I will check the grid volatfes and cathode resistors as Terry suggested.
> > > >
> > > > I also wondered if coil alignment may be part of answer so alsomtook off bottom of case.
> > > >
> > > > The bad news is that the nylon hex toool I got on ebay was too big for the cores (have ordered one from Ken K4EAA).
> > > >
> > > > The good news is that I examined all the slugs very carefully under bright light. Only one appears crackdd - the 3.5MHz oscillator coil. So when proper tool arrives I can align rig properly.
> > > >
> > > > 73 Adrian G4IQW
> > > >
> > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> > > > >
> > > > >
> > > > > Many thanks for valuable info Terry.
> > > > >
> > > > > Different views from similarly experienced owners, so what I'll do is test whether a new driver valve - after checking voltages described here - makes any difference to 10m ALC.
> > > > >
> > > > > Plenty of time anyway till 10m shows signs of life!
> > > > >
> > > > > 73 Adrian G4IQW
> > > > >
> > > > >
> > > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > > > > >
> > > > > > Robert:
> > > > > >
> > > > > > I will probably regret wading in to this pond!
> > > > > >
> > > > > > I do not doubt that you have no ALC indication on 10 meters on your TS-520. In my experience it is "common", but not "normal". I would also be very careful citing and observing any of these "service bulletins". I am very skeptical of most of these as some are just flat wrong. Putting star lock washers on circuit board to cure VFO drift isnt first thing I will ever reach for! They appear to me to be nothing more than a list of one line anecdotal entries submitted by owners and perhaps Kenwood service center bench techs? One line entries with no details, no basis, no explanations are not what I would expect

from a factory authorized service bulletin.
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> > > > > > I have worked on probably 30 or so TS520s in a 10 year period. Not an exhaustive number, but enough to know that all but one left my bench with adequate ALC indication on 10 meters. That one would get approx 1/4 scale deflection and was very touchy and owner was in a hurry to get it back. In my experience can typically get at least 1/2 scale deflection with Car Level pot at 1400 to 1500 position. My own personal TS-520 ALC indication on 10 meters is a little bit better than 1/2 scale deflection. It had none when I got it.
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> > > > > > I once had a fellow call me(some how got my home phone) and he was mad as hell. He told me he saw where I responded on some forum just as I am to you and that he had purchased his TS520 new from big west coast dealer and it had no ALC on 10 meters out of the box and he called Kenwood and they told him it was "normal". Now I dont want to call anyone a liar, but I suggested that I doubted he had actually called Kenwood factory design engineer in Japan. If so what did that engineer say was the reason? Would there not have been a discussion and some additional probing questions? I suggested that perhaps he had called the dealer and maybe even talked to a dealer bench tech who said something like " I see that all the time". Very different from a design engineer explaining why it was "normal". I then suggested that had it been me I would have taken the rig back to dealer and told them when they can sell me a new in the box one that has ALC
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> on all bands I will take it. He was fuming by time conversation ended.
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> > > > > > I closed the conversation this way. The compelling question you need to ask yourself is....."IF ONE OR MORE TS-520 HAVE SOME LEVEL OF ALC INDICATION ON 10 METERS WHY CANNOT ALL"? If later serial number production runs did not have this problem, wouldnt a mod have been issued? I know of no such Kenwood fix.
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> > > > > > Would Ford make a car that the speed-o-meter worked in 1st, 2nd, and 3rd gear, but in 4th gear you had to use some kind of work around to tell how fast your were going (maybe timing mile marker post with your wrist watch)? Would customers really live with that and call it normal? I dont think so.
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> > > > > > Also the manual does not say it is normal. I get that thrown at me. The operating manual clearly states that "Note: If there is no ALC reading indicated, increase the CAR control until there is an ALC reading" There is no disclaimer that follows that says "with the exception of on 10 meters". I think what confuses people is the statement later under the CW loading that says at 200 ma of Ip there may be no ALC indication. Too bad Kenwood had to make that statement, but apparently people were loading rig for max RF output using the RF detector position and for some odd reason then flipping meter back to ALC position instead of back to Ip. Maybe old timers who were use to loading the old Class C CW grid leak bias transmitters? Maybe they thought they needed to check and re-peak grid current? A Class AB1 Kenwood doesnt operate that way. We have essentially no grid current and no reason to keep checking ALC indication in the loading procedure. I
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> > > > > > There is a reason that you may have no ALC indication in CW Mode at 200 ma Ip and it has to do with degenerative RF feedback, but I wont go into it in this response.

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> > > > > > Sorry so long, but this is not easy subject to cover briefly.
> > > > > >
> > > > > > If you want to work on your no ALC indication on 10 meters start with a fresh 12BY7A and make sure you have spec DC voltages and make sure your cathode resistors are all at design value.
> > > > > >
> > > > > > Then in order to have ALC indication you need two key voltages. Start by checking your 6146 control grid Pin 5 operating DC bias voltage with 60 ma resting plate current. Also measure your RF drive voltage. If one or both of these are not to spec on 10 meters you will have no ALC indication. Need to be able to accurately measure these with a calibrated RF millivolt meter or O-scope. If you have -55vdc operating bias then you will need greater than 55/1.414 = 38.89 rms or 110.4 P-P rf drive volts. At 39 rf volts you will have just barely overcome the DC bias offset. The control grid of the 6146 must go positive on the positive half of the RF drive envelope in order for Ua grid current to flow. If 6146 control grid never goes positive relative to the cathode then there will be no Ua grid current. No Ua grid current means no ALC indication. This is the first place to start.
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> > > > > > Not just my experience. You might contact Jimmy Lamanteer WB2KNR who still operates his original dealer purchased new TS520 as his main rig and collects them and has 8 or 10 at all times and he reports to me that they all have some level of ALC indication on 10 meters.
> > > > > >
> > > > > > Not being critical of you Robert. Just trying to help.
> > > > > >
> > > > > > 73s Terry K9TW
> > > > > >
> > > > > >
> > > > > > > >
> > > > > > > According to the TS-520 service bulletins, no ALC indication on 10M is "normal." And that is the way it is with my 520. I assume the 520SE is the same, although there are 520 owners who say they do get ALC on 10M.
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42248. Questions about antenna tuners for the kenwood 520 SE

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-25 21:53:33 UTC
From: k4nes86
Topic: 42248 Message: 42248

I am looking on ebay for an antenna tuner for this radio and have found various older kenwood tuners. Will the at-230 work with the 520SE?

42249. Re: Questions about antenna tuners for the kenwood 520 SE

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-25 22:13:44 UTC
From: Bob
Topic: 42248 Message: 42249

I use the Dentron Supper Tuner, large knobs & easy to tune... :)
You can pick one up for around $125
Bob
****

--- In TS-520_820_530_830@yahoogroups.com, "k4nes86" <k4nes86@...> wrote:
>
> I am looking on ebay for an antenna tuner for this radio and have found various older kenwood tuners. Will the at-230 work with the 520SE?
>

42250. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-25 22:18:42 UTC
From: adrian.langford@ymail.com
Topic: 42105 Message: 42250

Hi Terry,

Thanks for all your help with this! I took all the readings below loaded for 28MHz, and with SG switch off but a dummy load attached.

At MD I got 6.4V p-to-p. By the way the waveform looked very "messy" here (fuzzy, badly defined peaks, like lots of faint AC waves superposed on each other), though it's very clean at the pin 5 Control Grid. Is that normal?

At DP I got a lot less than 160V p-p, measured 66V p-p then tried re-peaking the drive and could get it to 80V p-p, still way below your value and the 49V rms shown on the TX level diagram.

TP3 showed 1.4V p-p.

So I'm puzzled by a) the messy waveforms and b) the low DP reading. I dropped in a new 12BY7A just the other day and am getting 100W on other bands. What else can take DP low?

I haven't tried adjusting the Het Osc coil as I won't have the correct tool for a few days.

At least I am learning my way round the various test points! It's superbly arranged for DIY maintenance.

73 Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> If you have good RF drive at output of the Transmit Mixer then look at the output at the Plate of the Driver Tube @DP on RF board. Just be aware you have 300 vdc here. Make sure you Scope probe and vertical amp can handle that level DC. Should have approx 160 v P-P.
>
> Sometimes you may have to re-peak the Drive control depending on what instrument you are using to measure RF drive levels with as it can de-tune the tank circuits and cause a lower reading.
>
> To keep from long responses I will wait to tell you where to look next based on your findings at MD and DP.
>
> Terry K9TW
>

42251. Re: Questions about antenna tuners for the kenwood 520 SE

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-25 22:22:51 UTC
From: adrian.langford@ymail.com
Topic: 42248 Message: 42251

The AT-230 will be fine. I use an AT-130 (only one antenna input and just a cheap level type meter for dipping the controls, and no built-in dummy load. But it can handle the power and like all Kenwood stuff of this vintage is superbly built.

Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "k4nes86" <k4nes86@...> wrote:
>
> I am looking on ebay for an antenna tuner for this radio and have found various older kenwood tuners. Will the at-230 work with the 520SE?
>

42252. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-25 22:34:48 UTC
From: adrian.langford@ymail.com
Topic: 42105 Message: 42252

Correction the Het Osc on 28MHz was 2.5V p-p

Interestingly on 21MHz and 14MHz the Het Osc output was higher at 3.5V p-p.

73 Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@..." <adrian@...> wrote:
>
> Hi Terry,
>
> Thanks for all your help with this! I took all the readings below loaded for 28MHz, and with SG switch off but a dummy load attached.
>
> At MD I got 6.4V p-to-p. By the way the waveform looked very "messy" here (fuzzy, badly defined peaks, like lots of faint AC waves superposed on each other), though it's very clean at the pin 5 Control Grid. Is that normal?
>
> At DP I got a lot less than 160V p-p, measured 66V p-p then tried re-peaking the drive and could get it to 80V p-p, still way below your value and the 49V rms shown on the TX level diagram.
>
> TP3 showed 1.4V p-p.
>
> So I'm puzzled by a) the messy waveforms and b) the low DP reading. I dropped in a new 12BY7A just the other day and am getting 100W on other bands. What else can take DP low?
>
> I haven't tried adjusting the Het Osc coil as I won't have the correct tool for a few days.
>
> At least I am learning my way round the various test points! It's superbly arranged for DIY maintenance.
>
> 73 Adrian G4IQW
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > If you have good RF drive at output of the Transmit Mixer then look at the output at the Plate of the Driver Tube @DP on RF board. Just be aware you have 300 vdc here. Make sure you Scope probe and vertical amp can handle that level DC. Should have approx 160 v P-P.
> >
> > Sometimes you may have to re-peak the Drive control depending on what instrument you are using to measure RF drive levels with as it can de-tune the tank circuits and cause a lower reading.
> >
> > To keep from long responses I will wait to tell you where to look next based on your

findings at MD and DP.
> >
> > Terry K9TW
> >
>

42253. Re: [TS-520_820_530_830] Questions about antenna tuners for the kenwood 520 SE

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-25 23:47:41 UTC
From: KB1TCD
Topic: 42248 Message: 42253

I use no antenna tuner, if the swr is within 3 to 1, the radio serves as
a built in antenna tuner if you follow
the radio's tuning instructions.
Been working this way for years without a problem.
The only thing a tuner does is fake out the radio anyway to make it
think it's getting good swr and not blow the finals.

Just my 2 cents worth...let's see, if you factor in inflation that would
be what? two dollars???

73 de Jose Douglas - KB1TCD

42254. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-26 00:02:00 UTC
From: Terry Wagoner
Topic: 42105 Message: 42254

Adrian: You are doing well. I enjoy helping someone who is able to take some basic readings.

First of all 6146W finals are just fine for any hybrid. I run them all the time. They neutralize fine. When I cannot get 6146Bs my 2nd choice is Sylvania (JAN) 6146Ws from RF Parts. I have a pair in my TS-830 right now and easily get 100 watts out on all bands.

OK MD level is good at 6.4v P-P. Normally TIF is dirty (harmonic rich) due to Het or VCO leak back. MD is as I mentioned the actual transmit output frequency and it may be a little dirty (some 2nd harmonic), but not anything like TIF signal unless there is a problem with your TX Mixer. Scope can have problem syncing on TIF. Take a look at it for interest. I have covers on my 520 now, but may take them off and take a look at MD but pretty sure not normally harmonic rich.

Kenwood went to the Doubly Balanced Mixer config (uses two Mosfets) with the introduction of the 820 and retained it in the 530 and 830. This is superior mixer config as has very little to no Carrier or TIF signal present in the output. The 530s and 830s have a balance pot to ensure you can null the 2nd harmonic content (17.660 mhz).

Het Osc level is a little low but not bad. Might want to tweak it when you get your tuning tool. Het board hangs below the rf board on bottom side of your rig. It is the first board nearest front panel and you can see a picture of it in your owners manual and the 28 mhz coil.

The low rf drive level at DP is not a good sign. Especially given that you have a fresh 12BY7A and it works good on 14 and 21 mhz bands. This tells you that all the tube DC voltages are to spec. The important ones are the operating bias on control grid (just slightly positive) and the SG voltage when flipped to Send. These voltages have to be good, but you can measure them if you want. They are not band specific so if good on 14 and 21 then have to be there for 10 meters.

If you are telling me that you have no ALC indication and very low RF output on 10 meters it smells like bandswitch problem to me. The Driver tube plate must see a tuned circuit that is switched in. Absent that parallel resonant tuned circuit the rf voltage will be low.

On 10 meters no fixed capacitor is across the 10 meter Drive coil. They use the tubes inter-electrode capacitance and the parasitic capacitance of the foil traces and band switch traces to tune that coil to resonance.

Most likely problem is that you either have bad 10 meter drive coil or bad 10 meter band switch position. I have never seen a bad coil unless it was a physically damaged one. Hopefully it is just a severely mis-tuned 10 meter drive coil?

Terry K9TW

42255. Re: [TS-520_820_530_830] Re: TS820 MODDED

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-26 00:25:06 UTC
From: JIM LYNCH
Topic: 42228 Message: 42255

Taking your advise and getting another PA cage.The hot tube turned out to be a bad tube.Put in a spare and now it's not scaring the crap out of me, of course I'm still full of crap, my wife says so.

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, May 25, 2013 3:53 AM
Subject: [TS-520_820_530_830] Re: TS820 MODDED

Jim: Continuity as you know doesnt tell you much about L1 or any choke. Need inductance bridge to measure it. In the 520s thru 820s it is approx 3.0uhy. In the 530 and 830 it was increased to 6.8uhy.

Is the value critical? I would not go much above 6.8uhy. I have seen some with 4.7uhy installed. It is there primarily for VHF parasitic suppression, but it also facilitates 160 meter operation by supplying additional inductance for adequate Xl on 160 meters. That is why it is in series and at a right angle to reduce mutual coupling with main choke winding. It is very difficult to make an effective solenoid wound choke to cover the wide frequency range without having series holes fall into ham bands. So instead of using space windings on the big choke and adding this additional inductance value that would have made it too tall physically for the PA cage Kenwood added the small choke at the base.

My advice is to buy a PA cage rebuild kit from K4EAA or HybridRestore.
Good idea to replace the bypass cap even if it doesnt appear to be physically damaged. Has had lots of hours of use and is in pretty severe duty application.

What do you mean gets HOT with SG on? Are you talking heat from the 6146 finals? If so, what is the resting plate current doing? If rig isnt keyed should be no plate current or additional heat anywhere when you turn on the SG switch.

Also, what board has discolored foil side and dark colored BIG resistors? Are you talking about the Final Board with the two 10 ohm Brwn-Blk-Blk Cathode meter shunt resistors? If so, I would replace these resistors if they appear overheated. You can measure across them and should be approx 5.0 ohms but common to read approx 5.5 ohms or so. If much higher than that I would replace them. The two sources I mentioned above sell a kit for couple of bucks that has the cathode and screen grid resistors. Mouser and many other suppliers also sell resistors.

Of course with your VOM broken you will need to buy a meter. If I was to buy only one meter it would be a old Heath VTVM analog like a IM-11 or IM-18. If can afford two meters then get a low cost DMM for dc voltage and resistance measurements and the VTVM for rf and alignment work.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, JIM LYNCH <lynchjl@...> wrote:
>
> Terry: I have a discolored L1 choke as you described below.Continuity checks OK but can't tell if its shorted.Cap seems ok. This monster will get hot as heck if I turn SG on.The foil side looks like it has been hot, the big resistors are dark colored but ohm out all right. Any way to check the L1 choke without getting the soldering gun out? Thanks for all the info, I'm brand new into component levels and just got a Tectronics 2213. Sad to say my Tripplet VOM has seen better days so looking for something to take it's place.   jim
>
>
>
> _____
> From: Terry Wagoner <wagstw46@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Friday, May 24, 2013 8:46 AM
> Subject: [TS-520_820_530_830] Re: TS820 MODDED
>
>
> Rob:
>
> If you are lucky all they did was change the Het Osc xtal for the 28 mhz bandswitch position. Do the other 10 meter bandswitch positions still work on 10 meters? If so, then most likely thing to look for is Crystal X7 33.5 mhz on the PD board was replaced with a 32.5 mhz crystal. Can buy a new replacement from International Crystal.
> You may have to do re-alignment after replacing the crystal.
>
> I would also do a visual inspection of the PA cage and rectifier board. Sometimes these fellows also QRO or badly abuse the rig. There are several things they can do for QRO, but most common is to move 300 to 210A or PD2 to increase screen grid voltage. Sometimes they short out R6 470 ohm on Rect Board with a jumper wire or install a 47 ohm in its place.
>
> Take a good look at the main plate choke L3 in the PA cage to make sure not darkened (sometimes burned black). Also look at small right angle choke L1 at base of main choke for discoloration and look at the bypass cap C2. I have seen it burned and split open.
>
> Make sure rig is unplugged and HV filter caps discharged before you poke around inside the PA cage or Rectifier Board.
>
> Terry K9TW
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Rob" <barnardbaca@> wrote:
> >
> > Hola group:
> >
> > A fellow here in Guadalajara gave me a TS820S as it was lying around in his shop (T.V. repairman). The radio was modded for the Chicken Band. I want to "un-mod" it. Please turn me on to the appropriate links and procedures.
> >
> > thanks much and 73
> >

> > Roberto
> > XE1GXG WB7AVF
> >
>
>
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>
> ------------------------------------
>
> Yahoo! Groups Links
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> [Non-text portions of this message have been removed]
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Yahoo! Groups Links

[Non-text portions of this message have been removed]

42256. Re: [TS-520_820_530_830] Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-26 00:29:03 UTC
From: Wes Will
Topic: 42105 Message: 42256

On 05/25/2013 07:02 PM, Terry Wagoner wrote:
> Adrian: You are doing well. I enjoy helping someone who is able to take
> some basic readings.

Terry, when I get the rectifier board back in this thing (one is now on order, thanks to Bob, KE5FTF) do you mind if I pick your brains like this? I'm SURE that the short in the high voltage lines had to cause something else to go south in this poor rig, and watching you talk Adrian through this was a lesson in itself.

(I had a thought near the beginning of the thread, about the band switch. Has it been checked over and thoroughly cleaned? Might be all that's needed to get 10M back up to snuff.)

I can assure you I'm an old hand at taking measurements and reading schematics, so I won't disappoint there. Knowing that there could be some assistance if needed would be great.

Could be that a pointer to the troubleshooting and test-point voltages will be enough. I take it that it is somewhere in the files for this list?

There is always the chance that there is nothing wrong with this thing, once it gets the juice it is expecting, but I'm not going to count on it.

--
Wes Will
N9KDY

42257. Re: [TS-520_820_530_830] Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-26 01:20:44 UTC
From: Jerry Barr
Topic: 42105 Message: 42257

hi Terry/ hmmm i think i just read an article hear on this group said the 6146w wudnt work in place of the 6146/ if it does then it makes it easier to replace my finals when i need to/ thanksand nthat is in a ts 520se

Jerry KJ6NTL

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, May 25, 2013 5:02 PM
Subject: [TS-520_820_530_830] Re: Progress report new 520SE acquisition

Adrian: You are doing well. I enjoy helping someone who is able to take some basic readings.

First of all 6146W finals are just fine for any hybrid. I run them all the time. They neutralize fine. When I cannot get 6146Bs my 2nd choice is Sylvania (JAN) 6146Ws from RF Parts. I have a pair in my TS-830 right now and easily get 100 watts out on all bands.

OK MD level is good at 6.4v P-P. Normally TIF is dirty (harmonic rich) due to Het or VCO leak back. MD is as I mentioned the actual transmit output frequency and it may be a little dirty (some 2nd harmonic), but not anything like TIF signal unless there is a problem with your TX Mixer. Scope can have problem syncing on TIF. Take a look at it for interest. I have covers on my 520 now, but may take them off and take a look at MD but pretty sure not normally harmonic rich.

Kenwood went to the Doubly Balanced Mixer config (uses two Mosfets) with the introduction of the 820 and retained it in the 530 and 830. This is superior mixer config as has very little to no Carrier or TIF signal present in the output. The 530s and 830s have a balance pot to ensure you can null the 2nd harmonic content (17.660 mhz).

Het Osc level is a little low but not bad. Might want to tweak it when you get your tuning tool. Het board hangs below the rf board on bottom side of your rig. It is the first board nearest front panel and you can see a picture of it in your owners manual and the 28 mhz coil.

The low rf drive level at DP is not a good sign. Especially given that you have a fresh 12BY7A and it works good on 14 and 21 mhz bands. This tells you that all the tube DC voltages are to spec. The important ones are the operating bias on control grid (just slightly positive) and the SG voltage when flipped to Send. These voltages have to be good, but you can measure them if you want. They are not band specific so if good on 14 and 21 then have to be there for 10 meters.

If you are telling me that you have no ALC indication and very low RF output on 10 meters it smells like bandswitch problem to me. The Driver tube plate must see a tuned circuit that is switched in. Absent that parallel resonant tuned circuit the rf voltage will be low.

On 10 meters no fixed capacitor is across the 10 meter Drive coil. They use the tubes inter-electrode capacitance and the parasitic capacitance of the foil traces and band switch traces to tune that coil to resonance.

Most likely problem is that you either have bad 10 meter drive coil or bad 10 meter band switch position. I have never seen a bad coil unless it was a physically damaged one. Hopefully it is just a severely mis-tuned 10 meter drive coil?

Terry K9TW

[Non-text portions of this message have been removed]

42258. Re: [TS-520_820_530_830] Re: Erratic IP on TS-530S during tune up

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-26 01:23:53 UTC
From: Louis Wilen
Topic: 42052 Message: 42258

Terry,

I just wanted to follow up on the Q&A below. I finally got a high quality dummy load and used it instead of the dummy load in the MFJ tuner. That seems to have corrected the problem. The erratic IP during tune up is gone.

When I measure the dummy load in the MFJ tuner, it’s 49 ohms, but as we all know, it’s one thing to pass a tiny amount of DC current through a carbon rod and quite another to pump 120 watts of RF thought it.

Thanks again for your help.

Louis

From: Terry Wagoner
Sent: Thursday, May 09, 2013 6:26 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Erratic IP on TS-530S during tune up

Yes I did not say anything about the external load coming and going.

Good idea to check dummy load and any coax jumpers PL-259 connectors from rig to dummy load (any cable/connection combination from rig to the dummy load). Do that before anything in the rig. On rare occasions the lead at the SO-239 inside the pa cage can have a poor solder connection. Also the Antenna T/R relay NO contacts could be dirty.

Should have told you to look at external load stuff first. Pulled the trigger too quick. Sorry about that.

Terry K9TW

--- In mailto:TS-520_820_530_830%40yahoogroups.com, "Louis Wilen" <louis.wilen@...> wrote:
>
> Terry:
>
> Thanks for the quick reply.
>
> Please see my answers below.
>
>
> From: Terry Wagoner
> Sent: Wednesday, May 08, 2013 9:29 PM
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Subject: [TS-520_820_530_830] Re: Erratic IP on TS-530S during tune up
>
>
>

> Louis:
>
> When you set the resting plate current by adjusting the bias voltage pot on rear of rig is the plate current steady then?
>
> Yes, perfectly steady at 60 ma on CW or 50 ma on USB/LSB.
>
>
>
> Also, do you hear any arcing or frying sounds from the PA cage when the IP is jumping around?
>
> No arcing or frying sounds whatsoever. (I am familiar with what you are talking about, as I've heard those sounds from my transmatch when I try to load up too short of a wire on 160 M -- which is not something that I normally do.) By the way, I'm tuning up into a 50 ohm dummy load.
>
>
>
>
> You can measure and monitor the operating bias voltage and the Screen Grid voltage at the 6146 tube socket pins as you load the rig to make sure neither one of those voltages are moving around. Both should be stable key down.
>
> Be very careful monitoring these voltage. Personal safety issue from inadvertent contact and dont want any arc or sparks.
>
> I'll check that out if the deoxit fix that you suggest below doesn't cure the problem. I have the right equipment to measure these voltages, but I avoid that area whenever possible.
>
>
>
> If resting plate current is stable then bias pot is probably clean and not the problem. If operating bias and Screen grid voltages are stable then I would open up the PA cage and visually inspect the Plate choke and bypass capacitor at its base for signs of overheating/discoloration. While there I would clean the rotor shaft wiper contacts on both the tank capacitor and load capacitor with De-oxit and blow off residual with canned air.
>
> The Plate choke and bypass capacitor look like new. I'll clean the rotor shaft wiper contacts and load cap as your suggested.
>
>
>
> Lastly could be a dirty contact on the 4PDT flat pack Aux relay on the IF board. I have not had much success cleaning this relay. I would suggest replacing it.
>
> Thanks for the tips. Actually, I think that I'll try a different dummy load, too. It's the dummy load built into an ancient MFJ-949B tuner. Might as well eliminate that as a possible cause of the problem.

>
>
> Louis
>
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Louis Wilen" <louis.wilen@> wrote:
> >
> > I have a TS-530S, original owner, never been serviced by anyone except myself, and the only service that I've done is occasional cleaning with compressed air, tightening PCB screws, and re-centering the RIT. Also changed the driver tube about 15 years ago.
> >
> > During operation (except as explained below), everything works fine, acts fine, output power is about 120W CW, HV is 900V, idle IP is set correctly and is stable, and it checks out good on all tests that Ken (K4EAA) suggests in his "Tech question mailbag." For what it's worth, I checked the ESR of the large power supply capacitors and it was well under 1 ohm.
> >
> > But it has one problem that has developed recently. During initial tune-up after power on, the IP jumps around erratically while adjusting the plate control. It dips but it jerks around, not a smooth dip. It settles down and acts normal after a keying and adjusting the plate control several times, and then the rig tunes up fine. If I tune up again on the same band or a different band, it tunes up fine without acting erratic. But if go away and come back another day, the erratic IP during tune up comes back.
> >
> > Any ideas?
> >
> > Louis
> > W3LMW
> >
>
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>
> [Non-text portions of this message have been removed]
>

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.3272 / Virus Database: 3162/6309 - Release Date: 05/08/13

[Non-text portions of this message have been removed]

42259. Re: [TS-520_820_530_830] Re: Erratic IP on TS-530S during tune up

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-26 01:34:42 UTC
From: Louis Wilen
Topic: 42052 Message: 42259

fixed typo.

From: Louis Wilen
Sent: Saturday, May 25, 2013 9:23 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: Erratic IP on TS-530S during tune up

Terry,

I just wanted to follow up on the Q&A below. I finally got a high quality dummy load and used it instead of the dummy load in the MFJ tuner. That seems to have corrected the problem. The erratic IP during tune up is gone.

When I measure the dummy load in the MFJ tuner, it’s 49 ohms, but as we all know, it’s one thing to pass a tiny amount of DC current through a carbon rod and quite another to pump 120 watts of RF through it.

Thanks again for your help.

Louis

From: Terry Wagoner
Sent: Thursday, May 09, 2013 6:26 AM
To: mailto:TS-520_820_530_830%40yahoogroups.com
Subject: [TS-520_820_530_830] Re: Erratic IP on TS-530S during tune up

Yes I did not say anything about the external load coming and going.

Good idea to check dummy load and any coax jumpers PL-259 connectors from rig to dummy load (any cable/connection combination from rig to the dummy load). Do that before anything in the rig. On rare occasions the lead at the SO-239 inside the pa cage can have a poor solder connection. Also the Antenna T/R relay NO contacts could be dirty.

Should have told you to look at external load stuff first. Pulled the trigger too quick. Sorry about that.

Terry K9TW

--- In mailto:TS-520_820_530_830%40yahoogroups.com, "Louis Wilen" <louis.wilen@...> wrote:
>
> Terry:
>
> Thanks for the quick reply.
>
> Please see my answers below.
>
>
> From: Terry Wagoner

> Sent: Wednesday, May 08, 2013 9:29 PM
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Subject: [TS-520_820_530_830] Re: Erratic IP on TS-530S during tune up
>
>
>
> Louis:
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> When you set the resting plate current by adjusting the bias voltage pot on rear of rig is the plate current steady then?
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> Yes, perfectly steady at 60 ma on CW or 50 ma on USB/LSB.
>
>
>
> Also, do you hear any arcing or frying sounds from the PA cage when the IP is jumping around?
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> No arcing or frying sounds whatsoever. (I am familiar with what you are talking about, as I've heard those sounds from my transmatch when I try to load up too short of a wire on 160 M -- which is not something that I normally do.) By the way, I'm tuning up into a 50 ohm dummy load.
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>
>
>

> Lastly could be a dirty contact on the 4PDT flat pack Aux relay on the IF board. I have not had much success cleaning this relay. I would suggest replacing it.
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>
>
> Louis
>
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Louis Wilen" <louis.wilen@> wrote:
> >
> > I have a TS-530S, original owner, never been serviced by anyone except myself, and the only service that I've done is occasional cleaning with compressed air, tightening PCB screws, and re-centering the RIT. Also changed the driver tube about 15 years ago.
> >
> > During operation (except as explained below), everything works fine, acts fine, output power is about 120W CW, HV is 900V, idle IP is set correctly and is stable, and it checks out good on all tests that Ken (K4EAA) suggests in his "Tech question mailbag." For what it's worth, I checked the ESR of the large power supply capacitors and it was well under 1 ohm.
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> > But it has one problem that has developed recently. During initial tune-up after power on, the IP jumps around erratically while adjusting the plate control. It dips but it jerks around, not a smooth dip. It settles down and acts normal after a keying and adjusting the plate control several times, and then the rig tunes up fine. If I tune up again on the same band or a different band, it tunes up fine without acting erratic. But if go away and come back another day, the erratic IP during tune up comes back.
> >
> > Any ideas?
> >
> > Louis
> > W3LMW
> >
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>
> [Non-text portions of this message have been removed]
>

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.3272 / Virus Database: 3162/6309 - Release Date: 05/08/13

[Non-text portions of this message have been removed]

No virus found in this message.
Checked by AVG - www.avg.com

Version: 2013.0.3343 / Virus Database: 3184/6356 - Release Date: 05/25/13

[Non-text portions of this message have been removed]

42260. Re: [TS-520_820_530_830] Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-26 02:33:13 UTC
From: Jerry Barr
Topic: 42105 Message: 42260

hi Terry! I guess i wasnt asking my Q right/ ihave a ts520se/ and i understood the 6146 finals and the 6146a worked fine / but the 6146b and 6146w caused parisetic oscillations or cud not be neutralized or did i just misunderstand the article/ can i use a a,b or w in the finals that of course being the suffix

Jerry KJ6NTL

From: Wes Will <wwill@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, May 25, 2013 5:29 PM
Subject: Re: [TS-520_820_530_830] Re: Progress report new 520SE acquisition

On 05/25/2013 07:02 PM, Terry Wagoner wrote:
> Adrian: You are doing well. I enjoy helping someone who is able to take
> some basic readings.

Terry, when I get the rectifier board back in this thing (one is now on order, thanks to Bob, KE5FTF) do you mind if I pick your brains like this? I'm SURE that the short in the high voltage lines had to cause something else to go south in this poor rig, and watching you talk Adrian through this was a lesson in itself.

(I had a thought near the beginning of the thread, about the band switch. Has it been checked over and thoroughly cleaned? Might be all that's needed to get 10M back up to snuff.)

I can assure you I'm an old hand at taking measurements and reading schematics, so I won't disappoint there. Knowing that there could be some assistance if needed would be great.

Could be that a pointer to the troubleshooting and test-point voltages will be enough. I take it that it is somewhere in the files for this list?

There is always the chance that there is nothing wrong with this thing, once it gets the juice it is expecting, but I'm not going to count on it.

--
Wes Will
N9KDY

[Non-text portions of this message have been removed]

42261. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-26 02:56:32 UTC
From: Terry Wagoner
Topic: 42105 Message: 42261

Wes: My rigs are all starting to blur together. Trying to help too many folks at one time. When you are ready just come back and refresh all of us with what the original problem is or was and where you are at with it. One of us will be glad to help you. In addition to looking in the Files section you can use the Advanced Search and put key words in related to your question. It is not the best, but I try to do that before asking. Not too many questions that have not been answered before.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Wes Will <wwill@...> wrote:
>
> On 05/25/2013 07:02 PM, Terry Wagoner wrote:
> > Adrian: You are doing well. I enjoy helping someone who is able to take
> > some basic readings.
>
> Terry, when I get the rectifier board back in this thing (one is now on
> order, thanks to Bob, KE5FTF) do you mind if I pick your brains like
> this? I'm SURE that the short in the high voltage lines had to cause
> something else to go south in this poor rig, and watching you talk
> Adrian through this was a lesson in itself.
>
> (I had a thought near the beginning of the thread, about the band
> switch. Has it been checked over and thoroughly cleaned? Might be all
> that's needed to get 10M back up to snuff.)
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> I can assure you I'm an old hand at taking measurements and reading
> schematics, so I won't disappoint there. Knowing that there could be
> some assistance if needed would be great.
>
> Could be that a pointer to the troubleshooting and test-point voltages
> will be enough. I take it that it is somewhere in the files for this list?
>
> There is always the chance that there is nothing wrong with this thing,
> once it gets the juice it is expecting, but I'm not going to count on it.
>
> --
> Wes Will
> N9KDY
>

42262. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-26 03:07:38 UTC
From: Terry Wagoner
Topic: 42105 Message: 42262

I have never seen a Hybrid with a plain 6146 in it. Some claim that the slight difference in the inter-electrode capacitance between the various 6146 tubes causes problems with neutralization or for neutralization not to "hold". K9STH has written extensively about this and is quite passionate about it. I have never seen a problem with it in a hybrid and I do not subscribe to neutralization drifting or not holding. If neutralization is drifting in a hybrid I would suspect a loose neutralization capacitor rather than the tube capacitance changing. Just have never seen it.

I think the orginal hybrids came with S2001 and S2001A tubes. I think the S2001A has more plate dissipation and are equivalent to a 6146B, but do not know for sure as I have never seen a S2001 or S2001A factory data sheet.

I do not believe that the slight difference in inter-electrode capacitance makes any difference at all. I would just not mix 6146 tubes with different suffixes.

Just my opinion and experience.

This has been covered here many times before.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Jerry Barr <kj6ntl@...> wrote:
>
> hi Terry/ hmmm i think i just read an article hear on this group said the 6146w wudnt work in place of the 6146/ if it does then it makes it easier to replace my finals when i need to/ thanksand nthat is in a ts 520se
>
>
> Jerry KJ6NTL
>
> From: Terry Wagoner <wagstw46@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Saturday, May 25, 2013 5:02 PM
> Subject: [TS-520_820_530_830] Re: Progress report new 520SE acquisition
>
> Â
> Adrian: You are doing well. I enjoy helping someone who is able to take some basic readings.
>
> First of all 6146W finals are just fine for any hybrid. I run them all the time. They neutralize fine. When I cannot get 6146Bs my 2nd choice is Sylvania (JAN) 6146Ws from RF Parts. I have a pair in my TS-830 right now and easily get 100 watts out on all bands.
>
> OK MD level is good at 6.4v P-P. Normally TIF is dirty (harmonic rich) due to Het or VCO leak back. MD is as I mentioned the actual transmit output frequency and it may be a little dirty (some 2nd harmonic), but not anything like TIF signal unless there is a problem with

your TX Mixer. Scope can have problem syncing on TIF. Take a look at it for interest. I have covers on my 520 now, but may take them off and take a look at MD but pretty sure not normally harmonic rich.
>
> Kenwood went to the Doubly Balanced Mixer config (uses two Mosfets) with the introduction of the 820 and retained it in the 530 and 830. This is superior mixer config as has very little to no Carrier or TIF signal present in the output. The 530s and 830s have a balance pot to ensure you can null the 2nd harmonic content (17.660 mhz).
>
> Het Osc level is a little low but not bad. Might want to tweak it when you get your tuning tool. Het board hangs below the rf board on bottom side of your rig. It is the first board nearest front panel and you can see a picture of it in your owners manual and the 28 mhz coil.
>
> The low rf drive level at DP is not a good sign. Especially given that you have a fresh 12BY7A and it works good on 14 and 21 mhz bands. This tells you that all the tube DC voltages are to spec. The important ones are the operating bias on control grid (just slightly positive) and the SG voltage when flipped to Send. These voltages have to be good, but you can measure them if you want. They are not band specific so if good on 14 and 21 then have to be there for 10 meters.
>
> If you are telling me that you have no ALC indication and very low RF output on 10 meters it smells like bandswitch problem to me. The Driver tube plate must see a tuned circuit that is switched in. Absent that parallel resonant tuned circuit the rf voltage will be low.
>
> On 10 meters no fixed capacitor is across the 10 meter Drive coil. They use the tubes inter-electrode capacitance and the parasitic capacitance of the foil traces and band switch traces to tune that coil to resonance.
>
> Most likely problem is that you either have bad 10 meter drive coil or bad 10 meter band switch position. I have never seen a bad coil unless it was a physically damaged one. Hopefully it is just a severely mis-tuned 10 meter drive coil?
>
> Terry K9TW
>
>
>
>
> [Non-text portions of this message have been removed]
>

42263. Re: Erratic IP on TS-530S during tune up

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-26 03:09:30 UTC
From: Terry Wagoner
Topic: 42052 Message: 42263

Louis: Thanks for the closure. Wish all would do that. Helps us all learn. Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Louis Wilen" <louis.wilen@...> wrote:
>
> Terry,
>
> I just wanted to follow up on the Q&A below. I finally got a high quality dummy load and used it instead of the dummy load in the MFJ tuner. That seems to have corrected the problem. The erratic IP during tune up is gone.
>
> When I measure the dummy load in the MFJ tuner, itâ☐☐s 49 ohms, but as we all know, itâ☐☐s one thing to pass a tiny amount of DC current through a carbon rod and quite another to pump 120 watts of RF thought it.
>
> Thanks again for your help.
>
> Louis
>
> From: Terry Wagoner
> Sent: Thursday, May 09, 2013 6:26 AM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: Erratic IP on TS-530S during tune up
>
>
> Yes I did not say anything about the external load coming and going.
>
> Good idea to check dummy load and any coax jumpers PL-259 connectors from rig to dummy load (any cable/connection combination from rig to the dummy load). Do that before anything in the rig. On rare occasions the lead at the SO-239 inside the pa cage can have a poor solder connection. Also the Antenna T/R relay NO contacts could be dirty.
>
> Should have told you to look at external load stuff first. Pulled the trigger too quick. Sorry about that.
>
> Terry K9TW
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Louis Wilen" <louis.wilen@> wrote:
> >
> > Terry:
> >
> > Thanks for the quick reply.
> >
> > Please see my answers below.
> >
> >
> > From: Terry Wagoner
> > Sent: Wednesday, May 08, 2013 9:29 PM

> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > Subject: [TS-520_820_530_830] Re: Erratic IP on TS-530S during tune up
> >
> >
> >
> > Louis:
> >
> > When you set the resting plate current by adjusting the bias voltage pot on rear of rig is the plate current steady then?
> >
> > Yes, perfectly steady at 60 ma on CW or 50 ma on USB/LSB.
> >
> >
> >
> > Also, do you hear any arcing or frying sounds from the PA cage when the IP is jumping around?
> >
> > No arcing or frying sounds whatsoever. (I am familiar with what you are talking about, as I've heard those sounds from my transmatch when I try to load up too short of a wire on 160 M -- which is not something that I normally do.) By the way, I'm tuning up into a 50 ohm dummy load.
> >
> >
> >
> >
> > You can measure and monitor the operating bias voltage and the Screen Grid voltage at the 6146 tube socket pins as you load the rig to make sure neither one of those voltages are moving around. Both should be stable key down.
> >
> > Be very careful monitoring these voltage. Personal safety issue from inadvertent contact and dont want any arc or sparks.
> >
> > I'll check that out if the deoxit fix that you suggest below doesn't cure the problem. I have the right equipment to measure these voltages, but I avoid that area whenever possible.
> >
> >
> >
> > If resting plate current is stable then bias pot is probably clean and not the problem. If operating bias and Screen grid voltages are stable then I would open up the PA cage and visually inspect the Plate choke and bypass capacitor at its base for signs of overheating/discoloration. While there I would clean the rotor shaft wiper contacts on both the tank capacitor and load capacitor with De-oxit and blow off residual with canned air.
> >
> > The Plate choke and bypass capacitor look like new. I'll clean the rotor shaft wiper contacts and load cap as your suggested.
> >
> >
> >
> > Lastly could be a dirty contact on the 4PDT flat pack Aux relay on the IF board. I have not had much success cleaning this relay. I would suggest replacing it.
> >
> > Thanks for the tips. Actually, I think that I'll try a different dummy load, too. It's the dummy load built into an ancient MFJ-949B tuner. Might as well eliminate that as a possible cause of the problem.

> >
> >
> > Louis
> >
> >
> > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Louis Wilen" <louis.wilen@> wrote:
> > >
> > > I have a TS-530S, original owner, never been serviced by anyone except myself, and the only service that I've done is occasional cleaning with compressed air, tightening PCB screws, and re-centering the RIT. Also changed the driver tube about 15 years ago.
> > >
> > > During operation (except as explained below), everything works fine, acts fine, output power is about 120W CW, HV is 900V, idle IP is set correctly and is stable, and it checks out good on all tests that Ken (K4EAA) suggests in his "Tech question mailbag." For what it's worth, I checked the ESR of the large power supply capacitors and it was well under 1 ohm.
> > >
> > > But it has one problem that has developed recently. During initial tune-up after power on, the IP jumps around erratically while adjusting the plate control. It dips but it jerks around, not a smooth dip. It settles down and acts normal after a keying and adjusting the plate control several times, and then the rig tunes up fine. If I tune up again on the same band or a different band, it tunes up fine without acting erratic. But if go away and come back another day, the erratic IP during tune up comes back.
> > >
> > > Any ideas?
> > >
> > > Louis
> > > W3LMW
> > >
> >
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
>
>
>
> No virus found in this message.
> Checked by AVG - www.avg.com
> Version: 2013.0.3272 / Virus Database: 3162/6309 - Release Date: 05/08/13
>
>
> [Non-text portions of this message have been removed]
>

42264. Re: [TS-520_820_530_830] Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-26 03:28:08 UTC
From: Wes Will
Topic: 42105 Message: 42264

> I would just not mix 6146 tubes
> with different suffixes.

I don't know if it would make a lot of difference for these hybrid rigs, but back when I was learning this stuff, it was tubes and nothing but.

We would not only "not mix ,,, suffixes," but for almost any dual-tube amplifier set-up of any class or frequency (bass guitar amps to what passed for VHF back then), we would pull out the tube tester and start testing tubes in batches.

We'd number them, then test and write down the exact results of the tests. This was all done in order to get two that had most-nearly identical outputs and inter-electrode capacitances and internal resistance figures and anything else we could test for.

I doubt that it would help all that much for these hybrids, but it likely couldn't hurt, and might just get that last little bit of performance out of them. (Transmission clarity, stability, power, what-have-you.)

Just a thought, and kind of a remembrance of the end of the tube era.

--
Wes Will
N9KDY

42265. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-26 11:24:02 UTC
From: Terry Wagoner
Topic: 42105 Message: 42265

Back then you were dealing with Audio and not RF. The configuration was Push-Pull and not Parallel. The objective of matched pairs for Push-Pull Audio Amplifiers was to ensure that each tube had equal plate current so you minimized crossover clipping or distortion.

There are those who insist on paying for 6146 tubes that test close to same transconductance in a tube tester. It amuses me and I would like to ask them how they reconcile not having separate bias controls and a meter switch to set the resting plate current exactly the same on each tube when they install them and as the tubes age. Absent that how to you ensure each shares half the load? I would not be too concerned about linearity if one tube has slightly higher idle current than the other. Even if one tube was shifted slightly toward AB2 the ALC comes in to play the moment there is any hint of grid current. In parallel operation there is no cross over point to be concerned with.

I suppose if you bought matched pairs and had a way to set idle current on each one you could ensure that each tube was sharing the load equally and might extend the life of one tube over the other, but doubt if any measurable difference.

Just my opinion.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Wes Will <wwill@...> wrote:
>
> > I would just not mix 6146 tubes
> > with different suffixes.
>
> I don't know if it would make a lot of difference for these hybrid rigs,
> but back when I was learning this stuff, it was tubes and nothing but.
>
> We would not only "not mix ,,, suffixes," but for almost any dual-tube
> amplifier set-up of any class or frequency (bass guitar amps to what
> passed for VHF back then), we would pull out the tube tester and start
> testing tubes in batches.
>
> We'd number them, then test and write down the exact results of the
> tests. This was all done in order to get two that had most-nearly
> identical outputs and inter-electrode capacitances and internal
> resistance figures and anything else we could test for.
>
> I doubt that it would help all that much for these hybrids, but it
> likely couldn't hurt, and might just get that last little bit of
> performance out of them. (Transmission clarity, stability, power,
> what-have-you.)
>
> Just a thought, and kind of a remembrance of the end of the tube era.
>

> --
> Wes Will
> N9KDY
>

42266. TS-520 Het Osc Measurements

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-26 12:14:13 UTC
From: Terry Wagoner
Topic: 42266 Message: 42266

Adrian:

OK-You talked me in to taking off covers of my TS-520.

I looked at MD on scope (new Rigol DS1102E) and it is not clean sine wave on any band. It does not want to sync. It is not as dirty as TIF, but does have some harmonic content. My scope displays frequency as well as peak to peak voltage and when it does sync it displays 17 mhz for a moment so it has to be looking at 2x TIF signal. This surprises me a little as the HET osc injection level is significantly higher (as it should be)than the TIF signal level.

I also connected my good counter at MD and it has trouble locking on it and I get flashes of 17 mhz so it is also seeing 2x TIF.

As you note the rf signal at the 6146 control grids is a clean and stable sine wave. I checked MD on several bands and got same result.

Here are my Het signal levels at TP-3 with 100mhz scope and with Boonton 92E. You will note that the P-P levels do not match the RMS levels. I suspect this is due to the harmonic content the scope is measuring?

3.5 = 5.36 p-p = 1.60 rms
7.0 = 5.44 p-p = 1.62 rms
14.0 = 5.68 p-p = 1.68 rms
21.0 = 5.65 p-p = 1.67 rms
28.0 = 5.72 p-p = 1.70 rms
28.5 = 5.68 p-p = 1.68 rms
29.1 = 5.65 p-p = 1.67 rms

When you get your tuning tool suggest you adjust 10 meter Het Osc level to see if any improvement in DP level. I suspect not but easy first thing to do. After that try adjusting 10 meter Mixer and Drive coils.

Also, have you looked at the 5 watt 10 meter output into dummy load with your counter? Can use a small 2 or 3 turn sniffer coil connected to your counter test lead and placed near slots in PA cage. Are you seeing 28 mhz? Is your Tank capacitor (plate tuning) at its normal position for 10 meter loading?

Terry K9TW

42267. Re: [TS-520_820_530_830] Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-26 12:19:08 UTC
From: Mark Gilger
Topic: 42105 Message: 42267

I'm running 6146 W JAN's from GE and they work
fine. No issues with neutralization and I get
100+ watts output. I purchase them from RF Parts.

http://www.rfparts.com/6146w-ge.html

As I recall I'm running them in my TS-520S and my TS-830S.

Mark, WB0IQK

At 01:33 PM 5/25/2013, Jerry Barr wrote:
>
>
>it was my understanding the 6146 w didnt do well
>in place of the 6146 or the 6146aÂ or is that
>not correct/ they were very different
>
>Jerry KJ6NTL
>
>From:
>"<mailto:adrian.langford%40ymail.com>adrian.langford@ymail.com"
><<mailto:adrian%40qualitative.co.uk>adrian@...>
>To:
><mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>
>Sent: Saturday, May 25, 2013 9:55 AM
>Subject: [TS-520_820_530_830] Re: Progress report new 520SE acquisition
>
>Â
>I meant to add that to see any ALC, I need rf
>volts greater than 53.2/1.414=37.6V, so my 36V peak doesn't cut it!
>
>--- In
>mailto:TS-520_820_530_830%40yahoogroups.com,
>"adrian.langford@..." <adrian@...> wrote:
> >
> > Well I've spent a happy hour probing my 520SE
> to measure the readings you suggested taking to
> diagnose my "no ALC on 10m". I can see why I'm not getting any ALC...
> >
> > - On 28MHz I get no ALC, and only 5W
> indicated on external power meter when I tune
> the Plate and Load for max output.
> >
> > - Loaded on 28MHz using peak receive noise, I
> have -84.5vdc cutoff bias in RX at pin 5 control grid

> >
> > - In TX mode I have -53.2vdc operating bias
> >
> > - RF drive voltage (measured with Tektronix
> 50MHz scope)is 36.0 peak rf volts
> >
> > So using your workings I have 36-53.2 =
> -17.2V delta in TX mode, whereas I need a decent positive delta!
> >
> > Please advise on next place to look for why
> the rf volts are too low (you were getting 60.8V peak rf compared with my 36V).
> >
> > I haven't done any alignment yet as I'm
> waiting for correct tool to arrive, and don't
> want to crack any slugs through impatience.
> >
> > Oh while I had the rig open I looked in the
> finals cage. Was interested to see the original
> Japanese valves had been replaced at some stage by 6146Ws.
> >
> > 73s from Adrian G4IQW
> >
> > --- In
> mailto:TS-520_820_530_830%40yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > >
> > > Here are my readings from my personal TS-520 serial number 040234:
> > >
> > > 1. Full load on 28.500 Mhz = 85 watts
> output @200 ma into 50 ohm dummy load.
> > > 2. ALC indication is full scale
> deflection(FSD)ie the needle is far right at
> "350 ma" with Car Level Pot at position "8" and Drive Control peaked at 1230.
> > > 3. DC bias voltage at 6146 control grid Pin
> 5 = -85.6vdc cutoff bias in RX mode and -51.4 vdc operating bias in TX mode.
> > > 4. RF drive voltage at 6146 control grid
> Pin 5 = 43.0 rms volts measured with a Boonton 92E RF millivolt meter.
> > >
> > > 43 x 1.414 = 60.8 peak rf volts
> > > 60.8 - 51.4 vdc bias = 9.4 volts
> difference. This is reason why I have FSD ALC
> indication. It is normal to require more Car
> Level voltage on 10 meters. If unsure just set it Full CW to start with.
> > >
> > > -51.4/1.414 = 36.0 rf volts. You must have
> greater than 36.0 rf volts at -51.4vdc
> operating bias to get any ALC indication. The
> Rf drive signal must make the 6146 control grid
> positive with respect to the cathode so that ua
> grid current flows to produce any ALC
> indication. The greater the delta between dc

> bias and RF drive voltage on positive swing of
> the RF envelope the higher the ALC deflection will be.
> > >
> > > So you need to load your rig on 10 meters
> into dummy load. Since you have no ALC
> indication use a workaround like peaking the
> Drive Control on receiver back ground noise or
> use the Marker. After loading to full load flip
> the SG switch off and make the RF drive and DC
> bias voltage measurements on the 6146 control grid as I did above.
> > >
> > > You will need a 3 diode RF probe and VTVM,
> or an O-scope, or an RF Millivolt meter to make the RF drive measurements.
> > >
> > > Report back the RF output level, the
> operating bias voltage, and RF drive voltage
> and based on those I can point you to next place to look.
> > >
> > > Terry
> > > K9TW
> > >
> > > --- In
> mailto:TS-520_820_530_830%40yahoogroups.com,
> "adrian.langford@" <adrian@> wrote:
> > > >
> > > > Well I popped in "new" 12BY7A driver.
> > > >
> > > > Rewarded with much healthier ALC on 15m
> (before had been unstable on that band) but
> still no ALC whatsoever on 10m. I also used
> switch cleaner on band switch and worked it in,
> in case of contact problem on 10m.
> > > >
> > > > Next I will check the grid volatfes and
> cathode resistors as Terry suggested.
> > > >
> > > > I also wondered if coil alignment may be
> part of answer so alsomtook off bottom of case.
> > > >
> > > > The bad news is that the nylon hex toool
> I got on ebay was too big for the cores (have ordered one from Ken K4EAA).
> > > >
> > > > The good news is that I examined all the
> slugs very carefully under bright light. Only
> one appears crackdd - the 3.5MHz oscillator
> coil. So when proper tool arrives I can align rig properly.
> > > >
> > > > 73 Adrian G4IQW
> > > >
> > > > --- In

> mailto:TS-520_820_530_830%40yahoogroups.com,
> "adrian.langford@" <adrian@> wrote:
> > > > >
> > > > >
> > > > > Many thanks for valuable info Terry.
> > > > >
> > > > > Different views from similarly
> experienced owners, so what I'll do is test
> whether a new driver valve - after checking
> voltages described here - makes any difference to 10m ALC.
> > > > >
> > > > > Plenty of time anyway till 10m shows signs of life!
> > > > >
> > > > > 73 Adrian G4IQW
> > > > >
> > > > >
> > > > > --- In
> mailto:TS-520_820_530_830%40yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > > > > >
> > > > > > Robert:
> > > > > >
> > > > > > I will probably regret wading in to this pond!
> > > > > >
> > > > > > I do not doubt that you have no ALC
> indication on 10 meters on your TS-520. In my
> experience it is "common", but not "normal". I
> would also be very careful citing and observing
> any of these "service bulletins". I am very
> skeptical of most of these as some are just
> flat wrong. Putting star lock washers on
> circuit board to cure VFO drift isnt first
> thing I will ever reach for! They appear to me
> to be nothing more than a list of one line
> anecdotal entries submitted by owners and
> perhaps Kenwood service center bench techs? One
> line entries with no details, no basis, no
> explanations are not what I would expect from a
> factory authorized service bulletin.
> > > > > >
> > > > > > I have worked on probably 30 or so
> TS520s in a 10 year period. Not an exhaustive
> number, but enough to know that all but one
> left my bench with adequate ALC indication on
> 10 meters. That one would get approx 1/4 scale
> deflection and was very touchy and owner was in
> a hurry to get it back. In my experience can
> typically get at least 1/2 scale deflection
> with Car Level pot at 1400 to 1500 position. My
> own personal TS-520 ALC indication on 10 meters
> is a little bit better than 1/2 scale deflection. It had none when I got it.

> > > > > >
> > > > > > I once had a fellow call me(some how
> got my home phone) and he was mad as hell. He
> told me he saw where I responded on some forum
> just as I am to you and that he had purchased
> his TS520 new from big west coast dealer and it
> had no ALC on 10 meters out of the box and he
> called Kenwood and they told him it was
> "normal". Now I dont want to call anyone a
> liar, but I suggested that I doubted he had
> actually called Kenwood factory design engineer
> in Japan. If so what did that engineer say was
> the reason? Would there not have been a
> discussion and some additional probing
> questions? I suggested that perhaps he had
> called the dealer and maybe even talked to a
> dealer bench tech who said something like " I
> see that all the time". Very different from a
> design engineer explaining why it was "normal".
> I then suggested that had it been me I would
> have taken the rig back to dealer and told them
> when they can sell me a new in the box one that has ALC indication
>on all bands I will take it. He was fuming by time conversation ended.
> > > > > >
> > > > > > I closed the conversation this way.
> The compelling question you need to ask
> yourself is....."IF ONE OR MORE TS-520 HAVE
> SOME LEVEL OF ALC INDICATION ON 10 METERS WHY
> CANNOT ALL"? If later serial number production
> runs did not have this problem, wouldnt a mod
> have been issued? I know of no such Kenwood fix.
> > > > > >
> > > > > > Would Ford make a car that the
> speed-o-meter worked in 1st, 2nd, and 3rd gear,
> but in 4th gear you had to use some kind of
> work around to tell how fast your were going
> (maybe timing mile marker post with your wrist
> watch)? Would customers really live with that
> and call it normal? I dont think so.
> > > > > >
> > > > > > Also the manual does not say it is
> normal. I get that thrown at me. The operating
> manual clearly states that "Note: If there is
> no ALC reading indicated, increase the CAR
> control until there is an ALC reading" There is
> no disclaimer that follows that says "with the
> exception of on 10 meters". I think what
> confuses people is the statement later under
> the CW loading that says at 200 ma of Ip there
> may be no ALC indication. Too bad Kenwood had

> to make that statement, but apparently people
> were loading rig for max RF output using the RF
> detector position and for some odd reason then
> flipping meter back to ALC position instead of
> back to Ip. Maybe old timers who were use to
> loading the old Class C CW grid leak bias
> transmitters? Maybe they thought they needed to
> check and re-peak grid current? A Class AB1
> Kenwood doesnt operate that way. We have
> essentially no grid current and no reason to
> keep checking ALC indication in the loading procedure. I
>dont understand it. Kenwood even followed this
>note by adding a chart that shows the preferred
>meter positions and it clearly shows that you
>should use Ip position when loading in CW. At
>200 ma you are done and no reason to see if ALC has fallen off.
> > > > > >
> > > > > > There is a reason that you may have
> no ALC indication in CW Mode at 200 ma Ip and
> it has to do with degenerative RF feedback, but
> I wont go into it in this response.
> > > > > >
> > > > > > Sorry so long, but this is not easy subject to cover briefly.
> > > > > >
> > > > > > If you want to work on your no ALC
> indication on 10 meters start with a fresh
> 12BY7A and make sure you have spec DC voltages
> and make sure your cathode resistors are all at design value.
> > > > > >
> > > > > > Then in order to have ALC indication
> you need two key voltages. Start by checking
> your 6146 control grid Pin 5 operating DC bias
> voltage with 60 ma resting plate current. Also
> measure your RF drive voltage. If one or both
> of these are not to spec on 10 meters you will
> have no ALC indication. Need to be able to
> accurately measure these with a calibrated RF
> millivolt meter or O-scope. If you have -55vdc
> operating bias then you will need greater than
> 55/1.414 = 38.89 rms or 110.4 P-P rf drive
> volts. At 39 rf volts you will have just barely
> overcome the DC bias offset. The control grid
> of the 6146 must go positive on the positive
> half of the RF drive envelope in order for Ua
> grid current to flow. If 6146 control grid
> never goes positive relative to the cathode
> then there will be no Ua grid current. No Ua
> grid current means no ALC indication. This is the first place to start.
> > > > > >
> > > > > > Not just my experience. You might

> contact Jimmy Lamanteer WB2KNR who still
> operates his original dealer purchased new
> TS520 as his main rig and collects them and has
> 8 or 10 at all times and he reports to me that
> they all have some level of ALC indication on 10 meters.
> > > > > >
> > > > > > Not being critical of you Robert. Just trying to help.
> > > > > > >
> > > > > > > 73s Terry K9TW
> > > > > > >
> > > > > > >
> > > > > > > >
> > > > > > > > According to the TS-520 service
> bulletins, no ALC indication on 10M is
> "normal." And that is the way it is with my
> 520. I assume the 520SE is the same, although
> there are 520 owners who say they do get ALC on 10M.
> > > > > > > >
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42268. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-26 13:12:09 UTC
From: Terry Wagoner
Topic: 42105 Message: 42268

Hi Mark:

Any Kenwood bargains at Dayton? Did Dick and his son make it? I hope to make it back next year. Terry

42269. Re: [TS-520_820_530_830] Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-26 13:53:15 UTC
From: Mark Gilger
Topic: 42105 Message: 42269

Yes, Dick and his son Jeff made it. He flew in
this year so was not expecting to pick anything big up.

Lots of bargains, but ended up only bring home
some Drake stuff. I'm still puzzled over the
number of Collins equipment, like the R390's,
75A4, etc. that was there. Seems there was an
unusually large amount of that stuff for what ever reason.

Hope to see you next year, or maybe Ft. Wayne. Do
you ever get down to the Findlay hamfest in the
fall? That's one that I always attend.

Mark

At 09:12 AM 5/26/2013, Terry Wagoner wrote:
>
>
>Hi Mark:
>
>Any Kenwood bargains at Dayton? Did Dick and his
>son make it? I hope to make it back next year. Terry
>
>

[Non-text portions of this message have been removed]

42270. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-26 14:18:07 UTC
From: Terry Wagoner
Topic: 42105 Message: 42270

Yes I have flown in before in a Cessna 172 with 3 other hams so no way to lug those Johnson Viking IIs back!

Well glad you had good time.

I have not been to Findlay or Lima or Mansfield in many years. Use to make Findlay and set up and sell there. I will make a note about it and probably will make Ft. Wayne again. I think Findlay is about 2.5 hours from the house.

Take Care
Terry

--- In TS-520_820_530_830@yahoogroups.com, Mark Gilger <mgilger@...> wrote:
>
> Yes, Dick and his son Jeff made it. He flew in
> this year so was not expecting to pick anything big up.
>
> Lots of bargains, but ended up only bring home
> some Drake stuff. I'm still puzzled over the
> number of Collins equipment, like the R390's,
> 75A4, etc. that was there. Seems there was an
> unusually large amount of that stuff for what ever reason.
>
> Hope to see you next year, or maybe Ft. Wayne. Do
> you ever get down to the Findlay hamfest in the
> fall? That's one that I always attend.
>
> Mark
>
> At 09:12 AM 5/26/2013, Terry Wagoner wrote:
> >
> >
> >Hi Mark:
> >
> >Any Kenwood bargains at Dayton? Did Dick and his
> >son make it? I hope to make it back next year. Terry
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

42271. Re: [TS-520_820_530_830] Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-26 15:33:14 UTC
From: Mike
Topic: 42105 Message: 42271

Jerry,

Maybe you should take some time and read Tom Rauch's (W8JI) webpage on
amplifier stability.

http://w8ji.com/hf_stability.htm

and his page on VHF stability

http://w8ji.com/vhf_stability.htm

73
Mike W5RKL

On 5/25/2013 3:36 PM, Jerry Barr wrote:
>
> well i thought they wd produce parsitics and overheat
>
> Jerry KJ6NTL
>
> From: "adrian.langford@... <mailto:adrian.langford%40ymail.com>"
> <adrian@... <mailto:adrian%40qualitative.co.uk>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Saturday, May 25, 2013 1:30 PM
> Subject: [TS-520_820_530_830] Re: Progress report new 520SE acquisition
>
>
>
> Thanks Jerry. I do have a pair of new RCA 6146Bs as spare, but the
> 6146W are putting out 100+ W on all bands except 10m where I have no
> alc indication
>
> 73 Adrian G4IQW
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, Jerry Barr
> <kj6ntl@...> wrote:
> >
> > it was my understanding the 6146 w didnt do well in place of the
> 6146 or the 6146aÂ or is that not correct/ they were very different
> >
> >
> > Jerry KJ6NTL
> >
> > From: "adrian.langford@..." <adrian@...>
> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > Sent: Saturday, May 25, 2013 9:55 AM

> > Subject: [TS-520_820_530_830] Re: Progress report new 520SE acquisition
> >
> > Â
> > I meant to add that to see any ALC, I need rf volts greater than
> 53.2/1.414=37.6V, so my 36V peak doesn't cut it!
> >
> > --- In mailto:TS-520_820_530_830%40yahoogroups.com,
> "adrian.langford@" <adrian@> wrote:
> > >
> > > Well I've spent a happy hour probing my 520SE to measure the
> readings you suggested taking to diagnose my "no ALC on 10m". I can
> see why I'm not getting any ALC...
> > >
> > > - On 28MHz I get no ALC, and only 5W indicated on external power
> meter when I tune the Plate and Load for max output.
> > >
> > > - Loaded on 28MHz using peak receive noise, I have -84.5vdc cutoff
> bias in RX at pin 5 control grid
> > >
> > > - In TX mode I have -53.2vdc operating bias
> > >
> > > - RF drive voltage (measured with Tektronix 50MHz scope)is 36.0
> peak rf volts
> > >
> > > So using your workings I have 36-53.2 = -17.2V delta in TX mode,
> whereas I need a decent positive delta!
> > >
> > > Please advise on next place to look for why the rf volts are too
> low (you were getting 60.8V peak rf compared with my 36V).
> > >
> > > I haven't done any alignment yet as I'm waiting for correct tool
> to arrive, and don't want to crack any slugs through impatience.
> > >
> > > Oh while I had the rig open I looked in the finals cage. Was
> interested to see the original Japanese valves had been replaced at
> some stage by 6146Ws.
> > >
> > > 73s from Adrian G4IQW
> > >
> > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Terry
> Wagoner" <wagstw46@> wrote:
> > > >
> > > > Here are my readings from my personal TS-520 serial number 040234:
> > > >
> > > > 1. Full load on 28.500 Mhz = 85 watts output @200 ma into 50 ohm
> dummy load.
> > > > 2. ALC indication is full scale deflection(FSD)ie the needle is
> far right at "350 ma" with Car Level Pot at position "8" and Drive
> Control peaked at 1230.
> > > > 3. DC bias voltage at 6146 control grid Pin 5 = -85.6vdc cutoff

> bias in RX mode and -51.4 vdc operating bias in TX mode.
> > > > 4. RF drive voltage at 6146 control grid Pin 5 = 43.0 rms volts
> measured with a Boonton 92E RF millivolt meter.
> > > >
> > > > 43 x 1.414 = 60.8 peak rf volts
> > > > 60.8 - 51.4 vdc bias = 9.4 volts difference. This is reason why
> I have FSD ALC indication. It is normal to require more Car Level
> voltage on 10 meters. If unsure just set it Full CW to start with.
> > > >
> > > > -51.4/1.414 = 36.0 rf volts. You must have greater than 36.0 rf
> volts at -51.4vdc operating bias to get any ALC indication. The Rf
> drive signal must make the 6146 control grid positive with respect to
> the cathode so that ua grid current flows to produce any ALC
> indication. The greater the delta between dc bias and RF drive voltage
> on positive swing of the RF envelope the higher the ALC deflection
> will be.
> > > >
> > > > So you need to load your rig on 10 meters into dummy load. Since
> you have no ALC indication use a workaround like peaking the Drive
> Control on receiver back ground noise or use the Marker. After loading
> to full load flip the SG switch off and make the RF drive and DC bias
> voltage measurements on the 6146 control grid as I did above.
> > > >
> > > > You will need a 3 diode RF probe and VTVM, or an O-scope, or an
> RF Millivolt meter to make the RF drive measurements.
> > > >
> > > > Report back the RF output level, the operating bias voltage, and
> RF drive voltage and based on those I can point you to next place to
> look.
> > > >
> > > > Terry
> > > > K9TW
> > > >
> > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com,
> "adrian.langford@" <adrian@> wrote:
> > > > >
> > > > > Well I popped in "new" 12BY7A driver.
> > > > >
> > > > > Rewarded with much healthier ALC on 15m (before had been
> unstable on that band) but still no ALC whatsoever on 10m. I also used
> switch cleaner on band switch and worked it in, in case of contact
> problem on 10m.
> > > > >
> > > > > Next I will check the grid volatfes and cathode resistors as
> Terry suggested.
> > > > >
> > > > > I also wondered if coil alignment may be part of answer so
> alsomtook off bottom of case.
> > > > >
> > > > > The bad news is that the nylon hex toool I got on ebay was too

> big for the cores (have ordered one from Ken K4EAA).
> > > > >
> > > > > The good news is that I examined all the slugs very carefully
> under bright light. Only one appears crackdd - the 3.5MHz oscillator
> coil. So when proper tool arrives I can align rig properly.
> > > > >
> > > > > 73 Adrian G4IQW
> > > > >
> > > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com,
> "adrian.langford@" <adrian@> wrote:
> > > > > >
> > > > > > >
> > > > > > > Many thanks for valuable info Terry.
> > > > > > >
> > > > > > > Different views from similarly experienced owners, so what
> I'll do is test whether a new driver valve - after checking voltages
> described here - makes any difference to 10m ALC.
> > > > > > >
> > > > > > > Plenty of time anyway till 10m shows signs of life!
> > > > > > >
> > > > > > > 73 Adrian G4IQW
> > > > > > >
> > > > > > >
> > > > > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Terry
> Wagoner" <wagstw46@> wrote:
> > > > > > > >
> > > > > > > > Robert:
> > > > > > > >
> > > > > > > > I will probably regret wading in to this pond!
> > > > > > > >
> > > > > > > > I do not doubt that you have no ALC indication on 10
> meters on your TS-520. In my experience it is "common", but not
> "normal". I would also be very careful citing and observing any of
> these "service bulletins". I am very skeptical of most of these as
> some are just flat wrong. Putting star lock washers on circuit board
> to cure VFO drift isnt first thing I will ever reach for! They appear
> to me to be nothing more than a list of one line anecdotal entries
> submitted by owners and perhaps Kenwood service center bench techs?
> One line entries with no details, no basis, no explanations are not
> what I would expect from a factory authorized service bulletin.
> > > > > > > >
> > > > > > > > I have worked on probably 30 or so TS520s in a 10 year
> period. Not an exhaustive number, but enough to know that all but one
> left my bench with adequate ALC indication on 10 meters. That one
> would get approx 1/4 scale deflection and was very touchy and owner
> was in a hurry to get it back. In my experience can typically get at
> least 1/2 scale deflection with Car Level pot at 1400 to 1500
> position. My own personal TS-520 ALC indication on 10 meters is a
> little bit better than 1/2 scale deflection. It had none when I got it.
> > > > > > > >

> > > > > > > I once had a fellow call me(some how got my home phone)
> and he was mad as hell. He told me he saw where I responded on some
> forum just as I am to you and that he had purchased his TS520 new from
> big west coast dealer and it had no ALC on 10 meters out of the box
> and he called Kenwood and they told him it was "normal". Now I dont
> want to call anyone a liar, but I suggested that I doubted he had
> actually called Kenwood factory design engineer in Japan. If so what
> did that engineer say was the reason? Would there not have been a
> discussion and some additional probing questions? I suggested that
> perhaps he had called the dealer and maybe even talked to a dealer
> bench tech who said something like " I see that all the time". Very
> different from a design engineer explaining why it was "normal". I
> then suggested that had it been me I would have taken the rig back to
> dealer and told them when they can sell me a new in the box one that
> has ALC
> indication
> > on all bands I will take it. He was fuming by time conversation ended.
> > > > > > >
> > > > > > > I closed the conversation this way. The compelling
> question you need to ask yourself is....."IF ONE OR MORE TS-520 HAVE
> SOME LEVEL OF ALC INDICATION ON 10 METERS WHY CANNOT ALL"? If later
> serial number production runs did not have this problem, wouldnt a mod
> have been issued? I know of no such Kenwood fix.
> > > > > > >
> > > > > > > Would Ford make a car that the speed-o-meter worked in
> 1st, 2nd, and 3rd gear, but in 4th gear you had to use some kind of
> work around to tell how fast your were going (maybe timing mile marker
> post with your wrist watch)? Would customers really live with that and
> call it normal? I dont think so.
> > > > > > >
> > > > > > > Also the manual does not say it is normal. I get that
> thrown at me. The operating manual clearly states that "Note: If there
> is no ALC reading indicated, increase the CAR control until there is
> an ALC reading" There is no disclaimer that follows that says "with
> the exception of on 10 meters". I think what confuses people is the
> statement later under the CW loading that says at 200 ma of Ip there
> may be no ALC indication. Too bad Kenwood had to make that statement,
> but apparently people were loading rig for max RF output using the RF
> detector position and for some odd reason then flipping meter back to
> ALC position instead of back to Ip. Maybe old timers who were use to
> loading the old Class C CW grid leak bias transmitters? Maybe they
> thought they needed to check and re-peak grid current? A Class AB1
> Kenwood doesnt operate that way. We have essentially no grid current
> and no reason to keep checking ALC indication in the loading procedure. I
> > dont understand it. Kenwood even followed this note by adding a
> chart that shows the preferred meter positions and it clearly shows
> that you should use Ip position when loading in CW. At 200 ma you are
> done and no reason to see if ALC has fallen off.
> > > > > > >
> > > > > > > There is a reason that you may have no ALC indication in

> CW Mode at 200 ma Ip and it has to do with degenerative RF feedback,
> but I wont go into it in this response.
> > > > > > >
> > > > > > > Sorry so long, but this is not easy subject to cover briefly.
> > > > > > >
> > > > > > > If you want to work on your no ALC indication on 10 meters
> start with a fresh 12BY7A and make sure you have spec DC voltages and
> make sure your cathode resistors are all at design value.
> > > > > > >
> > > > > > > Then in order to have ALC indication you need two key
> voltages. Start by checking your 6146 control grid Pin 5 operating DC
> bias voltage with 60 ma resting plate current. Also measure your RF
> drive voltage. If one or both of these are not to spec on 10 meters
> you will have no ALC indication. Need to be able to accurately measure
> these with a calibrated RF millivolt meter or O-scope. If you have
> -55vdc operating bias then you will need greater than 55/1.414 = 38.89
> rms or 110.4 P-P rf drive volts. At 39 rf volts you will have just
> barely overcome the DC bias offset. The control grid of the 6146 must
> go positive on the positive half of the RF drive envelope in order for
> Ua grid current to flow. If 6146 control grid never goes positive
> relative to the cathode then there will be no Ua grid current. No Ua
> grid current means no ALC indication. This is the first place to start.
> > > > > > >
> > > > > > > Not just my experience. You might contact Jimmy Lamanteer
> WB2KNR who still operates his original dealer purchased new TS520 as
> his main rig and collects them and has 8 or 10 at all times and he
> reports to me that they all have some level of ALC indication on 10
> meters.
> > > > > > > >
> > > > > > > > Not being critical of you Robert. Just trying to help.
> > > > > > > >
> > > > > > > > 73s Terry K9TW
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > According to the TS-520 service bulletins, no ALC
> indication on 10M is "normal." And that is the way it is with my 520.
> I assume the 520SE is the same, although there are 520 owners who say
> they do get ALC on 10M.
> > > > > > > > >
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42272. ATTN CLIFF

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-26 16:44:29 UTC
From: kd5utc
Topic: 42272 Message: 42272

Hey cliff i know this out of group but have a ts-711a and its over heating and fan does not kick in at all ! checked fan and its good . do you know what i could do to fix problem ? could i wire fan direct? or do i have to find a relacement thermistor which is a TH1 (SDT1000F)which is discontinued or could you direct me some kind of replacement?

Thanks and 73s Kd5utc Rick Schofield

42273. Re: ATTN CLIFF

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-26 17:12:12 UTC
From: Sal Cerda
Topic: 42272 Message: 42273

You could use a 'snap disc' switch which turns on at a selected temperature. Pexsupply.com has them at reasonable prices.

[Non-text portions of this message have been removed]

42274. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-26 17:42:51 UTC
From: Terry Wagoner
Topic: 42105 Message: 42274

Hi Mike:

I have never seen a Kenwood Hybrid exhibit any type of parasitic oscillation VHF or near the fundamental. For that matter never saw any 6146 rigs have this problem. Maybe I wouldnt recognize it?

I have set the Pi-network load cap to approx 50% and keyed the rig with no drive and tuned the Plate Tune cap thru its range slowly and watched the Plate current meter and have never seen any meter movement. I have done this on all bands. This is a standard stability test.

I think the bigger worry with our Kenwoods is thermal runaway. This is far more likely to occur and has destroyed more 6146 finals than parasitics ever has.

I experienced this one time while trying to adjust the bias voltage pot to set the resting plate current. The pot had a bad spot in it and I lost operating bias voltage and the rig made a loud hum and rattling noise and the plate meter pegged and the finals glowed cherry red. This all happened in a micro-second and no way to catch it. Today I clean and exercise bias voltage pots with rig not powered and then make initial power on setting by measuring the bias voltage at control grid with SG switch off. After that I feel safe to set the resting plate current.

I suspect parasitic oscillation is possible otherwise Kenwood would not have placed suppressors in the anodes and grid leads. Although sometimes old time design just gets installed in later models as a precaution or it is just copied by designers as standard or good practice and the tube internal geometry and lead layout and propensity for parasitics may not have even been fully analyzed. No way to tell what Kenwood had in mind.

Take Care
Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> Jerry,
>
>
> Maybe you should take some time and read Tom Rauch's (W8JI) webpage on
> amplifier stability.
>
> http://w8ji.com/hf_stability.htm
>
> and his page on VHF stability
>
> http://w8ji.com/vhf_stability.htm
>
> 73
> Mike W5RKL

>
> On 5/25/2013 3:36 PM, Jerry Barr wrote:
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> > well i thought they wd produce parsitics and overheat
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> >
> > From: "adrian.langford@... <mailto:adrian.langford%40ymail.com>"
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> >
> >
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> > > it was my understanding the 6146 w didnt do well in place of the
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> > > Jerry KJ6NTL
> > >
> > > From: "adrian.langford@" <adrian@>
> > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > Sent: Saturday, May 25, 2013 9:55 AM
> > > Subject: [TS-520_820_530_830] Re: Progress report new 520SE acquisition
> > >
> > > Ã□
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> > 53.2/1.414=37.6V, so my 36V peak doesn't cut it!
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> > > >
> > > > - On 28MHz I get no ALC, and only 5W indicated on external power
> > meter when I tune the Plate and Load for max output.
> > > >

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> > bias in RX at pin 5 control grid
> > > >
> > > > - In TX mode I have -53.2vdc operating bias
> > > >
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> > > >
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> > > > >
> > > > > Here are my readings from my personal TS-520 serial number 040234:
> > > > >
> > > > > 1. Full load on 28.500 Mhz = 85 watts output @200 ma into 50 ohm
> > dummy load.
> > > > > 2. ALC indication is full scale deflection(FSD)ie the needle is
> > far right at "350 ma" with Car Level Pot at position "8" and Drive
> > Control peaked at 1230.
> > > > > 3. DC bias voltage at 6146 control grid Pin 5 = -85.6vdc cutoff
> > bias in RX mode and -51.4 vdc operating bias in TX mode.
> > > > > 4. RF drive voltage at 6146 control grid Pin 5 = 43.0 rms volts
> > measured with a Boonton 92E RF millivolt meter.
> > > > >
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> > > > > 60.8 - 51.4 vdc bias = 9.4 volts difference. This is reason why
> > I have FSD ALC indication. It is normal to require more Car Level
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> > > > >
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> > volts at -51.4vdc operating bias to get any ALC indication. The Rf
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> > the cathode so that ua grid current flows to produce any ALC
> > indication. The greater the delta between dc bias and RF drive voltage
> > on positive swing of the RF envelope the higher the ALC deflection

> > will be.
> > > > >
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> > you have no ALC indication use a workaround like peaking the Drive
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> > > > > >
> > > > > > You will need a 3 diode RF probe and VTVM, or an O-scope, or an
> > RF Millivolt meter to make the RF drive measurements.
> > > > > >
> > > > > > Report back the RF output level, the operating bias voltage, and
> > RF drive voltage and based on those I can point you to next place to
> > look.
> > > > > >
> > > > > > Terry
> > > > > > K9TW
> > > > > >
> > > > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com,
> > "adrian.langford@" <adrian@> wrote:
> > > > > > >
> > > > > > > Well I popped in "new" 12BY7A driver.
> > > > > > >
> > > > > > > Rewarded with much healthier ALC on 15m (before had been
> > unstable on that band) but still no ALC whatsoever on 10m. I also used
> > switch cleaner on band switch and worked it in, in case of contact
> > problem on 10m.
> > > > > > >
> > > > > > > Next I will check the grid volatfes and cathode resistors as
> > Terry suggested.
> > > > > > >
> > > > > > > I also wondered if coil alignment may be part of answer so
> > alsomtook off bottom of case.
> > > > > > >
> > > > > > > The bad news is that the nylon hex toool I got on ebay was too
> > big for the cores (have ordered one from Ken K4EAA).
> > > > > > >
> > > > > > > The good news is that I examined all the slugs very carefully
> > under bright light. Only one appears crackdd - the 3.5MHz oscillator
> > coil. So when proper tool arrives I can align rig properly.
> > > > > > >
> > > > > > > 73 Adrian G4IQW
> > > > > > >
> > > > > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com,
> > "adrian.langford@" <adrian@> wrote:
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > Many thanks for valuable info Terry.
> > > > > > > > >

> > > > > > > Different views from similarly experienced owners, so what
> > I'll do is test whether a new driver valve - after checking voltages
> > described here - makes any difference to 10m ALC.
> > > > > > > >
> > > > > > > > Plenty of time anyway till 10m shows signs of life!
> > > > > > > >
> > > > > > > > 73 Adrian G4IQW
> > > > > > > >
> > > > > > > >
> > > > > > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Terry
> > Wagoner" <wagstw46@> wrote:
> > > > > > > > >
> > > > > > > > > Robert:
> > > > > > > > >
> > > > > > > > > I will probably regret wading in to this pond!
> > > > > > > > >
> > > > > > > > > I do not doubt that you have no ALC indication on 10
> > meters on your TS-520. In my experience it is "common", but not
> > "normal". I would also be very careful citing and observing any of
> > these "service bulletins". I am very skeptical of most of these as
> > some are just flat wrong. Putting star lock washers on circuit board
> > to cure VFO drift isnt first thing I will ever reach for! They appear
> > to me to be nothing more than a list of one line anecdotal entries
> > submitted by owners and perhaps Kenwood service center bench techs?
> > One line entries with no details, no basis, no explanations are not
> > what I would expect from a factory authorized service bulletin.
> > > > > > > > >
> > > > > > > > > I have worked on probably 30 or so TS520s in a 10 year
> > period. Not an exhaustive number, but enough to know that all but one
> > left my bench with adequate ALC indication on 10 meters. That one
> > would get approx 1/4 scale deflection and was very touchy and owner
> > was in a hurry to get it back. In my experience can typically get at
> > least 1/2 scale deflection with Car Level pot at 1400 to 1500
> > position. My own personal TS-520 ALC indication on 10 meters is a
> > little bit better than 1/2 scale deflection. It had none when I got it.
> > > > > > > > >
> > > > > > > > > I once had a fellow call me(some how got my home phone)
> > and he was mad as hell. He told me he saw where I responded on some
> > forum just as I am to you and that he had purchased his TS520 new from
> > big west coast dealer and it had no ALC on 10 meters out of the box
> > and he called Kenwood and they told him it was "normal". Now I dont
> > want to call anyone a liar, but I suggested that I doubted he had
> > actually called Kenwood factory design engineer in Japan. If so what
> > did that engineer say was the reason? Would there not have been a
> > discussion and some additional probing questions? I suggested that
> > perhaps he had called the dealer and maybe even talked to a dealer
> > bench tech who said something like " I see that all the time". Very
> > different from a design engineer explaining why it was "normal". I
> > then suggested that had it been me I would have taken the rig back to

> > dealer and told them when they can sell me a new in the box one that
> > has ALC
> > indication
> > > on all bands I will take it. He was fuming by time conversation ended.
> > > > > > > > >
> > > > > > > > > > I closed the conversation this way. The compelling
> > question you need to ask yourself is....."IF ONE OR MORE TS-520 HAVE
> > SOME LEVEL OF ALC INDICATION ON 10 METERS WHY CANNOT ALL"? If later
> > serial number production runs did not have this problem, wouldnt a mod
> > have been issued? I know of no such Kenwood fix.
> > > > > > > > >
> > > > > > > > > > Would Ford make a car that the speed-o-meter worked in
> > 1st, 2nd, and 3rd gear, but in 4th gear you had to use some kind of
> > work around to tell how fast your were going (maybe timing mile marker
> > post with your wrist watch)? Would customers really live with that and
> > call it normal? I dont think so.
> > > > > > > > >
> > > > > > > > > > Also the manual does not say it is normal. I get that
> > thrown at me. The operating manual clearly states that "Note: If there
> > is no ALC reading indicated, increase the CAR control until there is
> > an ALC reading" There is no disclaimer that follows that says "with
> > the exception of on 10 meters". I think what confuses people is the
> > statement later under the CW loading that says at 200 ma of Ip there
> > may be no ALC indication. Too bad Kenwood had to make that statement,
> > but apparently people were loading rig for max RF output using the RF
> > detector position and for some odd reason then flipping meter back to
> > ALC position instead of back to Ip. Maybe old timers who were use to
> > loading the old Class C CW grid leak bias transmitters? Maybe they
> > thought they needed to check and re-peak grid current? A Class AB1
> > Kenwood doesnt operate that way. We have essentially no grid current
> > and no reason to keep checking ALC indication in the loading procedure. I
> > > dont understand it. Kenwood even followed this note by adding a
> > chart that shows the preferred meter positions and it clearly shows
> > that you should use Ip position when loading in CW. At 200 ma you are
> > done and no reason to see if ALC has fallen off.
> > > > > > > > >
> > > > > > > > > > There is a reason that you may have no ALC indication in
> > CW Mode at 200 ma Ip and it has to do with degenerative RF feedback,
> > but I wont go into it in this response.
> > > > > > > > >
> > > > > > > > > > Sorry so long, but this is not easy subject to cover briefly.
> > > > > > > > >
> > > > > > > > > > If you want to work on your no ALC indication on 10 meters
> > start with a fresh 12BY7A and make sure you have spec DC voltages and
> > make sure your cathode resistors are all at design value.
> > > > > > > > >
> > > > > > > > > > Then in order to have ALC indication you need two key
> > voltages. Start by checking your 6146 control grid Pin 5 operating DC
> > bias voltage with 60 ma resting plate current. Also measure your RF

> > drive voltage. If one or both of these are not to spec on 10 meters
> > you will have no ALC indication. Need to be able to accurately measure
> > these with a calibrated RF millivolt meter or O-scope. If you have
> > -55vdc operating bias then you will need greater than 55/1.414 = 38.89
> > rms or 110.4 P-P rf drive volts. At 39 rf volts you will have just
> > barely overcome the DC bias offset. The control grid of the 6146 must
> > go positive on the positive half of the RF drive envelope in order for
> > Ua grid current to flow. If 6146 control grid never goes positive
> > relative to the cathode then there will be no Ua grid current. No Ua
> > grid current means no ALC indication. This is the first place to start.
> > > > > > > > >
> > > > > > > > > Not just my experience. You might contact Jimmy Lamanteer
> > WB2KNR who still operates his original dealer purchased new TS520 as
> > his main rig and collects them and has 8 or 10 at all times and he
> > reports to me that they all have some level of ALC indication on 10
> > meters.
> > > > > > > > >
> > > > > > > > > Not being critical of you Robert. Just trying to help.
> > > > > > > > >
> > > > > > > > > 73s Terry K9TW
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > According to the TS-520 service bulletins, no ALC
> > indication on 10M is "normal." And that is the way it is with my 520.
> > I assume the 520SE is the same, although there are 520 owners who say
> > they do get ALC on 10M.
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
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>

42275. Attenuator pads project

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-26 18:48:59 UTC
From: k5hfg
Topic: 42275 Message: 42275

Hi Terry,
I am up north visiting the grandsons and keeping up with the discussions. I noticed the discourse has again turned to the 6146 W argument. I have been using W's in a 530 with no ill effects observed, on the bench or on the air. K4EAA. has a very good explanation about using them. I refuse to throw good valves away. Anyhow I did not want to pollute the 520se post as it is progressing well. I cannot wait to see the next post. A lot of good information being exchanged. I did want to update my attenuator project just for record. I have read some good articles this past week and have ordered parts for a 2dB single. After I find how that works out, I will design a gang box unit to drop down into the QRP universe. I am active on 17 CWDX QRP but I want to start using my 830 w/extVFO instead of my homebrew tuna tins. More and more dxops using splits. Sorry for long post. 73, Don K5HFG

42276. KENWOOD HYBRID USER NET (May 26th, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-26 19:02:40 UTC
From: mvgilger
Topic: 42276 Message: 42276

There was no net last weekend due to Dayton Hamvention. For any that did not attend, it was a good hamvention with lots of used Kenwood equipment in the flea market. I think I saw maybe a half dozen TS-830's and 530's, and 3-4 820's. All seemed to be in nice condition.

The Saturday's net on 40 meter had 16 stations checking in with good band conditions. We had 8 new check-ins today, W3GD, W4TRJ, K1VOY, W4AKG, KC1BE, KA1SJD, K2KRP, K2IB. Out of all stations checking in, there was:

3 running TS-520(x)
1 running TS-530(x)
3 running TS-820(x)
0- running TS-830S

I was running my TS-940s. The rest were running non hybrids of one model or another.

The Sunday's net on 20 meter we had 14 stations checking in under very poor band conditions. We had 9 new check-in, WO5O, N5YHC, KF4DYN, KJ4ZPB, WA6UVB, NR6C, and KI6IJI.

Out of those, there was:

2 running TS-520(x)
0 running TS-530(x)
0 running TS-820(x)
4 running TS-830S

I was running my TS-940s. The rest were running non hybrids of one model or another.

We have been having several people checking in regularly with their TS-430, TS-440, and TS-940's, which of course is not a hybrid, although over 30+ years old. Everyone is welcome as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a net control station, please send me an email. Currently it's just myself, WB2KNR and WB0SGA. I would like to get several more. If we do, we can alternate so everyone might be on a 3-4 week rotation. It's a lot of fun and a good way to make sure you station is optimized.

For anyone that has not heard, we have a new web site that WB4HFN is hosting. He currently has a very nice site for Drake, Collins and Heathkit and now Kenwood Hybrids. Good quality manuals plus sale flyers and brochures will be found here, along with user supplied information for all Hybrids.

His URL is:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754 check-ins, Sunday total 563 check-ins

November 2012, Saturday's, net total = 47, Sundays total = 20
December 2012, Saturday's, net total = 74, Sunday's total = 70
January 2013, Saturday's, net total = 93, Sunday's total = 87
February 2013, Saturday's net total = 103, Sundays total = 87
March 2013, Saturday's, net total = 112, Sunday's total =39
April 2013, Saturday's net total = 52, Sunday's total = 29
May 2013, Saturday's net total = 45, Sunday's total = 50(Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

42277. Re: Attenuator pads project

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-26 19:32:21 UTC
From: Terry Wagoner
Topic: 42275 Message: 42277

Hi Don:

Hope you are enjoying visit with grandsons. Well there will be as many opinions as there are people and sometimes no amount of logic will prevail. Brand loyalty is a funny thing and rational thinking is not required. Just makes it hard for a new person to sort out the facts from the feelings and beliefs. Fortunately none of this is earth shattering in the grand scheme of life.

I was just hoping in my life time that Shuguang factory (makers of Taylor and Penta 6146 tubes) would figure out how to make a S2001A or RCA 6146B equivalent that would have long service life in Kenwood hybrid service. I dont think they are there yet and I wonder if anyone ever told them what operating voltages we run them at? Sure would be nice to buy a brand new 2013 manufactured set of 6146 finals that like 900vdc plus on the anode.

Be interested to hear how your pad attenuator works out.

Enjoy the holiday with the kids.

73s Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "k5hfg" <dlbowders@...> wrote:
>
> Hi Terry,
> I am up north visiting the grandsons and keeping up with the discussions. I noticed the discourse has again turned to the 6146 W argument. I have been using W's in a 530 with no ill effects observed, on the bench or on the air. K4EAA. has a very good explanation about using them. I refuse to throw good valves away. Anyhow I did not want to pollute the 520se post as it is progressing well. I cannot wait to see the next post. A lot of good information being exchanged. I did want to update my attenuator project just for record. I have read some good articles this past week and have ordered parts for a 2dB single. After I find how that works out, I will design a gang box unit to drop down into the QRP universe. I am active on 17 CWDX QRP but I want to start using my 830 w/extVFO instead of my homebrew tuna tins. More and more dxops using splits. Sorry for long post. 73, Don K5HFG
>

42278. TS-820: where does this connector go? :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-26 21:16:37 UTC
From: coyoteinventor@ymail.com
Topic: 42278 Message: 42278

I took out some boards for cleaning, but did not realize not all male pins were used on this board, and now I'm not sure which ones to use. :-(
Click here to see the photo of the connector in question
<http://www.361euros.com/skitch/image-20130526-170951.jpg>
I plugged the 3-pin female connector in using the right most 3 pins (#1,2 & 3), leaving the 2 left ones (#4 & 5) unused, but I honestly don't know which 3 of the 5 male pins were used before I unplugged it, so I don't want to power up the machine just in case.
Any help will be GREATLY appreciated! :-)
--Cesar-- K1TNT

[Non-text portions of this message have been removed]

42279. Re: [TS-520_820_530_830] Attenuator pads project

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-26 21:04:37 UTC
From: Jerry Barr
Topic: 42275 Message: 42279

Hello all! did not mean to corrupt the thread with the 6146 issue but have been looking for a pair of them inexpensivly and understood u cdnt use the b,w ones so i was curious/if issues were being created by them /thanks for all the replys

Jerry KJ6NTL

From: k5hfg <dlbowders@nepower.coop>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, May 26, 2013 11:48 AM
Subject: [TS-520_820_530_830] Attenuator pads project

Hi Terry,
I am up north visiting the grandsons and keeping up with the discussions. I noticed the discourse has again turned to the 6146 W argument. I have been using W's in a 530 with no ill effects observed, on the bench or on the air. K4EAA. has a very good explanation about using them. I refuse to throw good valves away. Anyhow I did not want to pollute the 520se post as it is progressing well. I cannot wait to see the next post. A lot of good information being exchanged. I did want to update my attenuator project just for record. I have read some good articles this past week and have ordered parts for a 2dB single. After I find how that works out, I will design a gang box unit to drop down into the QRP universe. I am active on 17 CWDX QRP but I want to start using my 830 w/extVFO instead of my homebrew tuna tins. More and more dxops using splits. Sorry for long post. 73, Don K5HFG

[Non-text portions of this message have been removed]

42280. Re: [TS-520_820_530_830] TS-820: where does this connector go? :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-26 21:38:15 UTC
From: n6wk@...
Topic: 42278 Message: 42280

You have it in the correct spot.
It goes on Pins 1,2, 3 there is nothing on pins 4 and 5

73,
Gordon
N6WK

On 5/26/2013 2:16 PM, coyoteinventor@... wrote:
>
> I took out some boards for cleaning, but did not realize not all male
> pins were used on this board, and now I'm not sure which ones to use.
> :-(
> Click here to see the photo of the connector in question
> <http://www.361euros.com/skitch/image-20130526-170951.jpg>
> I plugged the 3-pin female connector in using the right most 3 pins
> (#1,2 & 3), leaving the 2 left ones (#4 & 5) unused, but I honestly
> don't know which 3 of the 5 male pins were used before I unplugged it,
> so I don't want to power up the machine just in case.
> Any help will be GREATLY appreciated! :-)
> --Cesar-- K1TNT
>
> [Non-text portions of this message have been removed]
>
>

"Faced with the choice between changing one's mind and proving that there is no need to do so, almost everyone gets busy on the proof."
- John Kenneth Galbraith -

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42281. Re: [TS-520_820_530_830] TS-820: where does this connector go? :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-26 21:48:56 UTC
From: n6wk@...
Topic: 42278 Message: 42281

To Clarify, If you had the CW filter installed, you would move it over
one or two pins.
It tells about it towards the end of the user manual on page 34 of the
one I have.

73,
Gordon
N6WK

73,
Gordon

On 5/26/2013 2:16 PM, coyoteinventor@... wrote:
>
> I took out some boards for cleaning, but did not realize not all male
> pins were used on this board, and now I'm not sure which ones to use.
> :-(
> Click here to see the photo of the connector in question
> <http://www.361euros.com/skitch/image-20130526-170951.jpg>
> I plugged the 3-pin female connector in using the right most 3 pins
> (#1,2 & 3), leaving the 2 left ones (#4 & 5) unused, but I honestly
> don't know which 3 of the 5 male pins were used before I unplugged it,
> so I don't want to power up the machine just in case.
> Any help will be GREATLY appreciated! :-)
> --Cesar-- K1TNT
>
> [Non-text portions of this message have been removed]
>
>

"Faced with the choice between changing one's mind and proving that there is no need to do
so, almost everyone gets busy on the proof."
- John Kenneth Galbraith -

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42282. TS 520se QRP mod questions

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-26 21:52:18 UTC
From: k4nes86
Topic: 42282 Message: 42282

I decided to buy the parts to make the qrp mod for the 520se. Which port do I wire this too? The Remote socket or the smaller socket where the external VFO would go?

42283. Re: Attenuator pads project

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-26 22:35:02 UTC
From: k5hfg
Topic: 42275 Message: 42283

No problem Jerry, I intended for this thread to identify some old issues and opinions about the 6146. I am currently using A,B and W's in various Hybrids. I have a tendancy to Not throw any valves away until they positively do not work.

Terry,

I did want to comment on your encounter with the runaway finals. I had this happen to me in two different rigs this past winter. I never work on a clean Hybrid.(except my personal rigs) I have gotten several on eBay as project rigs and also for the learning experience. Never concerned about there condition or where they come from. I use them as learning tools and then send them to whomever wants them. As long as I can break even or somewhere in that vacinity. If I know they do not function properly then I keep them here until they do. Anyway, I ran into the problem you describe after I had them working for a period of time. I had each one on the bench for a check out and the tubes ran away as soon as I flipped the send switch. Cherry red in a millisecond,condensors snapping,and sparks flying. A man can not react that fast. After shutdown and repair I cleaned the pots and exercised them and have not had a problem with them since. They are 530's and both have a permanent spot in the station. Working fine. I do not have a clue as to why they did that. I have been keeping an eye on them but they seem fine now. Just thought it was more than coincidence. Always thought that was something that happened to others. Now I always clean everything.....

--- In TS-520_820_530_830@yahoogroups.com, Jerry Barr <kj6ntl@...> wrote:
>
> Hello all! did not mean to corrupt the thread with the 6146 issue but have been looking for a pair of them inexpensivly and understoodÂ u cdnt use the b,wÂ ones so i was curious/if issues were being created by them /thanks for all the replys

42284. Re: [TS-520_820_530_830] TS-820: where does this connector go? :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-27 03:18:35 UTC
From: Mike
Topic: 42278 Message: 42284

This is another one of those questions that could have been easily answered IF the owner would had taken the time to read the operator's manual FIRST! Page 34, Figure 25 "Installing the CW Filter"clearly shows how to connect the plug you are referring to!

Mike

On 5/26/2013 4:48 PM, n6wk@... wrote:
> To Clarify, If you had the CW filter installed, you would move it over
> one or two pins.
> It tells about it towards the end of the user manual on page 34 of the
> one I have.
>
> 73,
> Gordon
> N6WK
>
> 73,
> Gordon
>
> On 5/26/2013 2:16 PM, coyoteinventor@... wrote:
>> I took out some boards for cleaning, but did not realize not all male
>> pins were used on this board, and now I'm not sure which ones to use.
>> :-(
>> Click here to see the photo of the connector in question
>> <http://www.361euros.com/skitch/image-20130526-170951.jpg>
>> I plugged the 3-pin female connector in using the right most 3 pins
>> (#1,2 & 3), leaving the 2 left ones (#4 & 5) unused, but I honestly
>> don't know which 3 of the 5 male pins were used before I unplugged it,
>> so I don't want to power up the machine just in case.
>> Any help will be GREATLY appreciated! :-)
>> --Cesar-- K1TNT
>>
>> [Non-text portions of this message have been removed]
>>
>>
> "Faced with the choice between changing one's mind and proving that there is no need to
do so, almost everyone gets busy on the proof."
> - John Kenneth Galbraith -
>

[Non-text portions of this message have been removed]

42285. Re: TS-820: where does this connector go? :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-27 04:35:22 UTC
From: coyoteinventor@ymail.com
Topic: 42278 Message: 42285

Thanks Gordon!

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> You have it in the correct spot.
> It goes on Pins 1,2, 3 there is nothing on pins 4 and 5
>
> 73,
> Gordon
> N6WK
>
>
> On 5/26/2013 2:16 PM, coyoteinventor@... wrote:
> >
> > I took out some boards for cleaning, but did not realize not all male
> > pins were used on this board, and now I'm not sure which ones to use.
> > :-(
> > Click here to see the photo of the connector in question
> > <http://www.361euros.com/skitch/image-20130526-170951.jpg>
> > I plugged the 3-pin female connector in using the right most 3 pins
> > (#1,2 & 3), leaving the 2 left ones (#4 & 5) unused, but I honestly
> > don't know which 3 of the 5 male pins were used before I unplugged it,
> > so I don't want to power up the machine just in case.
> > Any help will be GREATLY appreciated! :-)
> > --Cesar-- K1TNT
> >
> > [Non-text portions of this message have been removed]
> >
> >
>
> "Faced with the choice between changing one's mind and proving that there is no need to do so, almost everyone gets busy on the proof."
> - John Kenneth Galbraith -
>
> --
> E-Mail Disclaimer This communication and any documents, files, or previous e-mail messages attached to it constitute an electronic communication within the scope of the Electronic Communication Privacy Act, 18 USCA 2510.This communication may contain non-public, confidential, or legally privileged information intended for the sole use of the intended recipient(s). The unlawful interception, use or disclosure of such information is strictly prohibited under 18 USCA 2511. Any review, reliance, or distribution by others or forwarding without expressed permission is strictly prohibited. If you are not the intended recipient, please contact the sender and delete all copies.
>

42286. Re: My TS-820 got sick... :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-27 04:52:07 UTC
From: coyoteinventor@ymail.com
Topic: 42157 Message: 42286

Terry (K9TW),

I cleaned the AUX relay and the antenna TR relay, though both of them looked very clean. I even swapped them too, but that did not solve the problem, so I will look into measuring the AGC bus voltage next and double checking the regulated voltage (9v).

If I'm not getting the 3v on the AGC, what would you suggest I look into next?

Thanks again! ;-)

--Cesar-- K1TNT

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> You do not need a meter to clean the aux relay. If that doesnt work then a meter will be required to troubleshoot.
>
> --- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@" <coyoteinventor@> wrote:
> >
> > Terry (K9TW),
> >
> > Thanks for the long post!!! I really appreciate your time and effort to explain all this.
> >
> > I may give it a try this weekend (if I can borrow a better meter than the one I have) and see what I can find out. I'll post back with updates! :-)
> >
> > Thanks again!
> >
> > --Cesar-- K1TNT
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > >
> > > You do not need to locate the devices or measure Gate 2 voltage at them.
> > >
> > > There are several places you can measure the AGC bus voltage. On the IF board at Conn IF-3 Pin 11 for example. You need at least a 10 to 11 meg ohm meter. Even that meter will pull the voltage down some. Should have approx 3 vdc with RF gain full CW. If lower or missing common to start by measuring at it source and cleaning Aux relay contacts that switch it.
> > >
> > > A short lesson....The RF and IF amplifiers in the radio are all dual gate mosfets. We call these "gain controlled" stages. We use a variable positive dc voltage (approx 3.5vdc) applied to Gate 2 of these devices to automatically control the gain of these devices. We

call this control voltage AGC. This 3.5 vdc control voltage is derived from the RF-1 voltage on the AF-AVR board. With approx 3.5vdc applied to the Gate 2 of these devices they have maximum gain and as the voltage is lowered the gain is lowered (assuming all other required dc voltages to the devices is to spec).
> > >
> > > Two things normally lower this control voltage....receiving a strong off air signal and you running RF gain pot back CCW. The S-meter simply monitors the AGC bus line and when it sees the voltage go down it moves the meter up scale. Also, If the AF-AVR board fails you will have no RF-1 to supply the AGC bus so that is why I suggested you also measure it.
> > >
> > >
> > > You have two identical relays in the radio. One is the Aux relay that controls functions like switching the AGC and ALC bus line voltage and the other is your Antenna TR relay. These are plug in relays and very easy to remove and clean. Pull the Aux relay and carefully remove the plastic cover and clean the NC and NO contacts by wetting strip of printer paper with Deoxit and placing between the contacts and applying gentle pressure to the movable armature and pull the paper thru. Should see black traces on the paper. Do this several times and then blow out relay with canned air.
> > >
> > > When you report you had good receive one moment and then the level went down or became nearly non-existent and the S-meter is now pegged it sounds like the AGC bus voltage available at the IF Board and RF board to be applied to Gate 2 of the IF and Rf amp devices is very low.
> > >
> > > So I still recommend you check RF-1 on the AVR board and make sure it is available and set per the service manual. First step in alignment is checking and setting the regulated 9vdc and the RF-1 voltages.
> > >
> > > Remove the bottom cover of the radio after line cord has been unplugged and rig allowed to sit for awhile to ensure filter caps have bled off. The Aux Relay is about in center of radio next to two vertically oriented filter capacitors about on a line back from the VFO knob. The Ant relay is under a metal shield can in rear corner. You can remove both and clean contacts. Some folks rotate the position of these relays from time to time to place them in different service. Kens Electronics in Kalamazoo Mich has NOS replacements. He has a website. Not a bad idea to have a spare.
> > >
> > > Terry K9TW
> > > --- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@" <coyoteinventor@>
wrote:
> > > >
> > > > Terry (K9TW),
> > > > Thanks for your suggestions. After looking at the schematics for a while
> > > > I think I found what gate you are referring to; is it the gate2 on the
> > > > Q1 in the RF Unit board? Or is it Q8? I'll have to figure out where it
> > > > physically is located once I open up the rig. ;-)
> > > > I was not clear about the relays you were referring to. Can you tell me
> > > > in which board they are and maybe their component name/number so I can
> > > > try to find them in the schematic?
> > > >
> > > > Jay (kb9wwq): yes, the RF gain is all the way up. ;-)
> > > >

> > > > --Cesar-- K1TNT
> > > > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" wrote:
> > > > >
> > > > > If S-meter is pegged full scale right then your AGC bus is not seeing
> > > > RF-1 and you will have no receive as the RF and IF amp mosfets have very
> > > > low or no control voltage on Gate 2.
> > > > >
> > > > > Measure RF-1 and clean Aux relay contacts for starters.
> > > > >
> > > > > Terry K9TW
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@"
> > > > coyoteinventor@ wrote:
> > > > > >
> > > > > > Oh, and one more thing I forgot to mention, which might be
> > > > important.
> > > > > >
> > > > > > Even though I can not hear hardly anything, the needle in the meter
> > > > of the TS-820 moves all the way to the right (on all meter selections),
> > > > but when I transmit it goes back to the left and moves a little bit as I
> > > > talk.
> > > > > >
> > > > > > Thanks again!
> > > > > >
> > > > > > --Cesar-- K1TNT
> > > > > >
> > > > > >
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@" wrote:
> > > > > > >
> > > > > > > Hi group! I'm new in this forum and in ham radio, and I'm in need
> > > > of some help from the experts. ;-)
> > > > > > >
> > > > > > > I bought a Kenwood TS-820 a month ago or so, and it's been working
> > > > pretty well other than the common issues (drifting VFO, LCD going
> > > > on/off, and weakening final tubes) I have not had time to look into some
> > > > of the solutions mentioned in this forum.
> > > > > > >
> > > > > > > Last night, while using the radio, I stopped receiving for a few
> > > > seconds (everything went quiet) and then back to normal. Today I used
> > > > the radio for a while with no problems, then turned it off, and, when I
> > > > came back to it a couple of hours later, no receive at all, even after
> > > > fiddling with it for 15 minutes. :-(
> > > > > > >
> > > > > > > So, the symptoms: on SSB, I crank up the RF gain all the way up,
> > > > and the AF gain quite high, and I barely hear things (even the noise I
> > > > can hardly hear when usually, with these settings, I would be going
> > > > deaf!). If I crank up the AF gain all the way up, I get some type of
> > > > feedback (loud beep). If I switch to CW or TUN, I also get a loud
> > > > feedback (louder). If I transmit to a dummy load, I am getting less

> > > > than 50% of my normal transmit power.
> > > > > > > >
> > > > > > > > Any ideas what could have gone bad?
> > > > > > > >
> > > > > > > > Thanks in advance for your help!
> > > > > > > > >
> > > > > > > > --Cesar-- K1TNT
> > > > > > > >
> > > > > > >
> > > > > >
> > > > >
> > > >
> > > > [Non-text portions of this message have been removed]
> > > >
> > >
> >
>

42287. Re: [TS-520_820_530_830] TS-820: where does this connector go? :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-27 04:34:42 UTC
From: Wes Will
Topic: 42278 Message: 42287

On 05/26/2013 10:18 PM, Mike wrote:
> taken the time to read the operator's
> manual FIRST!

Well. I see that this list is not as I had first thought immune to the
"RTFM" rant that seems to be so prevalent elsewhere.

Sad. I had such high hopes.

42288. RE: [TS-520_820_530_830] TS-820: where does this connector go? :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-27 08:11:06 UTC
From: fpath fpath
Topic: 42278 Message: 42288

Wes,

I like most other people come to this forum to learn, teach and help each other. But if someone can't be bothered to read a manual first to try and understand the basics or attempt to understand their radio issue, it takes a lot of time to continually re-hash the same basic information. There has been numerous email attacks on the generous individuals that have the knowledge and ability to teach and help others. Saying that, if a person can't be bothered to take the time to read or download a manual and then to verbal someone for writing a lengthy email to help such individuals then this forum will suffer by losing the great individuals that give their time and knowledge freely. This does not include the people who ask where to download a good copy of the mauals, because they are at least trying! So please before taking the high road of "thought this forum was immune to RTMF", when making these statements you should consider just how much time people put into helping others and usually don't even receive a thanks once the information to repair their radio has been given. NOT that they are looking for thanks but just once in a while it is nice to get some acknowledgement instead of negativity. If a person can't read a manual on how to tune your radio when it is working how do you expect to teach someone to repair it. I have had one of these hams work with me on a radio for weeks just to repair the bloody thing, the only reason it took so long because it had someone with no knowledge or respect who stuffed it up in the first place.

73's
Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: wwill@siu.edu
Date: Sun, 26 May 2013 23:34:42 -0500
Subject: Re: [TS-520_820_530_830] TS-820: where does this connector go? :-(

On 05/26/2013 10:18 PM, Mike wrote:
> taken the time to read the operator's
> manual FIRST!

Well. I see that this list is not as I had first thought immune to the
"RTFM" rant that seems to be so prevalent elsewhere.

Sad. I had such high hopes.

[Non-text portions of this message have been removed]

42289. Re: My TS-820 got sick... :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-27 11:48:27 UTC
From: Terry Wagoner
Topic: 42157 Message: 42289

Relay cleaning was simple first step.

Now Go to IF board Conn IF-3

1. With power off measure AGC bus resistance at Pin 11. Should be approx 1.7 meg ohm.

2. With power on measure RF-1 at Pin 8. Should be approx 3.4vdc

3. With power on and RF gain pot full CW measure AGC at Pin 11. Should be approx 2.8vdc with a 11 meg VTVM and somewhat less with a 10 meg ohm DMM.

4. If RF-1 is OK and AGC is very low you can try applying 3vdc to Pin 11 and see if rig comes alive. If you do not have a bench supply then use a Radio Shack battery holder and series up couple of 1.5vdc C or D cells. Connect negative lead to chassis ground and touch positive 3vdc lead to Pin 11. Rig should come alive. Watch S meter and see if it comes off the peg.

Report back your findings.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@..." <coyoteinventor@...> wrote:
>
> Terry (K9TW),
>
> I cleaned the AUX relay and the antenna TR relay, though both of them looked very clean. I even swapped them too, but that did not solve the problem, so I will look into measuring the AGC bus voltage next and double checking the regulated voltage (9v).
>
> If I'm not getting the 3v on the AGC, what would you suggest I look into next?
>
> Thanks again! ;-)
>
> --Cesar-- K1TNT
>
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> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
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> > You do not need a meter to clean the aux relay. If that doesnt work then a meter will be required to troubleshoot.
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> > --- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@" <coyoteinventor@> wrote:
> > >
> > > Terry (K9TW),
> > >

> > > Thanks for the long post!!! I really appreciate your time and effort to explain all this.
> > >
> > > I may give it a try this weekend (if I can borrow a better meter than the one I have) and see what I can find out. I'll post back with updates! :-)
> > >
> > > Thanks again!
> > >
> > > --Cesar-- K1TNT
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> > > > A short lesson....The RF and IF amplifiers in the radio are all dual gate mosfets. We call these "gain controlled" stages. We use a variable positive dc voltage (approx 3.5vdc) applied to Gate 2 of these devices to automatically control the gain of these devices. We call this control voltage AGC. This 3.5 vdc control voltage is derived from the RF-1 voltage on the AF-AVR board. With approx 3.5vdc applied to the Gate 2 of these devices they have maximum gain and as the voltage is lowered the gain is lowered (assuming all other required dc voltages to the devices is to spec).
> > > >
> > > > Two things normally lower this control voltage....receiving a strong off air signal and you running RF gain pot back CCW. The S-meter simply monitors the AGC bus line and when it sees the voltage go down it moves the meter up scale. Also, If the AF-AVR board fails you will have no RF-1 to supply the AGC bus so that is why I suggested you also measure it.
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> > > > You have two identical relays in the radio. One is the Aux relay that controls functions like switching the AGC and ALC bus line voltage and the other is your Antenna TR relay. These are plug in relays and very easy to remove and clean. Pull the Aux relay and carefully remove the plastic cover and clean the NC and NO contacts by wetting strip of printer paper with Deoxit and placing between the contacts and applying gentle pressure to the movable armature and pull the paper thru. Should see black traces on the paper. Do this several times and then blow out relay with canned air.
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> > > > When you report you had good receive one moment and then the level went down or became nearly non-existent and the S-meter is now pegged it sounds like the AGC bus voltage available at the IF Board and RF board to be applied to Gate 2 of the IF and Rf amp devices is very low.
> > > >
> > > > So I still recommend you check RF-1 on the AVR board and make sure it is available

and set per the service manual. First step in alignment is checking and setting the regulated 9vdc and the RF-1 voltages.
> > > >
> > > > Remove the bottom cover of the radio after line cord has been unplugged and rig allowed to sit for awhile to ensure filter caps have bled off. The Aux Relay is about in center of radio next to two vertically oriented filter capacitors about on a line back from the VFO knob. The Ant relay is under a metal shield can in rear corner. You can remove both and clean contacts. Some folks rotate the position of these relays from time to time to place them in different service. Kens Electronics in Kalamazoo Mich has NOS replacements. He has a website. Not a bad idea to have a spare.
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> > > > Terry K9TW
> > > > --- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@" <coyoteinventor@> wrote:
> > > > >
> > > > > Terry (K9TW),
> > > > > Thanks for your suggestions. After looking at the schematics for a while
> > > > > I think I found what gate you are referring to; is it the gate2 on the
> > > > > Q1 in the RF Unit board? Or is it Q8? I'll have to figure out where it
> > > > > physically is located once I open up the rig. ;-)
> > > > > I was not clear about the relays you were referring to. Can you tell me
> > > > > in which board they are and maybe their component name/number so I can
> > > > > try to find them in the schematic?
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> > > > > Jay (kb9wwq): yes, the RF gain is all the way up. ;-)
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> > > > > --Cesar-- K1TNT
> > > > > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" wrote:
> > > > > >
> > > > > > If S-meter is pegged full scale right then your AGC bus is not seeing
> > > > > RF-1 and you will have no receive as the RF and IF amp mosfets have very
> > > > > low or no control voltage on Gate 2.
> > > > > >
> > > > > > Measure RF-1 and clean Aux relay contacts for starters.
> > > > > >
> > > > > > Terry K9TW
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@"
> > > > > coyoteinventor@ wrote:
> > > > > > >
> > > > > > > Oh, and one more thing I forgot to mention, which might be
> > > > > important.
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> > > > > > > Even though I can not hear hardly anything, the needle in the meter
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> > > > > but when I transmit it goes back to the left and moves a little bit as I
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> > > > > > >
> > > > > > > Thanks again!
> > > > > > >
> > > > > > > --Cesar-- K1TNT

> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@" wrote:
> > > > > > > >
> > > > > > > > Hi group! I'm new in this forum and in ham radio, and I'm in need
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> > > > > > > > I bought a Kenwood TS-820 a month ago or so, and it's been working
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> > > > > > > > Last night, while using the radio, I stopped receiving for a few
> > > > > seconds (everything went quiet) and then back to normal. Today I used
> > > > > the radio for a while with no problems, then turned it off, and, when I
> > > > > came back to it a couple of hours later, no receive at all, even after
> > > > > fiddling with it for 15 minutes. :-(
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> > > > > > > > So, the symptoms: on SSB, I crank up the RF gain all the way up,
> > > > > and the AF gain quite high, and I barely hear things (even the noise I
> > > > > can hardly hear when usually, with these settings, I would be going
> > > > > deaf!). If I crank up the AF gain all the way up, I get some type of
> > > > > feedback (loud beep). If I switch to CW or TUN, I also get a loud
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> > > > > than 50% of my normal transmit power.
> > > > > > > > >
> > > > > > > > Any ideas what could have gone bad?
> > > > > > > > >
> > > > > > > > Thanks in advance for your help!
> > > > > > > > >
> > > > > > > > --Cesar-- K1TNT
> > > > > > > > >
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> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > > [Non-text portions of this message have been removed]
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> >

42290. Re: My TS-820 got sick... :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-27 11:53:37 UTC
From: Terry Wagoner
Topic: 42157 Message: 42290

I forgot also measure voltage at Pin 6 AGL should be same as what you read at Pin 11 AGC.

Also apply temporary 3vdc to Pin 6 and see if S meter comes off the peg.

AGL and AGC at IF board should be same point electrically as they are connected in receive mode thru the NC contact of the aux relay you just cleaned. But possible to have bad molex connections at Relay board and/or IF board.

42291. Re: TS-520 Het Osc Measurements

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-27 14:25:08 UTC
From: adrian.langford@ymail.com
Topic: 42266 Message: 42291

Hi Terry,

Just a quick reminder first that mine is the 520SE with no ALC on 28MHz and just a few watts out on that band, but 100W on other bands,

I just duplicated your Het Osc measurements at TP3, using Tektronix 2225 50MHz scope for p-p measurements.

I recall in earlier post you said het osc would be about 1V, but your readings are quite a bit higher. The ones I actually measure on my 520SE are:

3.5 = 3.0V p-p = 1.06 rms
7.0 = 4.6V p-p = 1.63 rms
14.0 = 3.2V p-p = 1.13 rms
21.0 = 3.6V p-p = 1.27 rms
28.0 = 2.6V p-p = 0.92 rms
28.5 = 2.6V p-p = 0.92 rms
29.1 = 2.6V p-p = 0.92 rms

So as you observed before, the 28MHz Het looks a tad low and needs alignment, but I note all readings well below your 1.6 to 1.7V rms.

Took your idea to "sniff" out the RF with finals loaded and pushing out the 5W or so I manage on that band. Just wrapped a few turns round the patch co-ax to dummy load. I got 28.000MHz on the counter, and the Plate control is at the 28MHz position.

You may need to ignore the previous readings I gave you for the Driver valve output at DP. Experimenting with other bands I could see that the scope probe was badly detuning the circuit. On 21MHz where I can get 100W out I could only see about 40V p-p (not 160!). I couldn't even get ALC indication with the probe in place. Moving the Drive would increase DP but still well below spec. I didn't see same detuning effect on 7MHz and got the full spec DP volts.

I cleaned the band switch with Servisol at the wafer on the Drive coil board, but made no difference (in any case does that frequency counter 28MHz reading show the band switch is ok and switching in the Drive coil?).

So I am hoping it is just that the rig has not had any alignment for many years, and that this will bring 28MHz back to life.

Thanks for all your help and suggestions so far.

73s Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Adrian:
>

> OK-You talked me in to taking off covers of my TS-520.
>
> I looked at MD on scope (new Rigol DS1102E) and it is not clean sine wave on any band. It does not want to sync. It is not as dirty as TIF, but does have some harmonic content. My scope displays frequency as well as peak to peak voltage and when it does sync it displays 17 mhz for a moment so it has to be looking at 2x TIF signal. This surprises me a little as the HET osc injection level is significantly higher (as it should be)than the TIF signal level.
>
> I also connected my good counter at MD and it has trouble locking on it and I get flashes of 17 mhz so it is also seeing 2x TIF.
>
> As you note the rf signal at the 6146 control grids is a clean and stable sine wave. I checked MD on several bands and got same result.
>
> Here are my Het signal levels at TP-3 with 100mhz scope and with Boonton 92E. You will note that the P-P levels do not match the RMS levels. I suspect this is due to the harmonic content the scope is measuring?
>
> 3.5 = 5.36 p-p = 1.60 rms
> 7.0 = 5.44 p-p = 1.62 rms
> 14.0 = 5.68 p-p = 1.68 rms
> 21.0 = 5.65 p-p = 1.67 rms
> 28.0 = 5.72 p-p = 1.70 rms
> 28.5 = 5.68 p-p = 1.68 rms
> 29.1 = 5.65 p-p = 1.67 rms
>
> When you get your tuning tool suggest you adjust 10 meter Het Osc level to see if any improvement in DP level. I suspect not but easy first thing to do. After that try adjusting 10 meter Mixer and Drive coils.
>
> Also, have you looked at the 5 watt 10 meter output into dummy load with your counter? Can use a small 2 or 3 turn sniffer coil connected to your counter test lead and placed near slots in PA cage. Are you seeing 28 mhz? Is your Tank capacitor (plate tuning) at its normal position for 10 meter loading?
>
> Terry K9TW
>

42292. Re: [TS-520_820_530_830] Re: TS-820: where does this connector go? :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-27 13:20:13 UTC
From: Jerry Barr
Topic: 42278 Message: 42292

I learned a while back when tearing down my ford diesal that a handi camera helps get stuff back the way it was/ so now use it on anything i am taking apart

Jerry KJ6NTL

From: "coyoteinventor@..." <coyoteinventor@hotmail.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, May 26, 2013 9:35 PM
Subject: [TS-520_820_530_830] Re: TS-820: where does this connector go? :-(

Thanks Gordon!

--- In mailto:TS-520_820_530_830%40yahoogroups.com, n6wk@... wrote:
>
> You have it in the correct spot.
> It goes on Pins 1,2, 3 there is nothing on pins 4 and 5
>
> 73,
> Gordon
> N6WK
>
>
> On 5/26/2013 2:16 PM, coyoteinventor@... wrote:
> >
> > I took out some boards for cleaning, but did not realize not all male
> > pins were used on this board, and now I'm not sure which ones to use.
> > :-(
> > Click here to see the photo of the connector in question
> > <http://www.361euros.com/skitch/image-20130526-170951.jpg>
> > I plugged the 3-pin female connector in using the right most 3 pins
> > (#1,2 & 3), leaving the 2 left ones (#4 & 5) unused, but I honestly
> > don't know which 3 of the 5 male pins were used before I unplugged it,
> > so I don't want to power up the machine just in case.
> > Any help will be GREATLY appreciated! :-)
> > --Cesar-- K1TNT
> >
> > [Non-text portions of this message have been removed]
> >
> >
>
> "Faced with the choice between changing one's mind and proving that there is no need to do so, almost everyone gets busy on the proof."
> - John Kenneth Galbraith -
>
> --

> E-Mail Disclaimer This communication and any documents, files, or previous e-mail messages attached to it constitute an electronic communication within the scope of the Electronic Communication Privacy Act, 18 USCA 2510.This communication may contain non-public, confidential, or legally privileged information intended for the sole use of the intended recipient(s). The unlawful interception, use or disclosure of such information is strictly prohibited under 18 USCA 2511. Any review, reliance, or distribution by others or forwarding without expressed permission is strictly prohibited. If you are not the intended recipient, please contact the sender and delete all copies.
>

[Non-text portions of this message have been removed]

42293. Re: transceive cable for kenwood twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-27 17:28:34 UTC
From: famtechjl
Topic: 24774 Message: 42293

I too have the Twins set and am also missing the darn cable. Must be chronic with the T-599/R-599. I would be interested in throwing into a batch buy of these cables in order to get one. That's if we can find a point person to start it all up.

Regards,

Jim L.
WB6KVD

--- In TS-520_820_530_830@yahoogroups.com, "Osamu Hazawa" <pomerol@...> wrote:
>
> Hello All,
>
> I know there are needs and considerable frustration for missing cables.
> But I'm reluctant to start a new project because:
>
> - There were some people who ordered the cables but eventually
> dissapeared and did not pay for the shipping cost.
>
> - TMT guy who is in charge of item description (Web, auction) refused to
> correct
> misleading description (He uses "escutcheon" for the knob inlays).
>
> Osamu
>
> ----- Original Message -----
> From: Bob
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, February 04, 2010 1:55 AM
> Subject: [TS-520_820_530_830] Re: transceive cable for kenwood twins
>
>
>
>
> Osamu
> Thank You for the link. I did bring the site up in English using the
> Google tool. Once I figured out how to use it again. There was a contact
> page for ordering items. I put in my E-mail address and asked if they could
> get me the part number for the Cable ends only, and if they would sell the
> ends only to the cables. Now I don't know if it will work at all because
> once I sent the request the link dropped. So I did it again using the same
> page on the original site in Japanese. Osamu I am guessing you know how to
> navigate the site with out guessing where you are. I can not read or write
> in Japanese. If you could request the information and find out the costs of
> the connectors and the possibility of them selling them with out the cable
> it would be a great help.
> Thank You

> Bob Musser
> KB6KPK
> bmusser4@...
>
> --- In TS-520_820_530_830@yahoogroups.com, n6wk@ wrote:
> >
> > Osamu,
> > Any chance you could find out if just the Connectors are available?
> > If they are, I would be willing to send you the $$ to buy a few and of
> > course pay for any expenses to get them to me.
> > Please let me know. n6wk@
> >
> > thank you,
> > Gordon
> > N6WK
> >
> > Osamu Hazawa wrote:
> > > >
> > > >
> > > > Dave et al,
> > > >
> > > > >There was a thread on this list a few years ago about this company
> and a
> > > > >Japanese ham who was trying to get an order together for cables.
> > > >
> > > > I' m the person! B-)
> > > >
> > > > Osamu
> > > >
> > > > ----- Original Message -----
> > > > From: Dave
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > Sent: Wednesday, February 03, 2010 4:10 PM
> > > > Subject: Re: [TS-520_820_530_830] Re: transceive cable for kenwood
> twins
> > > >
> > > > I believe the cables are still available in Japan at TMT, but my
> reading
> > > > ability is really rusty:
> > > >
> > > > http://www.toyama-smenet.or.jp/~tmt/page1c.htm
> > > > <http://www.toyama-smenet.or.jp/%7Etmt/page1c.htm>
> > > >
> > > > This page has a bunch of stuff made of unobtainium :) Search for
> > > > '599'. The price is about US$85. They seem to be located in Toyama,
> > > > based on their telephone number and email address.
> > > >
> > > > There was a thread on this list a few years ago about this company and
> a

> > > Japanese ham who was trying to get an order together for cables.
> > > Unfortunately they only want to deal with domestic orders, so I think
> it
> > > really requires someone in Japan to make it happen.
> > >
> > > My missing treasure is a TV-502 cable.
> > >
> > > 73,
> > > - Dave W6OT
> > >
> > > Chuck Goelz wrote:
> > > >
> > > >
> > > > Bob,
> > > >
> > > > Apparently you are finding out just how scarce these are! As far as
> I
> > > > know, there aren't any. But, you probably CAN buy the whole cable,
> > > > provided that you are very patient and willing to pay the "fair
> market
> > > > price". I see the cables go up for sale on eBay periodically, as
> there
> > > > are sellers that recognize the value of splitting up the Twins... It
> > > > kind of hurts to see that this is profitable, but that's what the
> > > > market has done. Anyhow, I posted a couple of months ago that yet
> > > > another cable was available on eBay (I had no connection with the
> > > > sale!), just to let people like you know that it was available. They
> > > > tend to show up 2 or 3 time as year, so don't expect to be able to
> buy
> > > > one tomorrow... And when they do show up, they usually sell for $90
> to
> > > > $120. Really.
> > > >
> > > > For now, I'm keeping my cable. But I keep thinking that I might want
> > > > to sell my Twins (almost perfect T-599D with original S2001A finals,
> > > > R-599D w/ both 6m and 2m convertors, S-599, and THE cable) to buy a
> > > > new house or airplane or something... ;-) But my dilemma is that I
> > > > can't imagine breaking up such a beautiful set of Kenwood Twins just
> > > > to satisfy the existing market that is driven by the "I absolutely
> > > > NEED this piece at any ridiculous price to complete my station"
> > > > mentality. So I guess I'll just keep 'em... For now. (Wondering what
> > > > kind of responses I'll get from this one...)
> > > >
> > > > Anyhow, I hope someone else in the group has a better answer for
> you.
> > > > If you want the functionality that the cable provides, and
> originality
> > > > is not an issue, you could replace the connectors with something
> that
> > > > you CAN get mates for... And save the old connectors in case you get

> > > > lucky some day...
> > > >
> > > > Sincerely, good luck! And if you are not sure how to find the cable
> on
> > > > eBay, drop me an email...
> > > >
> > > > Cheers & 73,
> > > > Chuck WA3CEJ
> > > >
> > > > ----- Original Message -----
> > > > From: Bob
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > Sent: Tuesday, February 02, 2010 9:24 PM
> > > > Subject: [TS-520_820_530_830] Re: transceive cable for kenwood twins
> > > >
> > > > I have been looking for the ends to the connector cables the last
> > > > couple of months. I have hit every local shop here in Orange County
> > > > California and the surplus places etc. they have checked with there
> > > > suppliers and so on. The end of this process is that no one has
> found
> > > > the ends to the cable. IF someone has a connection and knows where
> the
> > > > ends of the cable for the 599 twins can be purchased let me know.
> > > > Thank You
> > > > KB6KPK
> > > > Bob Musser
> > > > Orange, CA.
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, pmarkavage
> > > > <pmarkavage@> wrote:
> > > > >
> > > > > Wiring diagram for the cable/connectors can be pulled from the
> > > > > receiver/transmitter schematics. If you don't use a transceiver
> cable,
> > > > > the receiver has a jumper plug in the remote socket (so you
> already
> > > have
> > > > > one plug) but the jumpers would have to be removed if you use it
> as
> > > one
> > > > > cable end.
> > > > >
> > > > > Pete, wa2cwa
> > > > >
> > > > > On Sun, 31 Jan 2010 22:54:14 -0500 yash@ writes:
> > > > > >

> > > > > > Looking at a set of 599D kenwood twins,seller does not have the
> 16
> > > > > > > pin cable that goes between the receiver and transmitter. needed
> for
> > > > > > > transceive operation. Dose anyone have a cable,or the 16 pin
> > > > > > > connectors and or a wiring diagram for the cable?
> > > > > > > any info on the cable assembly or a wiring diagram to build one,
> > > > > > > would really be greatful.
> > > > > > > thanks
> > > > > > > dale wt4t
> > > > > >
> > > > >
> > > >
> > > [
> > >
> >
>
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

42294. Re: TS-520 Het Osc Measurements

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-27 17:46:39 UTC
From: Terry Wagoner
Topic: 42266 Message: 42294

Adrian:

1. When I said 1 volt rms for Het Osc at TP-3 I am saying should not be very much less than that. On 40 meters you are right where I am at. My readings are approx .6 to .7 volts higher than yours. You can add a tenth or two for your bandwidth limitation of your scope. Likely just means I have just peaked them a little more up on the response slope. I use Boonton rf millivolt meter and then back off from peak approx 1dB. Absent instrumentation people will peak until they hear the oscillator stop and then back off 1 full turn or so.

2.OK just wanted to make sure the low RF output you were seeing was not due to being loaded on harmonic. With resonance occurring at normal indicated tank cap position and counter confirming fundamental frequency output not likely a problem inside the PA cage. Have you ever made a good visual inside the PA cage especially the two plate chokes and rf bypass cap? With all other bands good not likely a problem. No padder caps switched in on 10 meters, but suppose could have cold solder joint on the 10 meter tank coil?

3. Not unusual to slightly detune the Drive tube plate circuit when trying to measure rf levels at DP. Not sure why your scope probe works on 40 meters and not on 15 and 20 meters. Usually less effect at control grid of 6146 finals. The 830 Service manual recommends using a probe with no more than 3pf shunt capacitance. Might check your scope probe specs.

4. No you cannot tell by tank cap position if the Drive coil tuned circuit on 10 meters is being switched in. Really best indicator is when you can measure good 50 to 60 RF volts level at DP. I wish you had a 3 diode RF probe and VTVM to try to get that reading. Are you taking measurements with SG off, CW mode, Drive control and Car Level set for full scale ALC deflection? With my IM-18 and PK3 probe on 14.200 I measure very close to 60 rf volts and the ALC indication pulls off full scale meter deflection (350ma) down to approx 300ma when I apply the rf probe. The Boonton 92E pulls ALC indication down slightly less (310ma) and reads approx 58.5 rf volts. Note: using MA for reference.

Absent that will just have to wait until you get your tuning tools and then try peaking the 10 meters Drive and Mixer coils in TX mode and see if you can get some improvement.

I am reluctant to apply my new scope to the plate of the Driver tube to give you a comparison. It says max input voltage is 400vdc rms, but I am not ready to try that yet. I havent found the scope probe capacitance specs yet. Just had this scope for a couple of weeks and learning how to use it.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@..." <adrian@...> wrote:
>
> Hi Terry,
>
> Just a quick reminder first that mine is the 520SE with no ALC on 28MHz and just a few watts out on that band, but 100W on other bands,
>

> I just duplicated your Het Osc measurements at TP3, using Tektronix 2225 50MHz scope for p-p measurements.
>
> I recall in earlier post you said het osc would be about 1V, but your readings are quite a bit higher. The ones I actually measure on my 520SE are:
>
> 3.5 = 3.0V p-p = 1.06 rms
> 7.0 = 4.6V p-p = 1.63 rms
> 14.0 = 3.2V p-p = 1.13 rms
> 21.0 = 3.6V p-p = 1.27 rms
> 28.0 = 2.6V p-p = 0.92 rms
> 28.5 = 2.6V p-p = 0.92 rms
> 29.l = 2.6V p-p = 0.92 rms
>
> So as you observed before, the 28MHz Het looks a tad low and needs alignment, but I note all readings well below your 1.6 to 1.7V rms.
>
> Took your idea to "sniff" out the RF with finals loaded and pushing out the 5W or so I manage on that band. Just wrapped a few turns round the patch co-ax to dummy load. I got 28.000MHz on the counter, and the Plate control is at the 28MHz position.
>
> You may need to ignore the previous readings I gave you for the Driver valve output at DP. Experimenting with other bands I could see that the scope probe was badly detuning the circuit. On 21MHz where I can get 100W out I could only see about 40V p-p (not 160!). I couldn't even get ALC indication with the probe in place. Moving the Drive would increase DP but still well below spec. I didn't see same detuning effect on 7MHz and got the full spec DP volts.
>
> I cleaned the band switch with Servisol at the wafer on the Drive coil board, but made no difference (in any case does that frequency counter 28MHz reading show the band switch is ok and switching in the Drive coil?).
>
> So I am hoping it is just that the rig has not had any alignment for many years, and that this will bring 28MHz back to life.
>
> Thanks for all your help and suggestions so far.
>
> 73s Adrian G4IQW
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Adrian:
> >
> > OK-You talked me in to taking off covers of my TS-520.
> >
> > I looked at MD on scope (new Rigol DS1102E) and it is not clean sine wave on any band. It does not want to sync. It is not as dirty as TIF, but does have some harmonic content. My scope displays frequency as well as peak to peak voltage and when it does sync it displays 17 mhz for a moment so it has to be looking at 2x TIF signal. This surprises me a little as the HET osc injection level is significantly higher (as it should be)than the TIF

signal level.
> >
> > I also connected my good counter at MD and it has trouble locking on it and I get flashes of 17 mhz so it is also seeing 2x TIF.
> >
> > As you note the rf signal at the 6146 control grids is a clean and stable sine wave. I checked MD on several bands and got same result.
> >
> > Here are my Het signal levels at TP-3 with 100mhz scope and with Boonton 92E. You will note that the P-P levels do not match the RMS levels. I suspect this is due to the harmonic content the scope is measuring?
> >
> > 3.5 = 5.36 p-p = 1.60 rms
> > 7.0 = 5.44 p-p = 1.62 rms
> > 14.0 = 5.68 p-p = 1.68 rms
> > 21.0 = 5.65 p-p = 1.67 rms
> > 28.0 = 5.72 p-p = 1.70 rms
> > 28.5 = 5.68 p-p = 1.68 rms
> > 29.1 = 5.65 p-p = 1.67 rms
> >
> > When you get your tuning tool suggest you adjust 10 meter Het Osc level to see if any improvement in DP level. I suspect not but easy first thing to do. After that try adjusting 10 meter Mixer and Drive coils.
> >
> > Also, have you looked at the 5 watt 10 meter output into dummy load with your counter? Can use a small 2 or 3 turn sniffer coil connected to your counter test lead and placed near slots in PA cage. Are you seeing 28 mhz? Is your Tank capacitor (plate tuning) at its normal position for 10 meter loading?
> >
> > Terry K9TW
> >
>

42295. Re: Reading manuals

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-27 17:30:19 UTC
From: Wes Will
Topic: 42295 Message: 42295

On 05/27/2013 08:51 AM, Mike wrote:
> Wes,
>
> You said in response to ... statement of reading the operator's manual:
>
> "Well. I see that this list is not as I had first thought immune to the
> "RTFM" rant that seems to be so prevalent elsewhere."
>
> I suspect you have no clue how many times people/hams ...

I do not suspect, but KNOW all too well, that you would be about as wrong as it is possible to be about that.

For the last fifteen years before being medically retired, I was all that the bean-counters and short-sighted politicians had left us of Tier Three technical support, as well as being in charge of all IT customer service center staff training for the IT department Hell(sic) Desk of a midwestern state-owned university; student population ca. 20,000 and a faculty and staff of around 7,000.

Plus another roughly 15,000 retirees which we also had to support, none of which to my knowledge could even FIND either one of a manual, or their own hind end, even with the aid of approach control radar and GPS capability.

I KNOW this frustration in my very bones.

It just is NOT worth the electrons required to send it to add in one more snarkish "RTFM" post, particularly when someone had already given the manual page and paragraph in a much more HELPFUL fashion in their post.

Just shouting "RTFM" over and over is simply a waste of time and bandwidth.

Next time, try the, "That's in the manual, page X, paragraph Y, where it says to .... " and skip the "RTFM YOU LAZY DOLT!" post. Or just send it to me if you have to vent, since I do understand the desire to strangle the lazy dolts.

Posting another "RTFM" to the list won't help; it only adds to the clutter.

Those who read manuals and How-To's, already do.

Those who don't, never will, and telling them to likely makes them dig in their heels even more deeply.

You may lead someone to knowledge, but you CANNOT make them THINK.

Thanks to everyone here already for the knowledge. Between the files area and the archives of previous trouble-shooting sessions, I may not need to ask a single question on the list.

The level of expertise here is higher than almost anywhere else I've found, on almost any subject matter. Give yourselves Kudos.

--
Wes Will
N9KDY

(The physics people on another list I'm on have you beat, but the --average-- education level on there is a double-Ph.D. Makes me feel down-right stupid and seriously under-eddicated with just a Master's.)

42296. Re: TS-520 Het Osc Measurements

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-27 18:29:42 UTC
From: adrian.langford@ymail.com
Topic: 42266 Message: 42296

Hi Terry

This is all really useful and educational for me. I spent my youth building electronics projects do valves were always a closed book apart from experimenting with old small CRTs! It's fascinating to get to grips now with glass circuitry.

You may have put your finger on problem with scope probe. I am now away from bench for a few days, but I have a feeling the specs on the probe were not in single digit pF. I can check online with the probe supplier later.

For the DP voltage measurements you have flagged another error on my part. Yes I was measuring in CW and with SG off after tuning, but I was not taking ALC to full scale, instead setting carrier to where I would normally set when tuning the rig for operating with the needle a little past the ALC scale (on bands other than 10 metres the carrier needs to be around 9 o'clock to achieve this). When I'm back I'll see how this affects DP if I FSD the ALC. I don't think it will make much difference as when I was measuring low DP on higher bands I'm pretty sure I experimented with increasing carrier and didn't see more than very small change in DP.

So I'll go QRT for now on this thread, but am now really looking forward to doing a good alignment on all the coils. The tool should be waiting for me next weekend.

Thanks again and 73s

Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Adrian:
>
> 1. When I said 1 volt rms for Het Osc at TP-3 I am saying should not be very much less than that. On 40 meters you are right where I am at. My readings are approx .6 to .7 volts higher than yours. You can add a tenth or two for your bandwidth limitation of your scope. Likely just means I have just peaked them a little more up on the response slope. I use Boonton rf millivolt meter and then back off from peak approx 1dB. Absent instrumentation people will peak until they hear the oscillator stop and then back off 1 full turn or so.
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a probe with no more than 3pf shunt capacitance. Might check your scope probe specs.
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>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> >
> > Hi Terry,
> >
> > Just a quick reminder first that mine is the 520SE with no ALC on 28MHz and just a few watts out on that band, but 100W on other bands,
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> > I just duplicated your Het Osc measurements at TP3, using Tektronix 2225 50MHz scope for p-p measurements.
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> > I recall in earlier post you said het osc would be about 1V, but your readings are quite a bit higher. The ones I actually measure on my 520SE are:
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> > 29.1 = 2.6V p-p = 0.92 rms
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> > So as you observed before, the 28MHz Het looks a tad low and needs alignment, but I note all readings well below your 1.6 to 1.7V rms.
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> > Thanks for all your help and suggestions so far.
> >
> > 73s Adrian G4IQW
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> > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
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> > > Adrian:
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> > > OK-You talked me in to taking off covers of my TS-520.
> > >
> > > I looked at MD on scope (new Rigol DS1102E) and it is not clean sine wave on any band. It does not want to sync. It is not as dirty as TIF, but does have some harmonic content. My scope displays frequency as well as peak to peak voltage and when it does sync it displays 17 mhz for a moment so it has to be looking at 2x TIF signal. This surprises me a little as the HET osc injection level is significantly higher (as it should be)than the TIF signal level.
> > >
> > > I also connected my good counter at MD and it has trouble locking on it and I get flashes of 17 mhz so it is also seeing 2x TIF.
> > >
> > > As you note the rf signal at the 6146 control grids is a clean and stable sine wave. I checked MD on several bands and got same result.
> > >
> > > Here are my Het signal levels at TP-3 with 100mhz scope and with Boonton 92E. You will note that the P-P levels do not match the RMS levels. I suspect this is due to the harmonic content the scope is measuring?
> > >
> > > 3.5 = 5.36 p-p = 1.60 rms
> > > 7.0 = 5.44 p-p = 1.62 rms
> > > 14.0 = 5.68 p-p = 1.68 rms
> > > 21.0 = 5.65 p-p = 1.67 rms
> > > 28.0 = 5.72 p-p = 1.70 rms
> > > 28.5 = 5.68 p-p = 1.68 rms
> > > 29.1 = 5.65 p-p = 1.67 rms
> > >
> > > When you get your tuning tool suggest you adjust 10 meter Het Osc level to see if any improvement in DP level. I suspect not but easy first thing to do. After that try adjusting 10 meter Mixer and Drive coils.
> > >

> > > Also, have you looked at the 5 watt 10 meter output into dummy load with your counter? Can use a small 2 or 3 turn sniffer coil connected to your counter test lead and placed near slots in PA cage. Are you seeing 28 mhz? Is your Tank capacitor (plate tuning) at its normal position for 10 meter loading?
> > >
> > > Terry K9TW
> > >
> >
>

42297. Re: TS-520 Het Osc Measurements

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-27 20:43:02 UTC
From: Terry Wagoner
Topic: 42266 Message: 42297

Adrian:

Yes you are correct it wont make much difference. Important to just be consistent on your measuring procedure from band to band.

Several opinions on how Kenwood took the baseline TX Level Diagram voltages. No one we can ask. Look at each Service manual from the 520 thru the 830 and you will see varying levels of descriptions of the test conditions that were used. There are also some obvious errors on them. Clearly all were taken around 14.200 mhz. This makes sense as in the middle of the rigs band coverage.

At a minimum I would make sure that the ALC indication was no less than at the far right maximum end of the black rectangular ALC range on the meter.

I always just set Car pot and peak Drive for meter full scale deflection (FSD). I have found that with a fresh Driver tube and spec dc tube voltages you should be able to easily get to this level of ALC indication and it should not drift down while keyed to take your reading. With exception of 10 meters you can usually get this with Car Level pot no more than 1100 to 1200 position.

I have done some measuring of RF drive voltage at the 6146 control grids with various settings of the ALC indication including 50% of ALC box, 100% of ALC box, and Panel Meter FSD. I got no more than 0.50 rf volts difference. I also measured grid current and found it ranged from a low of 30ua at 50% of ALC box, 32 ua at 100% of ALC box, and a high of 34ua at panel meter FSD on 20 meters. That is micro-ampere and not milliampere.

I did this because the owners manual up until the 530/830 always confused people as to where in the panel meter range you should peak the Drive Control. With the 830 they tell you to keep it inside the ALC box. They just had to pick a spot. I have even seen You Tube hybrid loading videos that caution that you should make sure the ALC indication remains at 50% of the ALC box or to never exceed the maximum range of the box as if something terrible would happen if it exceeded the far right end of the ALC range. See them go back and forth adjusting it to keep it in the ALC box. Even see them go back and check it again when all done loading to 100 watts out. Where in the manual does it tell anyone to do that? This can get them in trouble as they may have no ALC indication now due to negative feedback at 200ma (subject for another post). This is all silliness.

I always teach to increase Car Pot to give yourself something to look at and to work with. So 2/3 to 3/4 FSD is what I do when loading my rigs. All you are doing is peaking parallel resonant circuits. You dont have to worry about exceeding 6146 control grid current. This is not a Class C grid leak bias transmitter of old days where you had to make sure you did not exceed the 6146 grid current of 3 or 4 ma. You will never see more than approx 45ua grid current. The minute the control grid goes positive with respect to the cathode and grid current starts to flow the ALC bus voltage is reduced, TIF signal is reduced, and grid current never exceed ua levels. What you are looking at and peaking on the meter is the ALC bus line control voltage going down in response to this ua grid current flow from cathode to grid. At resonance of the tuned circuits you will have maximum rf drive voltage which

means maximum difference between control grid rf drive and DC bias offset. This means grid is at maximum positive voltage relative to the cathode on the positive envelope of the drive signal. You are not establishing some maximum level of grid current.

Anyway if you want to run TX level diagram by peaking the ALC at far end of ALC box you should be OK doing that. As I said I like to run it to FSD which tells me Driver stage is capable of doing so and sustaining it without drifting off. Just let Driver Tube rest a little in between readings on any given band and when switching between the bands. It is running Class A at or slightly above max 27ma plate current so will run pretty hot. I have never lost one running TX level diagrams, but it certainly is possible given how hard tube is being run. I keep several spares on hand.

Terry K9TW

>

42298. Re: [TS-520_820_530_830] TS-820: where does this connector go? :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-27 21:54:25 UTC
From: John Davidson
Topic: 42278 Message: 42298

I don't get that attitude. Maybe the best advice you can get is "read the manual first" ! It encourages you to think before you ask for help you may not really need and maybe it will help you keep from looking bad.

From: Wes Will <wwill@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, May 27, 2013 12:34 AM
Subject: Re: [TS-520_820_530_830] TS-820: where does this connector go? :-(

On 05/26/2013 10:18 PM, Mike wrote:
> taken the time to read the operator's
> manual FIRST!

Well. I see that this list is not as I had first thought immune to the "RTFM" rant that seems to be so prevalent elsewhere.

Sad. I had such high hopes.

[Non-text portions of this message have been removed]

42299. Re: [TS-520_820_530_830] Re: transceive cable for kenwood twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-28 00:02:05 UTC
From: Jan Servaites
Topic: 24774 Message: 42299

If there's a vendor that sells the connectors, we can make up our own
cables.
I'll look around again to find a vendor.
Jan N8CBX

famtechjl wrote:

>
>
> I too have the Twins set and am also missing the darn cable. Must be
> chronic with the T-599/R-599. I would be interested in throwing into a
> batch buy of these cables in order to get one. That's if we can find a
> point person to start it all up.
>
> Regards,
>
> Jim L.
> WB6KVD
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Osamu Hazawa"
> <pomerol@...> wrote:
> >
> > Hello All,
> >
> > I know there are needs and considerable frustration for missing cables.
> > But I'm reluctant to start a new project because:
> >
> > - There were some people who ordered the cables but eventually
> > dissapeared and did not pay for the shipping cost.
> >
> > - TMT guy who is in charge of item description (Web, auction)
> refused to
> > correct
> > misleading description (He uses "escutcheon" for the knob inlays).
> >
> > Osamu
> >
> > ----- Original Message -----
> > From: Bob
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Thursday, February 04, 2010 1:55 AM
> > Subject: [TS-520_820_530_830] Re: transceive cable for kenwood twins
> >

> >
> >
> > Osamu
> > Thank You for the link. I did bring the site up in English using the
> > Google tool. Once I figured out how to use it again. There was a
> contact
> > page for ordering items. I put in my E-mail address and asked if
> they could
> > get me the part number for the Cable ends only, and if they would
> sell the
> > ends only to the cables. Now I don't know if it will work at all
> because
> > once I sent the request the link dropped. So I did it again using
> the same
> > page on the original site in Japanese. Osamu I am guessing you know
> how to
> > navigate the site with out guessing where you are. I can not read or
> write
> > in Japanese. If you could request the information and find out the
> costs of
> > the connectors and the possibility of them selling them with out the
> cable
> > it would be a great help.
> > Thank You
> > Bob Musser
> > KB6KPK
> > bmusser4@...
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@ wrote:
> > >
> > > Osamu,
> > > Any chance you could find out if just the Connectors are available?
> > > If they are, I would be willing to send you the $$ to buy a few and of
> > > course pay for any expenses to get them to me.
> > > Please let me know. n6wk@
> > >
> > > thank you,
> > > Gordon
> > > N6WK
> > >
> > > Osamu Hazawa wrote:
> > > >
> > > >
> > > > Dave et al,
> > > >
> > > > >There was a thread on this list a few years ago about this company
> > and a
> > > > > >Japanese ham who was trying to get an order together for cables.
> > > >

> > > > I' m the person! B-)
> > > >
> > > > Osamu
> > > >
> > > > ----- Original Message -----
> > > > From: Dave
> > > > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > Sent: Wednesday, February 03, 2010 4:10 PM
> > > > Subject: Re: [TS-520_820_530_830] Re: transceive cable for kenwood
> > twins
> > > > >
> > > > > I believe the cables are still available in Japan at TMT, but my
> > reading
> > > > > ability is really rusty:
> > > > >
> > > > > http://www.toyama-smenet.or.jp/~tmt/page1c.htm
> <http://www.toyama-smenet.or.jp/%7Etmt/page1c.htm>
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> > > > > This page has a bunch of stuff made of unobtainium :) Search for
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> > > > > Japanese ham who was trying to get an order together for cables.
> > > > > Unfortunately they only want to deal with domestic orders, so I
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> > > it
> > > > > really requires someone in Japan to make it happen.
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> > > > > My missing treasure is a TV-502 cable.
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> > > > > 73,
> > > > > - Dave W6OT
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> > > > > Chuck Goelz wrote:
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> > > > > > Bob,
> > > > > >
> > > > > > Apparently you are finding out just how scarce these are! As
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> > > I
> > > > > > know, there aren't any. But, you probably CAN buy the whole cable,
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> > > > > price". I see the cables go up for sale on eBay periodically, as
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> > > > > are sellers that recognize the value of splitting up the
> Twins... It
> > > > > kind of hurts to see that this is profitable, but that's what the
> > > > > market has done. Anyhow, I posted a couple of months ago that yet
> > > > > another cable was available on eBay (I had no connection with the
> > > > > sale!), just to let people like you know that it was
> available. They
> > > > > tend to show up 2 or 3 time as year, so don't expect to be
> able to
> > buy
> > > > > one tomorrow... And when they do show up, they usually sell
> for $90
> > to
> > > > > $120. Really.
> > > > >
> > > > > For now, I'm keeping my cable. But I keep thinking that I
> might want
> > > > > to sell my Twins (almost perfect T-599D with original S2001A
> finals,
> > > > > R-599D w/ both 6m and 2m convertors, S-599, and THE cable) to
> buy a
> > > > > new house or airplane or something... ;-) But my dilemma is that I
> > > > > can't imagine breaking up such a beautiful set of Kenwood
> Twins just
> > > > > to satisfy the existing market that is driven by the "I absolutely
> > > > > NEED this piece at any ridiculous price to complete my station"
> > > > > mentality. So I guess I'll just keep 'em... For now.
> (Wondering what
> > > > > kind of responses I'll get from this one...)
> > > > >
> > > > > Anyhow, I hope someone else in the group has a better answer for
> > you.
> > > > > If you want the functionality that the cable provides, and
> > originality
> > > > > is not an issue, you could replace the connectors with something
> > that
> > > > > you CAN get mates for... And save the old connectors in case
> you get
> > > > > lucky some day...
> > > > >
> > > > > Sincerely, good luck! And if you are not sure how to find the
> cable
> > on
> > > > > eBay, drop me an email...
> > > > >
> > > > > Cheers & 73,
> > > > > Chuck WA3CEJ
> > > > >

> > > > > ----- Original Message -----
> > > > > From: Bob
> > > > > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > Sent: Tuesday, February 02, 2010 9:24 PM
> > > > > Subject: [TS-520_820_530_830] Re: transceive cable for kenwood
> twins
> > > > > >
> > > > > I have been looking for the ends to the connector cables the last
> > > > > couple of months. I have hit every local shop here in Orange
> County
> > > > > California and the surplus places etc. they have checked with
> there
> > > > > suppliers and so on. The end of this process is that no one has
> > found
> > > > > the ends to the cable. IF someone has a connection and knows
> where
> > the
> > > > > ends of the cable for the 599 twins can be purchased let me know.
> > > > > Thank You
> > > > > KB6KPK
> > > > > Bob Musser
> > > > > Orange, CA.
> > > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, pmarkavage
> > > > > <pmarkavage@> wrote:
> > > > > >
> > > > > > Wiring diagram for the cable/connectors can be pulled from the
> > > > > > receiver/transmitter schematics. If you don't use a transceiver
> > cable,
> > > > > > the receiver has a jumper plug in the remote socket (so you
> > already
> > > > > have
> > > > > > one plug) but the jumpers would have to be removed if you
> use it
> > as
> > > > > one
> > > > > > cable end.
> > > > > >
> > > > > > Pete, wa2cwa
> > > > > >
> > > > > > On Sun, 31 Jan 2010 22:54:14 -0500 yash@ writes:
> > > > > > >
> > > > > > > Looking at a set of 599D kenwood twins,seller does not
> have the

> > 16
> > > > > > > pin cable that goes between the receiver and transmitter.
> needed
> > for
> > > > > > > transceive operation. Dose anyone have a cable,or the 16 pin
> > > > > > > connectors and or a wiring diagram for the cable?
> > > > > > > any info on the cable assembly or a wiring diagram to
> build one,
> > > > > > > would really be greatful.
> > > > > > > thanks
> > > > > > > dale wt4t
> > > > > > >
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> >
> > [Non-text portions of this message have been removed]
> >
>
>

42300. Re: [TS-520_820_530_830] Re: TS-520 Het Osc Measurements

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-27 23:40:40 UTC
From: Wes Will
Topic: 42266 Message: 42300

On 05/27/2013 03:43 PM, Terry Wagoner wrote:
> I keep several spares on hand.

Is this a "generally recommended practice" or something needed only when doing voltage levels or realignment?

If a general sort of recommendation, which of the myriad tube suppliers that crawl out of the woodwork on a general search of the web are the most reliable for a U.S. purchaser? I've spotted some recommendations in the archives, but there might be others that people have good luck with, and that haven't yet made it there.

In any case I'll be getting at least one driver tube for a spare, and making a clip for it inside the chassis somewhere, lots of room in the box, so I'll always know where it is....

Also, in re cooling, the big fan in there seems to be working fine, but does it actually cool enough? Would increasing the cooling be of enough benefit to make it worth a small amount of effort? I can cabbage together a small squirrel-cage external blower to increase the airflow a lot, if it will help. (Allowing that this thing ever works again, of course....) Tube life is for me a definite consideration.

--
W Will
N9KDY

42301. Re: [TS-520_820_530_830] Re: transceive cable for kenwood twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-28 01:01:57 UTC
From: pmarkavage@...
Topic: 24774 Message: 42301

Seems we go through this exercise periodically.
Hirose Connectors:
http://www.hirose-connectors.com/
Digi-Key and Mouser are two major distributors.

Pete, wa2cwa

On Mon, 27 May 2013 20:02:05 -0400 Jan Servaites <jservaites@...>
writes:
> If there's a vendor that sells the connectors, we can make up our own
>
> cables.
> I'll look around again to find a vendor.
> Jan N8CBX
>
> famtechjl wrote:
>
> >
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> > I too have the Twins set and am also missing the darn cable. Must
> be
> > chronic with the T-599/R-599. I would be interested in throwing
> into a
> > batch buy of these cables in order to get one. That's if we can
> find a
> > point person to start it all up.
> >
> > Regards,
> >
> > Jim L.
> > WB6KVD
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Osamu Hazawa"
> > <pomerol@...> wrote:
> > >
> > > Hello All,
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> > > I know there are needs and considerable frustration for missing
> cables.
> > > But I'm reluctant to start a new project because:
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> > > - There were some people who ordered the cables but eventually
> > > dissapeared and did not pay for the shipping cost.
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> > > - TMT guy who is in charge of item description (Web, auction)
> > refused to
> > > correct
> > > misleading description (He uses "escutcheon" for the knob
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> > >
> > > Osamu
> > >
> > > ----- Original Message -----
> > > From: Bob
> > > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Thursday, February 04, 2010 1:55 AM
> > > Subject: [TS-520_820_530_830] Re: transceive cable for kenwood
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> > > Osamu
> > > Thank You for the link. I did bring the site up in English using
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> the
> > cable
> > > it would be a great help.
> > > Thank You

> > > Bob Musser
> > > KB6KPK
> > > bmusser4@...
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@ wrote:
> > > >
> > > > Osamu,
> > > > Any chance you could find out if just the Connectors are
> available?
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> few and of
> > > > course pay for any expenses to get them to me.
> > > > Please let me know. n6wk@
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> > > > thank you,
> > > > Gordon
> > > > N6WK
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> > > > Osamu Hazawa wrote:
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> > > > > Dave et al,
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> > > > > >There was a thread on this list a few years ago about this
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> > > > >
> > > > > I' m the person! B-)
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> > > > > ----- Original Message -----
> > > > > From: Dave
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > Sent: Wednesday, February 03, 2010 4:10 PM
> > > > > Subject: Re: [TS-520_820_530_830] Re: transceive cable for
> kenwood
> > > twins
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> > > > > I believe the cables are still available in Japan at TMT,
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> > > > > http://www.toyama-smenet.or.jp/~tmt/page1c.htm

> > <http://www.toyama-smenet.or.jp/%7Etmt/page1c.htm>
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> > > > >
> > > > > This page has a bunch of stuff made of unobtainium :) Search
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> > > > > Unfortunately they only want to deal with domestic orders,
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> > > > > My missing treasure is a TV-502 cable.
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> > > > > 73,
> > > > > - Dave W6OT
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> > > > > Chuck Goelz wrote:
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> > > > > > Bob,
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> > > > > > Apparently you are finding out just how scarce these are!
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> > > > > > For now, I'm keeping my cable. But I keep thinking that I
>
> > might want
> > > > > > to sell my Twins (almost perfect T-599D with original
> S2001A
> > finals,
> > > > > > R-599D w/ both 6m and 2m convertors, S-599, and THE cable)
> to
> > buy a
> > > > > > new house or airplane or something... ;-) But my dilemma
> is that I
> > > > > > can't imagine breaking up such a beautiful set of Kenwood
>
> > Twins just
> > > > > > to satisfy the existing market that is driven by the "I
> absolutely
> > > > > > NEED this piece at any ridiculous price to complete my
> station"
> > > > > > mentality. So I guess I'll just keep 'em... For now.
> > (Wondering what
> > > > > > kind of responses I'll get from this one...)
> > > > > >
> > > > > > Anyhow, I hope someone else in the group has a better
> answer for
> > > you.
> > > > > > If you want the functionality that the cable provides,
> and
> > > originality
> > > > > > is not an issue, you could replace the connectors with
> something
> > > that
> > > > > > you CAN get mates for... And save the old connectors in
> case
> > you get
> > > > > > lucky some day...
> > > > > >
> > > > > > Sincerely, good luck! And if you are not sure how to find
> the

> > cable
> > > on
> > > > > > eBay, drop me an email...
> > > > > >
> > > > > > Cheers & 73,
> > > > > > Chuck WA3CEJ
> > > > > >
> > > > > > ----- Original Message -----
> > > > > > From: Bob
> > > > > > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > Sent: Tuesday, February 02, 2010 9:24 PM
> > > > > > Subject: [TS-520_820_530_830] Re: transceive cable for
> kenwood
> > twins
> > > > > > >
> > > > > > I have been looking for the ends to the connector cables
> the last
> > > > > > couple of months. I have hit every local shop here in
> Orange
> > County
> > > > > > California and the surplus places etc. they have checked
> with
> > there
> > > > > > suppliers and so on. The end of this process is that no
> one has
> > > found
> > > > > > the ends to the cable. IF someone has a connection and
> knows
> > where
> > > the
> > > > > > ends of the cable for the 599 twins can be purchased let
> me know.
> > > > > > Thank You
> > > > > > KB6KPK
> > > > > > Bob Musser
> > > > > > Orange, CA.
> > > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, pmarkavage
> > > > > > <pmarkavage@> wrote:
> > > > > > >
> > > > > > > Wiring diagram for the cable/connectors can be pulled
> from the
> > > > > > receiver/transmitter schematics. If you don't use a
> transceiver

> > > cable,
> > > > > > > the receiver has a jumper plug in the remote socket (so
> you
> > > already
> > > > > have
> > > > > > > one plug) but the jumpers would have to be removed if
> you
> > use it
> > > as
> > > > > one
> > > > > > > cable end.
> > > > > > >
> > > > > > > Pete, wa2cwa
> > > > > > >
> > > > > > > On Sun, 31 Jan 2010 22:54:14 -0500 yash@ writes:
> > > > > > > >
> > > > > > > Looking at a set of 599D kenwood twins,seller does not
>
> > have the
> > > 16
> > > > > > > pin cable that goes between the receiver and
> transmitter.
> > needed
> > > for
> > > > > > > transceive operation. Dose anyone have a cable,or the
> 16 pin
> > > > > > > connectors and or a wiring diagram for the cable?
> > > > > > > any info on the cable assembly or a wiring diagram to
>
> > build one,
> > > > > > > would really be greatful.
> > > > > > > thanks
> > > > > > > dale wt4t
> > > > > > >
> > > > > >
> > > > >
> > > > > [
> > > > >
> > > >
> > >
> > >
> > >
> > >
> > >
> > >
> > > [Non-text portions of this message have been removed]
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> ------------------------------------
>
> Yahoo! Groups Links
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42302. Re: TS-520 Het Osc Measurements

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-28 01:12:44 UTC
From: Terry Wagoner
Topic: 42266 Message: 42302

If you are asking about 12BY7A Driver tubes I have never purchased a new one for a Kenwood Hybrid. Cant recommend a source. Running TX Level Diagrams on all bands is probably most severe service they see. Lots of key down time to get complete set of rf drive readings on all bands.

This tube was originally used in the 50s as a TV video amp. Hams have been using them as a rf driver tube for pair of 6146 finals for years. Many of the commercial boatanchor transmitters used it.

I suppose I may have bought a new one or two back in the 60s, but all the ones I have now are supposed to be NOS tubes that I have picked up at hamfests and off Ebay. I service these rigs so I keep a stock for customers in addition for my operating TS-830 rigs.

A 12BY7A lasts quite some time considering they are biased Class A and are being pushed hard in hybrid service. If you measure cathode voltage and the cathode resistance and apply ohms law you will see that we are right at the recommended maximum plate current listed on tube data sheets. As they age and emission starts to fall off it first manifests itself on 10 meters. You wont be able to get as much ALC indication on key down and the ALC indication will begin to drift low under key down.

I dont think you need any additional fan. Just maintain it. I remove and clean and lube mine annually. The bushings are oil-lite bronze that depend on felt pads in each bushing housing. I disassemble and soak the felts annually. Any lite machine oil will work.

Some fellows are still running the original S2001 and S2001A tubes which tells me design cooling is adequate. Just observe good practice loading the rig. Avoid long keydown time, long off resonance tuning, dont exceed max plate current, and de-rate if using any high duty cycle modes like PSK. I have no experience with the new Chinese made 6146s. Problem we face today is all the NOS finals that you buy are 35 to 40 years old and may not be viable spares when you reach for them. I have experienced this and not fun. Arc over and accompanying blowing of cathode meter shunts is all too frequent.

I cant imagine storing the spare driver tube in the rig. Of course I am a neat freak and can walk to anything in my shack and shop.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Wes Will <wwill@...> wrote:
>
> On 05/27/2013 03:43 PM, Terry Wagoner wrote:
> > I keep several spares on hand.
>
> Is this a "generally recommended practice" or something needed only when
> doing voltage levels or realignment?
>
> If a general sort of recommendation, which of the myriad tube suppliers
> that crawl out of the woodwork on a general search of the web are the

> most reliable for a U.S. purchaser? I've spotted some recommendations
> in the archives, but there might be others that people have good luck
> with, and that haven't yet made it there.
>
> In any case I'll be getting at least one driver tube for a spare, and
> making a clip for it inside the chassis somewhere, lots of room in the
> box, so I'll always know where it is....
>
> Also, in re cooling, the big fan in there seems to be working fine, but
> does it actually cool enough? Would increasing the cooling be of enough
> benefit to make it worth a small amount of effort? I can cabbage
> together a small squirrel-cage external blower to increase the airflow a
> lot, if it will help. (Allowing that this thing ever works again, of
> course....) Tube life is for me a definite consideration.
>
> --
> W Will
> N9KDY
>

42303. Re: TS-820: where does this connector go? :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-28 01:23:29 UTC
From: Chuck Barnett
Topic: 42278 Message: 42303

I have been a member of this group for quite some time. But, now, I have a "new" TS-830s. I have considerable electrical/electronic experience, but not necessarily dealing with RF. However, I have searched the group archives may times. I haven't found an answer to the problem I'm having. BUT, I am very reluctant to ask for help on this forum for fear of being FLAMED. I really don't want to hear someone tell me how superior they are to me.

Chuck, KM9U

[Non-text portions of this message have been removed]

42304. Re: TS-820: where does this connector go? :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-28 01:38:28 UTC
From: n6wk_skcc3
Topic: 42278 Message: 42304

Don't be afraid to ask Questions Chuck.
That is what the group is all about... To HELP one another.

73,
Gordon
N6WK

--- In TS-520_820_530_830@yahoogroups.com, "Chuck Barnett" <cb46184@...> wrote:
>
> I have been a member of this group for quite some time. But, now, I have a
> "new" TS-830s. I have considerable electrical/electronic experience, but not
> necessarily dealing with RF. However, I have searched the group archives
> may times. I haven't found an answer to the problem I'm having. BUT, I am
> very reluctant to ask for help on this forum for fear of being FLAMED. I
> really don't want to hear someone tell me how superior they are to me.
>
>
>
> Chuck, KM9U
>
>
>
> [Non-text portions of this message have been removed]
>

42305. Re: [TS-520_820_530_830] Re: TS-820: where does this connector go? :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-28 01:57:52 UTC
From: Joseph Stiles
Topic: 42278 Message: 42305

Chuck,

I totally agree with Gordon. When I started out here a couple of years ago...I got "flamed" a couple of times. I just
learned to tune them out...if it gets too bad...Gordon..n6wk..is a moderator...and can tune THEM out.

Salute to all the veterans..who made this day possible

73 Joe
WB7UQU

From: n6wk_skcc3 <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, May 27, 2013 6:38 PM
Subject: [TS-520_820_530_830] Re: TS-820: where does this connector go? :-(

Don't be afraid to ask Questions Chuck.
That is what the group is all about... To HELP one another.

73,
Gordon
N6WK

--- In TS-520_820_530_830@yahoogroups.com, "Chuck Barnett" <cb46184@...> wrote:
>
> I have been a member of this group for quite some time. But, now, I have a
> "new" TS-830s. I have considerable electrical/electronic experience, but not
> necessarily dealing with RF. However, I have searched the group archives
> may times. I haven't found an answer to the problem I'm having. BUT, I am
> very reluctant to ask for help on this forum for fear of being FLAMED. I
> really don't want to hear someone tell me how superior they are to me.
>
>
>
> Chuck, KM9U
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

42306. Re: [TS-520_820_530_830] Re: TS-520 Het Osc Measurements

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-28 02:14:02 UTC
From: Joseph Stiles
Topic: 42266 Message: 42306

Wes,

I agree with Terry. The driver tube takes a beating when checking drive levels. It's a good idea to keep a known
good driver AND finals around. Ken Kemski....k4eaa.com sells nos drivers...he is absolutely trustworthy...he also has some
goodies and a rather good Q&A section. I also have gotten stuff from "hybridrestore" but no tubes. RF parts are good. I will not say to buy
any particular brand...except to say that I have not had good luck with the Chinese 6146B's. Taylor sells them..with a guarantee...but
if the tubes arc over...and you pop the cathode resistors...that's your problem...easy fix on the 820..but a pain on the others

As Terry stated...that fan works fine...just keep it clean..and a few drops of good light lube in the holes. I have an
820S with the original S2001's still working fine. If you treat 'em good...they will give a good life span

  To all the VETERANS who made this day possible....THANK YOU!

73 Joe
WB7UQU

From: Wes Will <wwill@siu.edu>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, May 27, 2013 4:40 PM
Subject: Re: [TS-520_820_530_830] Re: TS-520 Het Osc Measurements

On 05/27/2013 03:43 PM, Terry Wagoner wrote:
> I keep several spares on hand.

Is this a "generally recommended practice" or something needed only when doing voltage levels or realignment?

If a general sort of recommendation, which of the myriad tube suppliers that crawl out of the woodwork on a general search of the web are the most reliable for a U.S. purchaser? I've spotted some recommendations in the archives, but there might be others that people have good luck with, and that haven't yet made it there.

In any case I'll be getting at least one driver tube for a spare, and making a clip for it inside the chassis somewhere, lots of room in the box, so I'll always know where it is....

Also, in re cooling, the big fan in there seems to be working fine, but does it actually cool enough? Would increasing the cooling be of enough

benefit to make it worth a small amount of effort? I can cabbage together a small squirrel-cage external blower to increase the airflow a lot, if it will help. (Allowing that this thing ever works again, of course....) Tube life is for me a definite consideration.

--
W Will
N9KDY

[Non-text portions of this message have been removed]

42307. Re: [TS-520_820_530_830] Re: TS-820: where does this connector go? :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-28 02:59:40 UTC
From: Bob Lazarow
Topic: 42278 Message: 42307

Chuck: Congrats on the 830s..I have one and have put my Icom-7000 back in the box. I added an MFJ-DSP filter, with nice results.

I don't agree that people are trying to show superiority here. We are all (supposed) to be licensed Hams, which should mean a certain familiarity with electronics and manuals. Unfortunately, there are some who don't even try the most basic of steps when they run into a problem, but immediately ask for detailed step by step instructions in troubleshooting and repair, while they have not even bothered to download a usually free manual.

Moreover, as Hams, they should understand the need for test equipment and tools needed for repairs, and not expect other people to remotely diagnose our problems without the possibility of making accurate measurements. When that happens (too frequently), a little "negative feedback" has been expressed. But no one has been insulted, asked to leave the group, etc.

This is the most interesting Ham group I've ever encountered, and people like Terry, Mike, etc. deserve all our thanks for their free, time consuming efforts toward keeping our 30-40 year old rigs going a bit longer. All they ask for are some reasonable basic fundamentals on our part.

My feelings, anyway.

'73

Bob / WA2JAJ

On 5/27/2013 9:23 PM, Chuck Barnett wrote:
>
> I have been a member of this group for quite some time. But, now, I have a
> "new" TS-830s. I have considerable electrical/electronic experience,
> but not
> necessarily dealing with RF. However, I have searched the group archives
> may times. I haven't found an answer to the problem I'm having. BUT, I am
> very reluctant to ask for help on this forum for fear of being FLAMED. I
> really don't want to hear someone tell me how superior they are to me.
>
> Chuck, KM9U
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

42308. Re: [TS-520_820_530_830] Re: TS-820: where does this connector go? :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-28 03:54:57 UTC
From: Wes Will
Topic: 42278 Message: 42308

On 05/27/2013 09:59 PM, Bob Lazarow wrote:
> Chuck: Congrats on the 830s..I have one and have put my Icom-7000 back
> in the box. I added an MFJ-DSP filter, with nice results.

Nice. Is there an outboard DSP that you might recommend?? (Maybe home-brew? Can you make one out of a Raspberry Pi module? Hmmm... GIYF, gonna have to look into this.) Something that would give my hopefully-repairable 520 a kick in the audio?

I've got some scavenged MFJ odds and ends (VHF/UHF SWR meter that only needed a new calibration pot and some peanut bulbs for the meter light for instance), and I'm not at all brand-conscious.

Back in the box..... Here I am scraping people's junk to get -anything- in working order. I guess maybe some of the slams I keep hearing from the young people I try to convince to give amateur radio a go are really true:

"It's only for RICH PEOPLE."

It's certainly gotten a lot pricier than when I was a kid, turning old five-tube 1940's vintage cabinet radios into piles of parts, then trying to make something new out of them. "A Two-Tube Superheterodyne SW Receiver From An Old Television!" kind of magazine articles.

Not much of that going around these days. I'm not sure it's an improvement, personally.

> Moreover, as Hams, they should understand the need for test equipment
> and tools needed for repairs, and not expect other people to remotely

Which is why I'm currently on the look-out for an old Simpson 303 or the like, or even a Heathkit that I can recalibrate. Cut my teeth on swing-needle VTVM's. I think I've gotten a little lazy with the digital meters, auto-ranging and all that silliness. The higher impedance will certainly help.

(AND while I'm waiting for parts to arrive, I've dug out the monster of a o-scope, which I've not used in a coon's age, and will be working on re-aligning and re-calibrating that old junker, as well. Here's hoping I don't wind up spitting sparks when I get the case off and fire it up. "One hand on the probe, the other hand in your back pocket.")

> This is the most interesting Ham group I've ever encountered, and people
> like Terry, Mike, etc. deserve all our thanks for their free, time
> consuming efforts

That it most certainly is, I can tell you that you're dead-right on that one; I got this much in the short time I've been here. There are some seriously high-forehead sorts in this group, and I'm really hoping that the archives in particular will get me a working radio pretty soon. I now at least have some hope, where going it alone was leaving me with none.

>> very reluctant to ask for help on this forum for fear of being FLAMED. I

My Previous Point Exactly.

Mention that the information -could- have been found on page whatever, and get on with the world. Making people feel like idiots may make you feel better, but it doesn't in the end do anyone else much good.

More than one of those "you could have gotten it on page X, but here is your info" messages is likely to give more impetus, and do more toward shaming the simply lazy into looking first, and the uninformed into knowing where to look in the first place.

Sometimes it's not a matter of "Won't be bothered to try, just spoon-feed me" but "WHAT MANUAL? WHERE? THANKS!"

That "transmit voltages" list for instance. I did not know where it was located, or if there was one available, until I heard it mentioned in passing in one of the postings here since I got hooked up a few days ago. Now that I know it exists, I know to search the archives and the file list for it when I get to that point.

Had I gotten started first with the repairs and asked about reference voltages at the various test points, I am now quite certain someone would have chortled gleefully (or snarled nastily at how stupid I was) while rubbing my nose in my not having found it for myself; when the fact is I didn't know for certain it existed anywhere public.

Knowing more than a little (too bleedin' much) about human (and radio-geek) nature -I- would have just shrugged it off and gotten on with things. Others without the hidings I've been through and less emotional scar tissue layered on would have more than likely just dropped out of sight and let their radio stay dead. And another nice old rig with a lot of good times left in it would wind up in the dump.

Yes, looking for the answers in the manuals and archives, that's the best way of going about things. But getting all bent about it when somebody doesn't do so, is it really worth the angst and anger?

It never got me an extra penny when I was troubleshooting Microsoft's junk for a living, even when the 'fix' was a matter of clicking a mouse on the "HELP" menu and typing a four- or five- letter word then following the instructions that popped up. After enough years of it, you learn to save the adrenaline for things it will actually help...

Point to the right place which this new/lazy/uninformed/whatever person needs, and let it -go-, that's all I'm saying.

If it's egregious, someone who thinks the world owes them and who is demanding coddling - instead of any thinking, then just don't coddle. Point to the manual once, or the archive where it has been done umpteen times before, or whatever, and let them figure it out. Or at least start asking the right questions instead of demanding privileges.

<shrug>

I just don't see where expending any big amount of emotion (anger, disgust, superiority, hatred, etc.) is helping anybody, excepting maybe the makers of blood-pressure drugs. And from the last bit quoted above, we can see that the "RTFM, STUPID!" approach IS doing harm to people who truly aren't trying to be annoying, (Even when the "stupid" part is not actually uttered, it is perceived to be there by the person on the receiving end. You can bet on that.)

And there's the last syllable I'm planning on saying on the subject; enough is too much, as Popeye said.

--
Wes Will
N9KDY

42309. Re: [TS-520_820_530_830] Re: TS-820: where does this connector go? :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-28 04:46:36 UTC
From: Jeff Blaine
Topic: 42278 Message: 42309

To the question on the DSP...

Pairing a Softrock SDR (around $25, or about $60 assembled) with just about any PC made in the last 10 years will give you a receiver that will wax 100% of the stuff made prior to about 1990. And a version of that same softrock can be stuck off the IF of any of the hybrids for the similar sex and sizzle of modern combined with old school.

I think it’s easy to make a case of amazing performance for little bucks thanks to the march of modern tech. Unfortunately, that same march of tech is slowly obsoleting yesterday’s soldering iron skills in favor of contemporary software.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: Wes Will
Sent: Monday, May 27, 2013 10:54 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: TS-820: where does this connector go? :-(

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> Chuck: Congrats on the 830s..I have one and have put my Icom-7000 back
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> and tools needed for repairs, and not expect other people to remotely

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<shrug>

I just don't see where expending any big amount of emotion (anger, disgust, superiority, hatred, etc.) is helping anybody, excepting maybe the makers of blood-pressure drugs. And from the last bit quoted above, we can see that the "RTFM, STUPID!" approach IS doing harm to people who truly aren't trying to be annoying, (Even when the "stupid" part is not actually uttered, it is perceived to be there by the person on the receiving end. You can bet on that.)

And there's the last syllable I'm planning on saying on the subject; enough is too much, as Popeye said.

--
Wes Will
N9KDY

[Non-text portions of this message have been removed]

42310. Re: [TS-520_820_530_830] Re: TS-520 Het Osc Measurements

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-28 05:28:47 UTC
From: Mike
Topic: 42266 Message: 42310

I have a few comments about vacuum tubes which include spares and getting vacuum tubes.

If spares are purchased, it is recommended they be used periodically and not be allowed to lay/sit on a shelf for months and years at a time.Using the spares periodically allows the tube to heat up and absorb any gas that has accumulated over time.

A few words about shorted tubes and the symptoms they produce. Shorted small tubes such as those used in receivers, can cause loss of receiveas well as other stage failures, and produce a high static noise which can result in a high S meter indication. This is especially evident when the tube is used in the receiver's front end and IF amplifiers before the detector and S meter circuit. The only way to determine which tubeis bad is to take voltage measurements of each stage starting at the RF amplifier. At some point along the signal path the voltages will not be right. When that stage is found, replacing the tube with a known good tube will typically cure the problem. Small tubes are not excluded to overheated plates, color appears on the plate(s). No small tube, whether used for transmitting or receiving, should ever show any color onthe plate, regardless of how low level the plate color is. If the tube shows color on the plate the problem is either in the circuit itself or the tube.

Tube pin seals change over time which is caused by the heating and cooling around the pins. This results in gas in very small amounts entering the vacuum over time. There are folks who have been told to operate the tube(s) under filament voltage only for hours in order to absorb the gas accumulation. That process doesnothing but waste time. First, the filament in low power tubes such as the 6146, is not coated with a getter material. Second, the filament cannot and will not heat the getter element which is attached to the tube's plate, to the high temperature required for the getter material, Barium, to absorb gas. Third, current must flow in the tube (normal operation)for the plate to heat to the high temperature for the Barium to absorb any gas. Some tube that have excessive gas can arc in the base. I've experience 6146 tubes that have sat for years on the shelf "asspares", not being used periodically, that have arced in the base. This process occurs when the tube conducts and electrons are attracted to the positive ions in the gas resulting in an "Ion explosion" which can burn a hole right throughthe plate and also destroy the thin wire mesh in the grids (grid #1 and screen grid #2).

The getter element in the 6146and many other low power transmitting and receiving tubes, is also attached to the "Plate" and the filament cannot and will not heat the plate to the high temperature required to absorb gas. The only way the getter element can achieve a high enough

temperature is when current flows in the tube, heating up the plate. The "Chrome" or "Shinny" coating on the inside of the vacuum tube can change colors over time. Thisdoes not mean the tube is bad as some hams have been led to believe. The "Chorome" or "Shinny" coating is what occurs during the manufacturing process and is referred to as the "Getter flash". The air is removed from the glass envelope, the base of the glass envelope is sealed, and the tube is placed in a special machine which subjectsthe tube to a high RF field that heats the plate and getter element that's coated with Barium to the point where the Barium "Flashes". When the getter flash occurs, any residual air that exist after the base is sealed, is absorbed and the Barium on the getter element coats the inside of the glass envelope with a "Chrome" or "Shinny" coating. This process cannot be reproduced by the typical ham unless you have a thousands of dollars to purchase the machine that performs this process! The getter elements come in different sizes and shapes, a ring, a small round cup, or a squarewire, and they all are attached to the plate. If you look behind the "Chrome" or "Shinny" coating you will see the getter element which is attached to the plate by a spot weld during manufacturing. Any cracks in the tube's glass envelope that allow air to enter the glass envelope will cause the "Chrome" or "Shinny" coating to turn "White". When you see a tube where the coating has turned White, throw the tube away. The reason for the White color is because Barium turns White when exposed to air.

The getter material in high power tubes suchas the 4-400, 3-500Z, and 4-1000, is the dull dusty gray coating on the plate. The dull gray dusty coating is "Zirconium". Zirconium requires a high temperature, approximately 1000 degreecentigrade, for it to absorb gas. Like the low power transmitting and receiving tubes, that high temperature can only be acjoeved when current flows in the tube, heating the plate. The filament heat cannot and will not heat the plate to the high temperature required for Zirconium to absorb the gas. no matter howlong the tube is operated with filament voltage only! The plates on these higher power tubes are designed to take high temperatures so during normal transmissionsif you see the plate of these high power tubes showing adull red glow, don't be alarmed, that's normal. Some hams have been led to believe that when this occurs they should reduce drive so the color disappears because the dull redglow indicates over driving the tube. That's not true. Reducing drive is the worse thing you can do to these tubes, transmitting with no color showing! Reducing drive results in a reduction in current flow in the tube which lowersthe plate temperature ultimately resulting in the Zirconium to stop absorbing gas. High power tubes can arc but not all arcs mean the tube is toast.For further discussion on arcing in high power tubes I recommend reading Tom Rauch, W8JI, website(www.w8ji.com) where he has pictures showing arcing in high power tubes and the damage arcs can produce.

Another thing about spares. Don't waste your time buying "Matched tubes". The only time Matched Tubes are recommended is in "Push Pull" amplifiers. NONE of the hybrid final amplifiers operate in "Push Pull", the all operate in "Parallel". Matched tubes are a waste of money and

you will not achieve any improvement by wasting your money buying
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A word about tube testers. Most tube testers only test for filament
shorts/opens, shorts between the elements, and simple conduction. Tube
testers do not and will not test tubes under RF conditions. The only
real tube tester is the circuit the tube's used in, providing the
voltages and signal levels are correct.

A word about gassy tubes. Gassy tubes can affect how the circuit works.
Gassy tubes tend to cause the grid to be more positive which causes the
to conduct more than it should. This typically affects the grid which is
the element that controls current flow in the tube. The gas allows
electrons to flow between the cathode and the grid making the grid "less
negative" resulting in the tube conducting when it shouldn't. A simply
method to determine if a tube is gassy or not is to measure the grid
voltage (no signal applied) on both sides of the grid resistor. If the
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voltage on the opposite side of the grid resistor then the tube is gassy
and should be replaced. A good, non-gassy tube, will have the same grid
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excluding the "grid leak" resistor in an oscillator, are used to isolate
the grid fromthe AGC or ALC bussand are typically 1 meg 1/2 watt. These
are used, forexample, in RF and IF stages where the AGC and ALC voltage
control gain.

73
Mike W5RKL

On 5/27/2013 6:40 PM, Wes Will wrote:
>
> On 05/27/2013 03:43 PM, Terry Wagoner wrote:
> > I keep several spares on hand.
>
> Is this a "generally recommended practice" or something needed only when
> doing voltage levels or realignment?
>
> If a general sort of recommendation, which of the myriad tube suppliers
> that crawl out of the woodwork on a general search of the web are the
> most reliable for a U.S. purchaser? I've spotted some recommendations
> in the archives, but there might be others that people have good luck
> with, and that haven't yet made it there.
>
> In any case I'll be getting at least one driver tube for a spare, and
> making a clip for it inside the chassis somewhere, lots of room in the
> box, so I'll always know where it is....
>
> Also, in re cooling, the big fan in there seems to be working fine, but
> does it actually cool enough? Would increasing the cooling be of enough
> benefit to make it worth a small amount of effort? I can cabbage
> together a small squirrel-cage external blower to increase the airflow a

> lot, if it will help. (Allowing that this thing ever works again, of
> course....) Tube life is for me a definite consideration.
>
> --
> W Will
> N9KDY
>
>

[Non-text portions of this message have been removed]

42311. TS 830 VOX

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-28 10:19:31 UTC
From: Brian
Topic: 42311 Message: 42311

The TS 830s vox is working fine. The problem I have is on cw. I automatically send cqs. I would like the delay to be long enough where the relay does not drop in and out. With the delay at max, I am having the relay cut on and off. Is there an internal adjustment that will allow the delay to lengthen.

Thanks

42312. Re: [TS-520_820_530_830] Re: TS-820: where does this connector go? :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-28 10:46:17 UTC
From: Bob Lazarow
Topic: 42278 Message: 42312

Wes: The MFJ is an outboard = MFJ-784B....many features and does a great job. You can get one used on eBay, eHam, etc anywhere from about $125 to over $200 used. Sorry, I don't have any info on home brew DSP, but I'm sure it's out there...

Yes, the world has changed since we were young...

73

Bob/WA2JAJ

On 5/27/2013 11:54 PM, Wes Will wrote:
>
> On 05/27/2013 09:59 PM, Bob Lazarow wrote:
> > Chuck: Congrats on the 830s..I have one and have put my Icom-7000 back
> > in the box. I added an MFJ-DSP filter, with nice results.
>
> Nice. Is there an outboard DSP that you might recommend?? (Maybe
> home-brew? Can you make one out of a Raspberry Pi module? Hmmm...
> GIYF, gonna have to look into this.) Something that would give my
> hopefully-repairable 520 a kick in the audio?
>
> I've got some scavenged MFJ odds and ends (VHF/UHF SWR meter that only
> needed a new calibration pot and some peanut bulbs for the meter light
> for instance), and I'm not at all brand-conscious.
>
> Back in the box..... Here I am scraping people's junk to get -anything-
> in working order. I guess maybe some of the slams I keep hearing from
> the young people I try to convince to give amateur radio a go are really
> true:
>
> "It's only for RICH PEOPLE."
>
> It's certainly gotten a lot pricier than when I was a kid, turning old
> five-tube 1940's vintage cabinet radios into piles of parts, then trying
> to make something new out of them. "A Two-Tube Superheterodyne SW
> Receiver From An Old Television!" kind of magazine articles.
>
> Not much of that going around these days. I'm not sure it's an
> improvement, personally.
>
> > Moreover, as Hams, they should understand the need for test equipment
> > and tools needed for repairs, and not expect other people to remotely
>
> Which is why I'm currently on the look-out for an old Simpson 303 or the

> like, or even a Heathkit that I can recalibrate. Cut my teeth on
> swing-needle VTVM's. I think I've gotten a little lazy with the digital
> meters, auto-ranging and all that silliness. The higher impedance will
> certainly help.
>
> (AND while I'm waiting for parts to arrive, I've dug out the monster of
> a o-scope, which I've not used in a coon's age, and will be working on
> re-aligning and re-calibrating that old junker, as well. Here's hoping
> I don't wind up spitting sparks when I get the case off and fire it up.
> "One hand on the probe, the other hand in your back pocket.")
>
> > This is the most interesting Ham group I've ever encountered, and people
> > like Terry, Mike, etc. deserve all our thanks for their free, time
> > consuming efforts
>
> That it most certainly is, I can tell you that you're dead-right on that
> one; I got this much in the short time I've been here. There are some
> seriously high-forehead sorts in this group, and I'm really hoping that
> the archives in particular will get me a working radio pretty soon. I
> now at least have some hope, where going it alone was leaving me with
> none.
>
> >> very reluctant to ask for help on this forum for fear of being
> FLAMED. I
>
> My Previous Point Exactly.
>
> Mention that the information -could- have been found on page whatever,
> and get on with the world. Making people feel like idiots may make you
> feel better, but it doesn't in the end do anyone else much good.
>
> More than one of those "you could have gotten it on page X, but here is
> your info" messages is likely to give more impetus, and do more toward
> shaming the simply lazy into looking first, and the uninformed into
> knowing where to look in the first place.
>
> Sometimes it's not a matter of "Won't be bothered to try, just
> spoon-feed me" but "WHAT MANUAL? WHERE? THANKS!"
>
> That "transmit voltages" list for instance. I did not know where it was
> located, or if there was one available, until I heard it mentioned in
> passing in one of the postings here since I got hooked up a few days
> ago. Now that I know it exists, I know to search the archives and the
> file list for it when I get to that point.
>
> Had I gotten started first with the repairs and asked about reference
> voltages at the various test points, I am now quite certain someone
> would have chortled gleefully (or snarled nastily at how stupid I was)
> while rubbing my nose in my not having found it for myself; when the
> fact is I didn't know for certain it existed anywhere public.

>
> Knowing more than a little (too bleedin' much) about human (and
> radio-geek) nature -I- would have just shrugged it off and gotten on
> with things. Others without the hidings I've been through and less
> emotional scar tissue layered on would have more than likely just
> dropped out of sight and let their radio stay dead. And another nice
> old rig with a lot of good times left in it would wind up in the dump.
>
> Yes, looking for the answers in the manuals and archives, that's the
> best way of going about things. But getting all bent about it when
> somebody doesn't do so, is it really worth the angst and anger?
>
> It never got me an extra penny when I was troubleshooting Microsoft's
> junk for a living, even when the 'fix' was a matter of clicking a mouse
> on the "HELP" menu and typing a four- or five- letter word then
> following the instructions that popped up. After enough years of it,
> you learn to save the adrenaline for things it will actually help...
>
> Point to the right place which this new/lazy/uninformed/whatever person
> needs, and let it -go-, that's all I'm saying.
>
> If it's egregious, someone who thinks the world owes them and who is
> demanding coddling - instead of any thinking, then just don't coddle.
> Point to the manual once, or the archive where it has been done umpteen
> times before, or whatever, and let them figure it out. Or at least
> start asking the right questions instead of demanding privileges.
>
> <shrug>
>
> I just don't see where expending any big amount of emotion (anger,
> disgust, superiority, hatred, etc.) is helping anybody, excepting maybe
> the makers of blood-pressure drugs. And from the last bit quoted above,
> we can see that the "RTFM, STUPID!" approach IS doing harm to people who
> truly aren't trying to be annoying, (Even when the "stupid" part is not
> actually uttered, it is perceived to be there by the person on the
> receiving end. You can bet on that.)
>
> And there's the last syllable I'm planning on saying on the subject;
> enough is too much, as Popeye said.
>
> --
> Wes Will
> N9KDY
>
>

[Non-text portions of this message have been removed]

42313. Re: TS-820: where does this connector go? :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-28 11:42:02 UTC
From: Terry Wagoner
Topic: 42278 Message: 42313

Bob:

You are the kind of Ham that makes it rewarding to make the time commitment. I never subscribe to knowledge is power. We are trying to teach a way of thinking and acting and you clearly understand it. I freely share any thing I know or have experienced. I do this so someone can take my place holding the tent poles up and keep these classic treasures on the air and keep a small portion of the old hobby alive that I was lucky to grow up in.

Thank You
Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Bob Lazarow <r_lazarow@...> wrote:
>
> Chuck: Congrats on the 830s..I have one and have put my Icom-7000 back
> in the box. I added an MFJ-DSP filter, with nice results.
>
> I don't agree that people are trying to show superiority here. We are
> all (supposed) to be licensed Hams, which should mean a certain
> familiarity with electronics and manuals. Unfortunately, there are some
> who don't even try the most basic of steps when they run into a problem,
> but immediately ask for detailed step by step instructions in
> troubleshooting and repair, while they have not even bothered to
> download a usually free manual.
>
> Moreover, as Hams, they should understand the need for test equipment
> and tools needed for repairs, and not expect other people to remotely
> diagnose our problems without the possibility of making accurate
> measurements. When that happens (too frequently), a little "negative
> feedback" has been expressed. But no one has been insulted, asked to
> leave the group, etc.
>
> This is the most interesting Ham group I've ever encountered, and people
> like Terry, Mike, etc. deserve all our thanks for their free, time
> consuming efforts toward keeping our 30-40 year old rigs going a bit
> longer. All they ask for are some reasonable basic fundamentals on our part.
>
> My feelings, anyway.
>
> '73
>
> Bob / WA2JAJ
>
>
>
>
> On 5/27/2013 9:23 PM, Chuck Barnett wrote:

> >
> > I have been a member of this group for quite some time. But, now, I have a
> > "new" TS-830s. I have considerable electrical/electronic experience,
> > but not
> > necessarily dealing with RF. However, I have searched the group archives
> > may times. I haven't found an answer to the problem I'm having. BUT, I am
> > very reluctant to ask for help on this forum for fear of being FLAMED. I
> > really don't want to hear someone tell me how superior they are to me.
> >
> > Chuck, KM9U
> >
> > [Non-text portions of this message have been removed]
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

42314. Re: TS-520 Het Osc Measurements

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-28 12:13:51 UTC
From: Terry Wagoner
Topic: 42266 Message: 42314

I agree with Mike and now rotate my spare finals once a year when I do my annual PM (cleaning, VFO tri-flo lube, fan bushing lube etc). Also he is correct you cannot getter the 6146 finals. If you want to "cook" them have a ball, but not possible to really "getter" them.

I do not rotate the 12BY7A driver tubes.

I use to place any spare 6146 final I bought in my Heath DX-60 to run them with anode and screen voltage on and RF excitation and some plate current. I quit doing that as the DX-60 doesnt really replicate what the 6146 sees in Hybrid service. My thought was it was better to experience a arc over in the old DX-60 than in the hybrid, but in practice it didnt prevent arc overs.

I am now a fan of DC hi-potting or BVT testing, but very few hams have this test gear. You could charge up a high voltage cap and dump it across anode to cathode but not recommended if dont understand what you are doing. Work the math with a .002 uf cap and you will be surprised how many joules is involved.

So rotating tube in service time seems best alternative for most hams.

You may also want to consider installing some arc over protection. I have done this in all my rigs and havent experienced any more blown cathode resistors.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> I have a few comments about vacuum tubes which include spares and
> getting vacuum tubes.
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> If spares are purchased, it is recommended they be used periodically and
> not be allowed to lay/sit on a shelf for months and years at a
> time.Using the spares periodically allows the tube to heat up and absorb
> any gas that has accumulated over time.
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> small tubes such as those used in receivers, can cause loss of receiveas
> well as other stage failures, and produce a high static noise which can
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>
> 73
> Mike W5RKL
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>
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> > benefit to make it worth a small amount of effort? I can cabbage
> > together a small squirrel-cage external blower to increase the airflow a
> > lot, if it will help. (Allowing that this thing ever works again, of
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> > --
> > W Will
> > N9KDY
> >
> >
>
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>
> [Non-text portions of this message have been removed]
>

42315. Re: [TS-520_820_530_830] Re: TS-520 Het Osc Measurements

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-28 13:08:15 UTC
From: Louis Wilen
Topic: 42266 Message: 42315

Terry,

Please give us some details about the arc over protection that you have installed in your rigs. This sounds potentially very helpful.

Thanks,

Louis
W3LMW

From: Terry Wagoner
Sent: Tuesday, May 28, 2013 8:13 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS-520 Het Osc Measurements

I agree with Mike and now rotate my spare finals once a year when I do my annual PM (cleaning, VFO tri-flo lube, fan bushing lube etc). Also he is correct you cannot getter the 6146 finals. If you want to "cook" them have a ball, but not possible to really "getter" them.

I do not rotate the 12BY7A driver tubes.

I use to place any spare 6146 final I bought in my Heath DX-60 to run them with anode and screen voltage on and RF excitation and some plate current. I quit doing that as the DX-60 doesnt really replicate what the 6146 sees in Hybrid service. My thought was it was better to experience a arc over in the old DX-60 than in the hybrid, but in practice it didnt prevent arc overs.

I am now a fan of DC hi-potting or BVT testing, but very few hams have this test gear. You could charge up a high voltage cap and dump it across anode to cathode but not recommended if dont understand what you are doing. Work the math with a .002 uf cap and you will be surprised how many joules is involved.

So rotating tube in service time seems best alternative for most hams.

You may also want to consider installing some arc over protection. I have done this in all my rigs and havent experienced any more blown cathode resistors.

Terry K9TW

--- In mailto:TS-520_820_530_830%40yahoogroups.com, Mike <w5rkl@...> wrote:
>
> I have a few comments about vacuum tubes which include spares and
> getting vacuum tubes.
>
> If spares are purchased, it is recommended they be used periodically and
> not be allowed to lay/sit on a shelf for months and years at a
> time.Using the spares periodically allows the tube to heat up and absorb

> any gas that has accumulated over time.
>
> A few words about shorted tubes and the symptoms they produce. Shorted
> small tubes such as those used in receivers, can cause loss of receiveas
> well as other stage failures, and produce a high static noise which can
> result in a high S meter indication. This is especially evident when the
> tube is used in the receiver's front end and IF amplifiers before the
> detector and S meter circuit. The only way to determine which tubeis bad
> is to take voltage measurements of each stage starting at the RF
> amplifier. At some point along the signal path the voltages will not be
> right. When that stage is found, replacing the tube with a known good
> tube will typically cure the problem. Small tubes are not excluded to
> overheated plates, color appears on the plate(s). No small tube, whether
> used for transmitting or receiving, should ever show any color onthe
> plate, regardless of how low level the plate color is. If the tube shows
> color on the plate the problem is either in the circuit itself or the tube.
>
> Tube pin seals change over time which is caused by the heating and
> cooling around the pins. This results in gas in very small amounts
> entering the vacuum over time. There are folks who have been told to
> operate the tube(s) under filament voltage only for hours in order to
> absorb the gas accumulation. That process doesnothing but waste time.
> First, the filament in low power tubes such as the 6146, is not coated
> with a getter material. Second, the filament cannot and will not heat
> the getter element which is attached to the tube's plate, to the high
> temperature required for the getter material, Barium, to absorb gas.
> Third, current must flow in the tube (normal operation)for the plate to
> heat to the high temperature for the Barium to absorb any gas. Some tube
> that have excessive gas can arc in the base. I've experience 6146 tubes
> that have sat for years on the shelf "asspares", not being used
> periodically, that have arced in the base. This process occurs when the
> tube conducts and electrons are attracted to the positive ions in the
> gas resulting in an "Ion explosion" which can burn a hole right
> throughthe plate and also destroy the thin wire mesh in the grids (grid
> #1 and screen grid #2).
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> The getter element in the 6146and many other low power transmitting and
> receiving tubes, is also attached to the "Plate" and the filament cannot
> and will not heat the plate to the high temperature required to absorb
> gas. The only way the getter element can achieve a high enough
> temperature is when current flows in the tube, heating up the plate. The
> "Chrome" or "Shinny" coating on the inside of the vacuum tube can change
> colors over time. Thisdoes not mean the tube is bad as some hams have
> been led to believe. The "Chorome" or "Shinny" coating is what occurs
> during the manufacturing process and is referred to as the "Getter
> flash". The air is removed from the glass envelope, the base of the
> glass envelope is sealed, and the tube is placed in a special machine
> which subjectsthe tube to a high RF field that heats the plate and
> getter element that's coated with Barium to the point where the Barium
> "Flashes". When the getter flash occurs, any residual air that exist

> after the base is sealed, is absorbed and the Barium on the getter
> element coats the inside of the glass envelope with a "Chrome" or
> "Shinny" coating. This process cannot be reproduced by the typical ham
> unless you have a thousands of dollars to purchase the machine that
> performs this process! The getter elements come in different sizes and
> shapes, a ring, a small round cup, or a squarewire, and they all are
> attached to the plate. If you look behind the "Chrome" or "Shinny"
> coating you will see the getter element which is attached to the plate
> by a spot weld during manufacturing. Any cracks in the tube's glass
> envelope that allow air to enter the glass envelope will cause the
> "Chrome" or "Shinny" coating to turn "White". When you see a tube where
> the coating has turned White, throw the tube away. The reason for the
> White color is because Barium turns White when exposed to air.
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> The getter material in high power tubes suchas the 4-400, 3-500Z, and
> 4-1000, is the dull dusty gray coating on the plate. The dull gray dusty
> coating is "Zirconium". Zirconium requires a high temperature,
> approximately 1000 degreecentigrade, for it to absorb gas. Like the low
> power transmitting and receiving tubes, that high temperature can only
> be acjoeved when current flows in the tube, heating the plate. The
> filament heat cannot and will not heat the plate to the high temperature
> required for Zirconium to absorb the gas. no matter howlong the tube is
> operated with filament voltage only! The plates on these higher power
> tubes are designed to take high temperatures so during normal
> transmissionsif you see the plate of these high power tubes showing
> adull red glow, don't be alarmed, that's normal. Some hams have been led
> to believe that when this occurs they should reduce drive so the color
> disappears because the dull redglow indicates over driving the tube.
> That's not true. Reducing drive is the worse thing you can do to these
> tubes, transmitting with no color showing! Reducing drive results in a
> reduction in current flow in the tube which lowersthe plate temperature
> ultimately resulting in the Zirconium to stop absorbing gas. High power
> tubes can arc but not all arcs mean the tube is toast.For further
> discussion on arcing in high power tubes I recommend reading Tom Rauch,
> W8JI, website(www.w8ji.com) where he has pictures showing arcing in high
> power tubes and the damage arcs can produce.
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> Another thing about spares. Don't waste your time buying "Matched
> tubes". The only time Matched Tubes are recommended is in "Push Pull"
> amplifiers. NONE of the hybrid final amplifiers operate in "Push Pull",
> the all operate in "Parallel". Matched tubes are a waste of money and
> you will not achieve any improvement by wasting your money buying
> Matched tubes.
>
> A word about tube testers. Most tube testers only test for filament
> shorts/opens, shorts between the elements, and simple conduction. Tube
> testers do not and will not test tubes under RF conditions. The only
> real tube tester is the circuit the tube's used in, providing the
> voltages and signal levels are correct.
>

> A word about gassy tubes. Gassy tubes can affect how the circuit works.
> Gassy tubes tend to cause the grid to be more positive which causes the
> to conduct more than it should. This typically affects the grid which is
> the element that controls current flow in the tube. The gas allows
> electrons to flow between the cathode and the grid making the grid "less
> negative" resulting in the tube conducting when it shouldn't. A simply
> method to determine if a tube is gassy or not is to measure the grid
> voltage (no signal applied) on both sides of the grid resistor. If the
> voltage on the grid side of the resistor is "less negative" then the
> voltage on the opposite side of the grid resistor then the tube is gassy
> and should be replaced. A good, non-gassy tube, will have the same grid
> voltage on both sides of the grid resistor. Most grid resistors,
> excluding the "grid leak" resistor in an oscillator, are used to isolate
> the grid fromthe AGC or ALC bussand are typically 1 meg 1/2 watt. These
> are used, forexample, in RF and IF stages where the AGC and ALC voltage
> control gain.
>
> 73
> Mike W5RKL
>
>
>
>
>
>
> On 5/27/2013 6:40 PM, Wes Will wrote:
> >
> > On 05/27/2013 03:43 PM, Terry Wagoner wrote:
> > > I keep several spares on hand.
> >
> > Is this a "generally recommended practice" or something needed only when
> > doing voltage levels or realignment?
> >
> > If a general sort of recommendation, which of the myriad tube suppliers
> > that crawl out of the woodwork on a general search of the web are the
> > most reliable for a U.S. purchaser? I've spotted some recommendations
> > in the archives, but there might be others that people have good luck
> > with, and that haven't yet made it there.
> >
> > In any case I'll be getting at least one driver tube for a spare, and
> > making a clip for it inside the chassis somewhere, lots of room in the
> > box, so I'll always know where it is....
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> > Also, in re cooling, the big fan in there seems to be working fine, but
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>

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.3343 / Virus Database: 3184/6362 - Release Date: 05/27/13

[Non-text portions of this message have been removed]

42316. Re: TS-520 Het Osc Measurements

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-28 13:53:09 UTC
From: Terry Wagoner
Topic: 42266 Message: 42316

Louis:

Go to Ron WB4HFN site and click on Kenwood Net Home page and then click on Articles.

1. Installed diode string across the cathode resistors to protect the panel meter and the resistors. Tom Raunch W8JI gave me this idea.

2. Installed MOV (varistors) from screen grid to ground. I copied this from G3SEK Tetrode Board protection. If you get serious I can share the calcs I performed to size the MOVs.

3. Installed Ohmite OY glitch resistors at output of HV filter caps to limit fault current. Eimac Care and Feeding white paper prompted this idea. With out these resistors fault current is only limited by the 5 ohm cathode resistance and low value of transformer ESR. 900vdc/5 ohms = 180 amps. Add 10 ohms of glitch resistor then 900vdc/15ohms = 60 amps

I ordinarily do not recommend modifying these rigs, but threw in the towel after multiple cathode resistor failures on 520, 530, 820, and 830 rigs with a variety of brands of 6146 finals.

Havent seen any recent posts on this problem so maybe the disease has been cured ?

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Louis Wilen" <louis.wilen@...> wrote:
>
> Terry,
>
> Please give us some details about the arc over protection that you have installed in your rigs. This sounds potentially very helpful.
>
> Thanks,
>
> Louis
> W3LMW
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> From: Terry Wagoner
> Sent: Tuesday, May 28, 2013 8:13 AM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: TS-520 Het Osc Measurements
>
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> > Mike W5RKL
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> > > W Will
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> >
> > [Non-text portions of this message have been removed]
> >
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>
> No virus found in this message.
> Checked by AVG - www.avg.com
> Version: 2013.0.3343 / Virus Database: 3184/6362 - Release Date: 05/27/13
>
>
> [Non-text portions of this message have been removed]
>

42317. Re: TS-520 Het Osc Measurements

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-28 14:18:16 UTC
From: Terry Wagoner
Topic: 42266 Message: 42317

I meant "popping" your 6146 with a 0.2uf hv cap charged to 900vdc. Would not use anything larger.

Back of envelope calcs;

Joules = W = 1/2 (uf)(vdc)squared = (.2 x 10-6 UF)(900vdc)sqrd = 81 milli joules

Assuming 5 micro second discharge time then:
Power = joules/time = (81 x 10-3)/(5 x 10-6) = 16,200 watts

That will vaporize any "wiskers" !

Terry K9TW

"You could charge up a high voltage cap and dump it across anode to cathode but not recommended if dont understand what you are doing. Work the math with a .002 uf cap and you will be surprised how many joules is involved".

Better to build or buy a BVT or Hipot tester.

> >

>

42318. DG-5 power connector

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-28 14:33:39 UTC
From: tjb813
Topic: 42318 Message: 42318

Does anyone happen to know of a replacement part number for the power connector for the DG-5? (Kenwood number E08-0203-25). If anyone knows the manufacturer, that would help also. I need several plugs only. I know of one enterprise that is selling the complete cable kit for around $25. I am hoping for a more cost-effective solution. Thanks

Tim
KD8CN

42319. Re: TS-820: where does this connector go? :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-28 14:37:47 UTC
From: coyoteinventor@ymail.com
Topic: 42278 Message: 42319

Jerry KJ6NTL,

Thanks for the good advice. I usually do take pictures of things, and label the heck out of them when I have any doubt I will not be able to put it back together. In this case, I did not realize there were extra male pins not being used (they where kind of hidden behind the chassis and I missed it). But it's always a great idea to take photos of things as you take them apart, I agree. :-)

--Cesar-- K1TNT

--- In TS-520_820_530_830@yahoogroups.com, Jerry Barr <kj6ntl@...> wrote:
>
> I learned a while back when tearing down my ford diesal that a handi camera helps get stuff back the way it was/ so now use it on anything i am taking apart
>
>
> Jerry KJ6NTL
>
> From: "coyoteinventor@..." <coyoteinventor@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sunday, May 26, 2013 9:35 PM
> Subject: [TS-520_820_530_830] Re: TS-820: where does this connector go? :-(
>
> Â
> Thanks Gordon!
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, n6wk@ wrote:
> >
> > You have it in the correct spot.
> > It goes on Pins 1,2, 3 there is nothing on pins 4 and 5
> >
> > 73,
> > Gordon
> > N6WK
> >
> >
> > On 5/26/2013 2:16 PM, coyoteinventor@ wrote:
> > >
> > > I took out some boards for cleaning, but did not realize not all male
> > > pins were used on this board, and now I'm not sure which ones to use.
> > > :-(
> > > Click here to see the photo of the connector in question
> > > <http://www.361euros.com/skitch/image-20130526-170951.jpg>
> > > I plugged the 3-pin female connector in using the right most 3 pins
> > > (#1,2 & 3), leaving the 2 left ones (#4 & 5) unused, but I honestly
> > > don't know which 3 of the 5 male pins were used before I unplugged it,

> > > so I don't want to power up the machine just in case.
> > > Any help will be GREATLY appreciated! :-)
> > > --Cesar-- K1TNT
> > >
> > > [Non-text portions of this message have been removed]
> > >
> > >
> >
> > "Faced with the choice between changing one's mind and proving that there is no need to do so, almost everyone gets busy on the proof."
> > - John Kenneth Galbraith -
> >
> > --
> > E-Mail Disclaimer This communication and any documents, files, or previous e-mail messages attached to it constitute an electronic communication within the scope of the Electronic Communication Privacy Act, 18 USCA 2510.This communication may contain non-public, confidential, or legally privileged information intended for the sole use of the intended recipient(s). The unlawful interception, use or disclosure of such information is strictly prohibited under 18 USCA 2511. Any review, reliance, or distribution by others or forwarding without expressed permission is strictly prohibited. If you are not the intended recipient, please contact the sender and delete all copies.
> >
>
>
>
>
> [Non-text portions of this message have been removed]
>

42320. Re: TS-820: where does this connector go? :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-28 14:51:21 UTC
From: coyoteinventor@ymail.com
Topic: 42278 Message: 42320

Mike,

I apologize for not finding this in the manual. I have read the manual several times since I got my old rig a month or 2 ago; used it for tuning my rig, find out specs, etc, but I did not remember this figure. To be honest, I don't think I would have known how to even look for my problem in the manual, as I know not all connectors of all boards are shown in figures in the manual. I thought I had messed up, and only someone who knew the boards could confirm where the connectors go.

Again, I apologize if I wasted anybody's time.

--Cesar-- K1TNT

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> This is another one of those questions that could have been easily
> answered IF the owner would had taken the time to read the operator's
> manual FIRST! Page 34, Figure 25 "Installing the CW Filter"clearly shows
> how to connect the plug you are referring to!
>
> Mike
>
> On 5/26/2013 4:48 PM, n6wk@... wrote:
> > To Clarify, If you had the CW filter installed, you would move it over
> > one or two pins.
> > It tells about it towards the end of the user manual on page 34 of the
> > one I have.
> >
> > 73,
> > Gordon
> > N6WK
> >
> > 73,
> > Gordon
> >
> > On 5/26/2013 2:16 PM, coyoteinventor@... wrote:
> >> I took out some boards for cleaning, but did not realize not all male
> >> pins were used on this board, and now I'm not sure which ones to use.
> >> :-(
> >> Click here to see the photo of the connector in question
> >> <http://www.361euros.com/skitch/image-20130526-170951.jpg>
> >> I plugged the 3-pin female connector in using the right most 3 pins
> >> (#1,2 & 3), leaving the 2 left ones (#4 & 5) unused, but I honestly
> >> don't know which 3 of the 5 male pins were used before I unplugged it,
> >> so I don't want to power up the machine just in case.
> >> Any help will be GREATLY appreciated! :-)

> >> --Cesar-- K1TNT
> >>
> >> [Non-text portions of this message have been removed]
> >>
> >>
> > "Faced with the choice between changing one's mind and proving that there is no need to do so, almost everyone gets busy on the proof."
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> >
>
>
>
> [Non-text portions of this message have been removed]
>

42321. Re: [TS-520_820_530_830] Re: TS-520 Het Osc Measurements

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-28 14:51:20 UTC
From: Louis Wilen
Topic: 42266 Message: 42321

Thanks Terry. I'll read up on this. At first glance, mod #3 appears very easy. The other mods require more careful work. Do you think that mod #3 alone would be beneficial?

Louis
W3LMW

From: Terry Wagoner
Sent: Tuesday, May 28, 2013 9:53 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS-520 Het Osc Measurements

Louis:

Go to Ron WB4HFN site and click on Kenwood Net Home page and then click on Articles.

1. Installed diode string across the cathode resistors to protect the panel meter and the resistors. Tom Raunch W8JI gave me this idea.

2. Installed MOV (varistors) from screen grid to ground. I copied this from G3SEK Tetrode Board protection. If you get serious I can share the calcs I performed to size the MOVs.

3. Installed Ohmite OY glitch resistors at output of HV filter caps to limit fault current. Eimac Care and Feeding white paper prompted this idea. With out these resistors fault current is only limited by the 5 ohm cathode resistance and low value of transformer ESR. 900vdc/5 ohms = 180 amps. Add 10 ohms of glitch resistor then 900vdc/15ohms = 60 amps

I ordinarily do not recommend modifying these rigs, but threw in the towel after multiple cathode resistor failures on 520, 530, 820, and 830 rigs with a variety of brands of 6146 finals.

Havent seen any recent posts on this problem so maybe the disease has been cured ?

Terry K9TW

--- In mailto:TS-520_820_530_830%40yahoogroups.com, "Louis Wilen" <louis.wilen@...> wrote:
>
> Terry,
>
> Please give us some details about the arc over protection that you have installed in your rigs. This sounds potentially very helpful.
>
> Thanks,
>
> Louis
> W3LMW
>
> From: Terry Wagoner
> Sent: Tuesday, May 28, 2013 8:13 AM

> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Subject: [TS-520_820_530_830] Re: TS-520 Het Osc Measurements
>
>
> I agree with Mike and now rotate my spare finals once a year when I do my annual PM (cleaning, VFO tri-flo lube, fan bushing lube etc). Also he is correct you cannot getter the 6146 finals. If you want to "cook" them have a ball, but not possible to really "getter" them.
>
> I do not rotate the 12BY7A driver tubes.
>
> I use to place any spare 6146 final I bought in my Heath DX-60 to run them with anode and screen voltage on and RF excitation and some plate current. I quit doing that as the DX-60 doesnt really replicate what the 6146 sees in Hybrid service. My thought was it was better to experience a arc over in the old DX-60 than in the hybrid, but in practice it didnt prevent arc overs.
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> I am now a fan of DC hi-potting or BVT testing, but very few hams have this test gear. You could charge up a high voltage cap and dump it across anode to cathode but not recommended if dont understand what you are doing. Work the math with a .002 uf cap and you will be surprised how many joules is involved.
>
> So rotating tube in service time seems best alternative for most hams.
>
> You may also want to consider installing some arc over protection. I have done this in all my rigs and havent experienced any more blown cathode resistors.
>
> Terry K9TW
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, Mike <w5rkl@> wrote:
> >
> > I have a few comments about vacuum tubes which include spares and
> > getting vacuum tubes.
> >
> > If spares are purchased, it is recommended they be used periodically and
> > not be allowed to lay/sit on a shelf for months and years at a
> > time.Using the spares periodically allows the tube to heat up and absorb
> > any gas that has accumulated over time.
> >
> > A few words about shorted tubes and the symptoms they produce. Shorted
> > small tubes such as those used in receivers, can cause loss of receiveas
> > well as other stage failures, and produce a high static noise which can
> > result in a high S meter indication. This is especially evident when the
> > tube is used in the receiver's front end and IF amplifiers before the
> > detector and S meter circuit. The only way to determine which tubeis bad
> > is to take voltage measurements of each stage starting at the RF
> > amplifier. At some point along the signal path the voltages will not be
> > right. When that stage is found, replacing the tube with a known good
> > tube will typically cure the problem. Small tubes are not excluded to
> > overheated plates, color appears on the plate(s). No small tube, whether

> > used for transmitting or receiving, should ever show any color onthe
> > plate, regardless of how low level the plate color is. If the tube shows
> > color on the plate the problem is either in the circuit itself or the tube.
> >
> > Tube pin seals change over time which is caused by the heating and
> > cooling around the pins. This results in gas in very small amounts
> > entering the vacuum over time. There are folks who have been told to
> > operate the tube(s) under filament voltage only for hours in order to
> > absorb the gas accumulation. That process doesnothing but waste time.
> > First, the filament in low power tubes such as the 6146, is not coated
> > with a getter material. Second, the filament cannot and will not heat
> > the getter element which is attached to the tube's plate, to the high
> > temperature required for the getter material, Barium, to absorb gas.
> > Third, current must flow in the tube (normal operation)for the plate to
> > heat to the high temperature for the Barium to absorb any gas. Some tube
> > that have excessive gas can arc in the base. I've experience 6146 tubes
> > that have sat for years on the shelf "asspares", not being used
> > periodically, that have arced in the base. This process occurs when the
> > tube conducts and electrons are attracted to the positive ions in the
> > gas resulting in an "Ion explosion" which can burn a hole right
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> > #1 and screen grid #2).
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> > The getter element in the 6146and many other low power transmitting and
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> > gas. The only way the getter element can achieve a high enough
> > temperature is when current flows in the tube, heating up the plate. The
> > "Chrome" or "Shinny" coating on the inside of the vacuum tube can change
> > colors over time. Thisdoes not mean the tube is bad as some hams have
> > been led to believe. The "Chorome" or "Shinny" coating is what occurs
> > during the manufacturing process and is referred to as the "Getter
> > flash". The air is removed from the glass envelope, the base of the
> > glass envelope is sealed, and the tube is placed in a special machine
> > which subjectsthe tube to a high RF field that heats the plate and
> > getter element that's coated with Barium to the point where the Barium
> > "Flashes". When the getter flash occurs, any residual air that exist
> > after the base is sealed, is absorbed and the Barium on the getter
> > element coats the inside of the glass envelope with a "Chrome" or
> > "Shinny" coating. This process cannot be reproduced by the typical ham
> > unless you have a thousands of dollars to purchase the machine that
> > performs this process! The getter elements come in different sizes and
> > shapes, a ring, a small round cup, or a squarewire, and they all are
> > attached to the plate. If you look behind the "Chrome" or "Shinny"
> > coating you will see the getter element which is attached to the plate
> > by a spot weld during manufacturing. Any cracks in the tube's glass
> > envelope that allow air to enter the glass envelope will cause the
> > "Chrome" or "Shinny" coating to turn "White". When you see a tube where
> > the coating has turned White, throw the tube away. The reason for the
> > White color is because Barium turns White when exposed to air.

> >
> > The getter material in high power tubes suchas the 4-400, 3-500Z, and
> > 4-1000, is the dull dusty gray coating on the plate. The dull gray dusty
> > coating is "Zirconium". Zirconium requires a high temperature,
> > approximately 1000 degreecentigrade, for it to absorb gas. Like the low
> > power transmitting and receiving tubes, that high temperature can only
> > be acjoeved when current flows in the tube, heating the plate. The
> > filament heat cannot and will not heat the plate to the high temperature
> > required for Zirconium to absorb the gas. no matter howlong the tube is
> > operated with filament voltage only! The plates on these higher power
> > tubes are designed to take high temperatures so during normal
> > transmissionsif you see the plate of these high power tubes showing
> > adull red glow, don't be alarmed, that's normal. Some hams have been led
> > to believe that when this occurs they should reduce drive so the color
> > disappears because the dull redglow indicates over driving the tube.
> > That's not true. Reducing drive is the worse thing you can do to these
> > tubes, transmitting with no color showing! Reducing drive results in a
> > reduction in current flow in the tube which lowersthe plate temperature
> > ultimately resulting in the Zirconium to stop absorbing gas. High power
> > tubes can arc but not all arcs mean the tube is toast.For further
> > discussion on arcing in high power tubes I recommend reading Tom Rauch,
> > W8JI, website(www.w8ji.com) where he has pictures showing arcing in high
> > power tubes and the damage arcs can produce.
> >
> > Another thing about spares. Don't waste your time buying "Matched
> > tubes". The only time Matched Tubes are recommended is in "Push Pull"
> > amplifiers. NONE of the hybrid final amplifiers operate in "Push Pull",
> > the all operate in "Parallel". Matched tubes are a waste of money and
> > you will not achieve any improvement by wasting your money buying
> > Matched tubes.
> >
> > A word about tube testers. Most tube testers only test for filament
> > shorts/opens, shorts between the elements, and simple conduction. Tube
> > testers do not and will not test tubes under RF conditions. The only
> > real tube tester is the circuit the tube's used in, providing the
> > voltages and signal levels are correct.
> >
> > A word about gassy tubes. Gassy tubes can affect how the circuit works.
> > Gassy tubes tend to cause the grid to be more positive which causes the
> > to conduct more than it should. This typically affects the grid which is
> > the element that controls current flow in the tube. The gas allows
> > electrons to flow between the cathode and the grid making the grid "less
> > negative" resulting in the tube conducting when it shouldn't. A simply
> > method to determine if a tube is gassy or not is to measure the grid
> > voltage (no signal applied) on both sides of the grid resistor. If the
> > voltage on the grid side of the resistor is "less negative" then the
> > voltage on the opposite side of the grid resistor then the tube is gassy
> > and should be replaced. A good, non-gassy tube, will have the same grid
> > voltage on both sides of the grid resistor. Most grid resistors,
> > excluding the "grid leak" resistor in an oscillator, are used to isolate

> > the grid fromthe AGC or ALC bussand are typically 1 meg 1/2 watt. These
> > are used, forexample, in RF and IF stages where the AGC and ALC voltage
> > control gain.
> >
> > 73
> > Mike W5RKL
> >
> >
> >
> >
> >
> >
> > On 5/27/2013 6:40 PM, Wes Will wrote:
> > >
> > > On 05/27/2013 03:43 PM, Terry Wagoner wrote:
> > > > I keep several spares on hand.
> > >
> > > Is this a "generally recommended practice" or something needed only when
> > > doing voltage levels or realignment?
> > >
> > > If a general sort of recommendation, which of the myriad tube suppliers
> > > that crawl out of the woodwork on a general search of the web are the
> > > most reliable for a U.S. purchaser? I've spotted some recommendations
> > > in the archives, but there might be others that people have good luck
> > > with, and that haven't yet made it there.
> > >
> > > In any case I'll be getting at least one driver tube for a spare, and
> > > making a clip for it inside the chassis somewhere, lots of room in the
> > > box, so I'll always know where it is....
> > >
> > > Also, in re cooling, the big fan in there seems to be working fine, but
> > > does it actually cool enough? Would increasing the cooling be of enough
> > > benefit to make it worth a small amount of effort? I can cabbage
> > > together a small squirrel-cage external blower to increase the airflow a
> > > lot, if it will help. (Allowing that this thing ever works again, of
> > > course....) Tube life is for me a definite consideration.
> > >
> > > --
> > > W Will
> > > N9KDY
> > >
> > >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
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>

>
> No virus found in this message.
> Checked by AVG - www.avg.com
> Version: 2013.0.3343 / Virus Database: 3184/6362 - Release Date: 05/27/13
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

42322. Re: TS-820: where does this connector go? :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-28 14:59:54 UTC
From: Scott Griffin
Topic: 42278 Message: 42322

Hi Chuck,

No this group is terrific and there is no worry about being “flamed”. When I first got my TS-830S which had a number of problems, I was given enormous help by Terry, who was very patient as I would run tests and give him the results on this forum. This is one of the best of the ham radio forums in my opinion. I am no electronics expert, but I do follow the advice of people on this forum, order the manuals and try to trace the schematics-and it has worked for me!

Thanks and 73s, Scott, N6CIC

[Non-text portions of this message have been removed]

42323. Re: [TS-520_820_530_830] DG-5 power connector

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-28 15:03:04 UTC
From: Alvin Chipmunk
Topic: 42318 Message: 42323

Yes, I would like one (maybe two) as well.....

From: tjb813 <tjb813@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, May 28, 2013 10:33 AM
Subject: [TS-520_820_530_830] DG-5 power connector

Does anyone happen to know of a replacement part number for the power connector for the DG-5? (Kenwood number E08-0203-25). If anyone knows the manufacturer, that would help also. I need several plugs only. I know of one enterprise that is selling the complete cable kit for around $25. I am hoping for a more cost-effective solution. Thanks

Tim
KD8CN

[Non-text portions of this message have been removed]

42324. Re: TS-520 Het Osc Measurements

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-28 15:26:37 UTC
From: Terry Wagoner
Topic: 42266 Message: 42324

Louis they are all pretty easy to install. I just used solder lugs with star washer ends and used existing board mounting screws to mount them. Then tack solder the MOVs and Diodes to the tube socket pins and thru the solder holes in the solder lugs. Then dress the leads so not contacting or shorting anything. Not pretty but functional.

If I was to install only one mod it would be to protect the panel meter by not allowing the cathode resistors to blow open. Very easy to place 3 silicon rectifier diodes in series from tube socket cathode to chassis ground.

When Cathode resistors pop open the cathode will try to rise toward anode voltage. Assuming bias is still on the tube it will rise to well over 100 volts very quickly. Next time your cathode resistors pop connect your voltmeter to cathode and chassis ground and turn rig on and turn on heaters and watch the voltage climb. It will make you a little nervous. The 500ua meter movement is configured as a voltmeter and the max it likes to see is 1.75 vdc. They are expensive and getting hard to find.

In theory the diodes will clamp the voltage to approx 2 volts (turn on voltage for 3 silicon rectifiers in series) across the 5 ohm resistors and they will then see only 2/5 = 400ma instead of hundreds of amps. At that current level the Cathode resistors should never open again. Now the diodes may fail, but OK to sacrifice them and easy to replace them.

Even high power linear amplifiers that use glitch resistors and fuses in the B+ line normally also include some form of panel meter protection such as back to back diodes across the meter.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Louis Wilen" <louis.wilen@...> wrote:
>
> Thanks Terry. Iâ☐☐ll read up on this. At first glance, mod #3 appears very easy. The other mods require more careful work. Do you think that mod #3 alone would be beneficial?
>
> Louis
> W3LMW
>
> From: Terry Wagoner
> Sent: Tuesday, May 28, 2013 9:53 AM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: TS-520 Het Osc Measurements
>
>
>
> Louis:
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> Go to Ron WB4HFN site and click on Kenwood Net Home page and then click on Articles.
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> 1. Installed diode string across the cathode resistors to protect the panel meter and the resistors. Tom Raunch W8JI

gave me this idea.
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> > Terry,
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> > Please give us some details about the arc over protection that you have installed in your rigs. This sounds potentially very helpful.
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> > Thanks,
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> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > Subject: [TS-520_820_530_830] Re: TS-520 Het Osc Measurements
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> > So rotating tube in service time seems best alternative for most hams.

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> > --- In mailto:TS-520_820_530_830%40yahoogroups.com, Mike <w5rkl@> wrote:
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> > > any gas that has accumulated over time.
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> > > A few words about shorted tubes and the symptoms they produce. Shorted
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> > > The getter material in high power tubes suchas the 4-400, 3-500Z, and
> > > 4-1000, is the dull dusty gray coating on the plate. The dull gray dusty
> > > coating is "Zirconium". Zirconium requires a high temperature,
> > > approximately 1000 degreecentigrade, for it to absorb gas. Like the low
> > > power transmitting and receiving tubes, that high temperature can only
> > > be acjoeved when current flows in the tube, heating the plate. The
> > > filament heat cannot and will not heat the plate to the high temperature
> > > required for Zirconium to absorb the gas. no matter howlong the tube is
> > > operated with filament voltage only! The plates on these higher power
> > > tubes are designed to take high temperatures so during normal
> > > transmissionsif you see the plate of these high power tubes showing
> > > adull red glow, don't be alarmed, that's normal. Some hams have been led
> > > to believe that when this occurs they should reduce drive so the color
> > > disappears because the dull redglow indicates over driving the tube.
> > > That's not true. Reducing drive is the worse thing you can do to these
> > > tubes, transmitting with no color showing! Reducing drive results in a
> > > reduction in current flow in the tube which lowersthe plate temperature
> > > ultimately resulting in the Zirconium to stop absorbing gas. High power
> > > tubes can arc but not all arcs mean the tube is toast.For further
> > > discussion on arcing in high power tubes I recommend reading Tom Rauch,

> > > W8JI, website(www.w8ji.com) where he has pictures showing arcing in high
> > > power tubes and the damage arcs can produce.
> > >
> > > Another thing about spares. Don't waste your time buying "Matched
> > > tubes". The only time Matched Tubes are recommended is in "Push Pull"
> > > amplifiers. NONE of the hybrid final amplifiers operate in "Push Pull",
> > > the all operate in "Parallel". Matched tubes are a waste of money and
> > > you will not achieve any improvement by wasting your money buying
> > > Matched tubes.
> > >
> > > A word about tube testers. Most tube testers only test for filament
> > > shorts/opens, shorts between the elements, and simple conduction. Tube
> > > testers do not and will not test tubes under RF conditions. The only
> > > real tube tester is the circuit the tube's used in, providing the
> > > voltages and signal levels are correct.
> > >
> > > A word about gassy tubes. Gassy tubes can affect how the circuit works.
> > > Gassy tubes tend to cause the grid to be more positive which causes the
> > > to conduct more than it should. This typically affects the grid which is
> > > the element that controls current flow in the tube. The gas allows
> > > electrons to flow between the cathode and the grid making the grid "less
> > > negative" resulting in the tube conducting when it shouldn't. A simply
> > > method to determine if a tube is gassy or not is to measure the grid
> > > voltage (no signal applied) on both sides of the grid resistor. If the
> > > voltage on the grid side of the resistor is "less negative" then the
> > > voltage on the opposite side of the grid resistor then the tube is gassy
> > > and should be replaced. A good, non-gassy tube, will have the same grid
> > > voltage on both sides of the grid resistor. Most grid resistors,
> > > excluding the "grid leak" resistor in an oscillator, are used to isolate
> > > the grid fromthe AGC or ALC bussand are typically 1 meg 1/2 watt. These
> > > are used, forexample, in RF and IF stages where the AGC and ALC voltage
> > > control gain.
> > >
> > > 73
> > > Mike W5RKL
> > >
> > >
> > >
> > >
> > >
> > >
> > > On 5/27/2013 6:40 PM, Wes Will wrote:
> > > >
> > > > On 05/27/2013 03:43 PM, Terry Wagoner wrote:
> > > > > I keep several spares on hand.
> > > >
> > > > Is this a "generally recommended practice" or something needed only when
> > > > doing voltage levels or realignment?
> > > >

> > > > If a general sort of recommendation, which of the myriad tube suppliers
> > > > that crawl out of the woodwork on a general search of the web are the
> > > > most reliable for a U.S. purchaser? I've spotted some recommendations
> > > > in the archives, but there might be others that people have good luck
> > > > with, and that haven't yet made it there.
> > > >
> > > > In any case I'll be getting at least one driver tube for a spare, and
> > > > making a clip for it inside the chassis somewhere, lots of room in the
> > > > box, so I'll always know where it is....
> > > >
> > > > Also, in re cooling, the big fan in there seems to be working fine, but
> > > > does it actually cool enough? Would increasing the cooling be of enough
> > > > benefit to make it worth a small amount of effort? I can cabbage
> > > > together a small squirrel-cage external blower to increase the airflow a
> > > > lot, if it will help. (Allowing that this thing ever works again, of
> > > > course....) Tube life is for me a definite consideration.
> > > >
> > > > --
> > > > W Will
> > > > N9KDY
> > > >
> > > >
> > >
> > >
> > >
> > > [Non-text portions of this message have been removed]
> > >
> >
> >
> >
> >
> > No virus found in this message.
> > Checked by AVG - www.avg.com
> > Version: 2013.0.3343 / Virus Database: 3184/6362 - Release Date: 05/27/13
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

42325. Re: [TS-520_820_530_830] DG-5 power connector

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-28 15:49:26 UTC
From: Jerry Barr
Topic: 42318 Message: 42325

i wud like to find a inexpensive dg-5 myself hi hi for my ts 520se

Jerry KJ6NTL

From: Alvin Chipmunk <n3kvl@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, May 28, 2013 8:03 AM
Subject: Re: [TS-520_820_530_830] DG-5 power connector

Yes, I would like one (maybe two) as well.....

From: tjb813 <mailto:tjb813%40gmail.com>
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Tuesday, May 28, 2013 10:33 AM
Subject: [TS-520_820_530_830] DG-5 power connector

Does anyone happen to know of a replacement part number for the power connector for the DG-5? (Kenwood number E08-0203-25). If anyone knows the manufacturer, that would help also. I need several plugs only. I know of one enterprise that is selling the complete cable kit for around $25. I am hoping for a more cost-effective solution. Thanks

Tim
KD8CN

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[Non-text portions of this message have been removed]

42326. Re: [TS-520_820_530_830] DG-5 power connector

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-28 18:13:35 UTC
From: dennis hatch
Topic: 42318 Message: 42326

I'd like to find one that doesn't have bad wave soldering, and WORKS! H.I.

--- On Tue, 5/28/13, Jerry Barr <kj6ntl@...> wrote:

From: Jerry Barr <kj6ntl@...>
Subject: Re: [TS-520_820_530_830] DG-5 power connector
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Date: Tuesday, May 28, 2013, 10:49 AM

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Jerry KJ6NTL

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To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
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Tim
KD8CN

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Yahoo! Groups Links

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42327. Re: [TS-520_820_530_830] Re: TS-820: where does this connector go? :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-28 18:30:31 UTC
From: Mike
Topic: 42278 Message: 42327

Cesar,

No problem, no apology necessary.

A good thing to remember is to look at the pictorials in the manuals, a lot of questions can be answered in those pictorials. The service manual also has pictorials that will show you where the individual stages are located. Just be careful when pulling the plugs from the boards/enclosures. I use Hemostats clamped in the middle of the plus, pulling straight up. Hemostats are those clamps used by surgeons to clamp arteries closed during surgery. You can find them at All Electronics, www.allelectronics.com, and other outlets on the web. I use them for all sorts of task, holding resistors in place while soldering, picking components up that have fallen into the radio, and as heat sinks when soldering solid state devices. They are your 3rd hand when repairing your gear. They are also good to hold a piece of wire when cleaning solder out of PC board holes.

If in doubt and you can't figure it out or understand what's being said, can't find any reference in a manual(s), then by all means come and ask.

I had an 820 a while back, bought it on ebay 10 years ago. It looked like a previous owner painted it with a "paint brush" an awful light blueish green color, it was awful! It had other problems, very dirty VFO varicap shaft to frame connection causing instability in the VFO tuning, and the AF AVR board 9VDC supply pass transistor had on leg in the board hole and the other in the trash can. I fixed everything, used it for a few years, the sold it recently to a ham back east. Some of the intermittent problems, not all of them, can be traced back to interconnecting pin inside the PLL and display enclosures. The PLL and Display Unit enclosures have 2 boards that are "sandwiched" into the small enclosure with fixed pins making the interconnections.These connections almost never get attention and over time they become dirty resulting in intermittent failures. Kenwood also had problems with very thin foil runs which can be damaged very easily by using excessive heat. Cracks in foil runs in and around the plug pins are not uncommon. A lot of the boards have had updates done at the factory so when replacing a board it's very important to look on the "foil side" for the board's version number. Don't rely solely on the component side X50.... number, check the foil side number. This is especially important for the AF AVR board because there are 2 different board versions. Laying on the 2 different version AF AVR boards on the bench, side by side, both boards look almost identical but one board will work while the other will not. The change in on the "AF3" pin connections. The one thing I remember about the 820 AF AVR board differences is the audio is routed from the

AF3 connection differently on one version then the other. So don't forget to check the foil side numbers to ensure they match the replacement board. This, by the way, is NOT in any 820 operator's or service manual nor have I found this in any Kenwood tech bulletin, it's all based on my previous experience working with the 820's AF AVR board replacements. I no longer have the 820 but one day I may fine another and buy it.

The 820 service manual leaves a lot to be desired not only in accuracy but also in Japanese to English translation. Having said that, I do recommend taking some time and reading the "Circuit Description" section and study the block diagram so you get a better idea of what's going on "under the hood" of your 820. This also, after you have a good understanding of how the 820 works, will give you a better idea where to look when problems do arise.

It's also important to learn how PLL's work since the 820 is controlled by PLL Unit. It's important to understand that the PLL Unit requires 3 signals, VFO, CAR Unit, and PLL Unit's individual band's HET OSC signals to work properly. If just one of these signal is missing then the PLL Unit will change to an Unlock state resulting in no receive and no transmit. The 820's PLL unit is the easiest to learn and understand. Once you have a solid foundation on how the PLL work, learning how the 530 and 830 PLL Units work is much easier.

Having some test equipment is a must, frequency counter, analog VTVM, millivolt meter with RF probe (Terry has the details on one of these), signal generator, and a scope should be part of your test equipment collection. A DVM can be used but it's best used when measuring resistance and AC/DC voltages. For simple continuity checks, a cheap analog VOM found at your local hardware store is nice to have, simple and easy to use plus it has an analog meter. Most of these VOMs have one resistance setting, 1K. That's more than enough for any continuity checks you may need to do. I also use a DVM to measure power transformer winding resistance. You can tell if a power transformer is good or not by measuring the winding resistance and shorts between windings and shorts between windings and the transformer's metal core. It only takes a short between a couple of windings to cause excessive current to flow in the transformer. For more information on power transformers and how they work, including discussions on "back emf" magnetic fields, find a copy of John T. Fryes "Basic Radio Course". A seller on Ebay is selling the 1951 edition on CD. I recommend it since it's written in easy to understand chapters with simple examples. It's also a very good book/reference for those who are interested in learning basic electronics. I highly recommend it for anyone who wants to become a ham and learn electronics!

Have fun and enjoy your 820, they're a nice rig. They will drift which is normal for any analog "L/C" VFO.

73
Mike W5RKL

On 5/28/2013 9:51 AM, coyoteinventor@... wrote:
>
> Mike,
>
> I apologize for not finding this in the manual. I have read the manual
> several times since I got my old rig a month or 2 ago; used it for
> tuning my rig, find out specs, etc, but I did not remember this
> figure. To be honest, I don't think I would have known how to even
> look for my problem in the manual, as I know not all connectors of all
> boards are shown in figures in the manual. I thought I had messed up,
> and only someone who knew the boards could confirm where the
> connectors go.
>
> Again, I apologize if I wasted anybody's time.
>
> --Cesar-- K1TNT
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@...> wrote:
> >
> > This is another one of those questions that could have been easily
> > answered IF the owner would had taken the time to read the operator's
> > manual FIRST! Page 34, Figure 25 "Installing the CW Filter"clearly
> shows
> > how to connect the plug you are referring to!
> >
> > Mike
> >
> > On 5/26/2013 4:48 PM, n6wk@... wrote:
> > > To Clarify, If you had the CW filter installed, you would move it over
> > > one or two pins.
> > > It tells about it towards the end of the user manual on page 34 of the
> > > one I have.
> > >
> > > 73,
> > > Gordon
> > > N6WK
> > >
> > > 73,
> > > Gordon
> > >
> > > On 5/26/2013 2:16 PM, coyoteinventor@... wrote:
> > >> I took out some boards for cleaning, but did not realize not all male
> > >> pins were used on this board, and now I'm not sure which ones to use.
> > >> :-(
> > >> Click here to see the photo of the connector in question
> > >> <http://www.361euros.com/skitch/image-20130526-170951.jpg>
> > >> I plugged the 3-pin female connector in using the right most 3 pins

> > >> (#1,2 & 3), leaving the 2 left ones (#4 & 5) unused, but I honestly
> > >> don't know which 3 of the 5 male pins were used before I
> unplugged it,
> > >> so I don't want to power up the machine just in case.
> > >> Any help will be GREATLY appreciated! :-)
> > >> --Cesar-- K1TNT
> > >>
> > >> [Non-text portions of this message have been removed]
> > >>
> > >>
> > > "Faced with the choice between changing one's mind and proving
> that there is no need to do so, almost everyone gets busy on the proof."
> > > - John Kenneth Galbraith -
> > >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
>

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42328. Re: [TS-520_820_530_830] Re: TS-820: where does this connector go? :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-28 20:47:48 UTC
From: Wes Will
Topic: 42278 Message: 42328

On 05/28/2013 01:30 PM, Mike wrote:

So much to learn, just from reading the on-going threads...

> boards/enclosures. I use Hemostats clamped in the middle of the plug,

One thing I have learned about using hemostats for electronics. They come with RIDGED jaws, for gripping strength, to make the blood vessel hold still when you pinch it off. This is good and bad for electronics. It grips really well, but can mar a wire or component lead so badly as to weaken it severely. Snap.

Pinching a light-gauge wire with the insulation on will show you just how much damage it can do. The ridged jaws will cut the insulation, small slits, as often as not. This leaves a possible short across another component or connection for your future trouble-shooting pleasure. Un-funny, to say the least.

I have several sets, saved from suture kits that are mostly just "throw-away" items now (where they were once sterilized and re-used). I run them through the wash, then the autoclave to sterilize them, and put them in the toolbox.

About a third of them I take to the shop in the basement and, using a water-cooled blade-sharpening wheel, grind the ridged jaws smooth. They still grip quite adequately, they still make wonderful soldering heat-sinks, but they no longer mar the wires and leads.

42329. Re: [TS-520_820_530_830] Re: transceive cable for kenwood twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-28 23:53:08 UTC
From: pmarkavage@...
Topic: 24774 Message: 42329

The R-599/T-599 interconnection cable used the Hirose 1300 series type of connectors (round pins). These were discontinued many years ago. Your best bet is to use the current Hirose 1600 series of connectors (flat pins). However, you would also have to change out the connector on the R-599 and T-599 to match the cable connectors. Doable stuff, but not trivial.

Pete, wa2cwa

On Mon, 27 May 2013 19:57:42 -0700 JIM LATENDORF <famtech.kebr@...> writes:

That's great !! But, don't keep us in suspense. What's the part number and is it available through Mouser or Digi-Key directly ??

Just trying to save a few steps.

Jim L.

On 05/27/2013 06:01 PM, pmarkavage@juno.com wrote:

Seems we go through this exercise periodically.
Hirose Connectors:
http://www.hirose-connectors.com/
Digi-Key and Mouser are two major distributors.

Pete, wa2cwa

On Mon, 27 May 2013 20:02:05 -0400 Jan Servaites <jservaites@...> writes:
> If there's a vendor that sells the connectors, we can make up our own
>
> cables.
> I'll look around again to find a vendor.
> Jan N8CBX
>
> famtechjl wrote:
>
> >
> >
> > I too have the Twins set and am also missing the darn cable. Must
> be
> > chronic with the T-599/R-599. I would be interested in throwing
> into a
> > batch buy of these cables in order to get one. That's if we can
> find a
> > point person to start it all up.

> >
> > Regards,
> >
> > Jim L.
> > WB6KVD
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Osamu Hazawa"
> > <pomerol@...> wrote:
> > >
> > > Hello All,
> > >
> > > I know there are needs and considerable frustration for missing
> cables.
> > > But I'm reluctant to start a new project because:
> > >
> > > - There were some people who ordered the cables but eventually
> > > dissapeared and did not pay for the shipping cost.
> > >
> > > - TMT guy who is in charge of item description (Web, auction)
> > refused to
> > > correct
> > > misleading description (He uses "escutcheon" for the knob
> inlays).
> > >
> > > Osamu
> > >
> > > ----- Original Message -----
> > > From: Bob
> > > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Thursday, February 04, 2010 1:55 AM
> > > Subject: [TS-520_820_530_830] Re: transceive cable for kenwood
> twins
> > >
> > >
> > >
> > > Osamu
> > > Thank You for the link. I did bring the site up in English using
> the
> > > Google tool. Once I figured out how to use it again. There was a
> >
> > contact
> > > page for ordering items. I put in my E-mail address and asked if
> >
> > they could
> > > get me the part number for the Cable ends only, and if they
> would
> > sell the
> > > ends only to the cables. Now I don't know if it will work at all

>
> > because
> > > once I sent the request the link dropped. So I did it again using
>
> > the same
> > > page on the original site in Japanese. Osamu I am guessing you
> know
> > how to
> > > navigate the site with out guessing where you are. I can not
> read or
> > write
> > > in Japanese. If you could request the information and find out
> the
> > costs of
> > > the connectors and the possibility of them selling them with out
> the
> > cable
> > > it would be a great help.
> > > Thank You
> > > Bob Musser
> > > KB6KPK
> > > bmusser4@...
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@ wrote:
> > > >
> > > > Osamu,
> > > > Any chance you could find out if just the Connectors are
> available?
> > > > If they are, I would be willing to send you the $$ to buy a
> few and of
> > > > course pay for any expenses to get them to me.
> > > > Please let me know. n6wk@
> > > >
> > > > thank you,
> > > > Gordon
> > > > N6WK
> > > >
> > > > Osamu Hazawa wrote:
> > > > >
> > > > >
> > > > > Dave et al,
> > > > >
> > > > > >There was a thread on this list a few years ago about this
> company
> > > and a
> > > > > >Japanese ham who was trying to get an order together for
> cables.
> > > > >
> > > > > I' m the person! B-)

> > > > >
> > > > > Osamu
> > > > >
> > > > > ----- Original Message -----
> > > > > From: Dave
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > Sent: Wednesday, February 03, 2010 4:10 PM
> > > > > Subject: Re: [TS-520_820_530_830] Re: transceive cable for
> kenwood
> > > twins
> > > > >
> > > > > I believe the cables are still available in Japan at TMT,
> but my
> > > reading
> > > > > ability is really rusty:
> > > > >
> > > > > http://www.toyama-smenet.or.jp/~tmt/page1c.htm
> > <http://www.toyama-smenet.or.jp/%7Etmt/page1c.htm>
> > > > > <http://www.toyama-smenet.or.jp/%7Etmt/page1c.htm>
> > > > >
> > > > > This page has a bunch of stuff made of unobtainium :) Search
> for
> > > > > '599'. The price is about US$85. They seem to be located in
> Toyama,
> > > > > based on their telephone number and email address.
> > > > >
> > > > > There was a thread on this list a few years ago about this
> > company and
> > > a
> > > > > Japanese ham who was trying to get an order together for
> cables.
> > > > > Unfortunately they only want to deal with domestic orders,
> so I
> > think
> > > it
> > > > > really requires someone in Japan to make it happen.
> > > > >
> > > > > My missing treasure is a TV-502 cable.
> > > > >
> > > > > 73,
> > > > > - Dave W6OT
> > > > >
> > > > > Chuck Goelz wrote:
> > > > > >
> > > > > >
> > > > > > Bob,
> > > > > >
> > > > > > Apparently you are finding out just how scarce these are!

> As
> > far as
> > > I
> > > > > > know, there aren't any. But, you probably CAN buy the
> whole cable,
> > > > > > > provided that you are very patient and willing to pay the
> "fair
> > > market
> > > > > > > price". I see the cables go up for sale on eBay
> periodically, as
> > > there
> > > > > > > are sellers that recognize the value of splitting up the
> > Twins... It
> > > > > > > kind of hurts to see that this is profitable, but that's
> what the
> > > > > > > market has done. Anyhow, I posted a couple of months ago
> that yet
> > > > > > > another cable was available on eBay (I had no connection
> with the
> > > > > > > sale!), just to let people like you know that it was
> > available. They
> > > > > > > tend to show up 2 or 3 time as year, so don't expect to be
>
> > able to
> > > buy
> > > > > > > one tomorrow... And when they do show up, they usually
> sell
> > for $90
> > > to
> > > > > > > $120. Really.
> > > > > > >
> > > > > > > For now, I'm keeping my cable. But I keep thinking that I
>
> > might want
> > > > > > > to sell my Twins (almost perfect T-599D with original
> S2001A
> > finals,
> > > > > > > R-599D w/ both 6m and 2m convertors, S-599, and THE cable)
> to
> > buy a
> > > > > > > new house or airplane or something... ;-) But my dilemma
> is that I
> > > > > > > can't imagine breaking up such a beautiful set of Kenwood
>
> > Twins just
> > > > > > > to satisfy the existing market that is driven by the "I
> absolutely
> > > > > > > NEED this piece at any ridiculous price to complete my
> station"
> > > > > > > mentality. So I guess I'll just keep 'em... For now.

> > (Wondering what
> > > > > > kind of responses I'll get from this one...)
> > > > > >
> > > > > > Anyhow, I hope someone else in the group has a better
> answer for
> > > you.
> > > > > > If you want the functionality that the cable provides,
> and
> > > originality
> > > > > > is not an issue, you could replace the connectors with
> something
> > > that
> > > > > > you CAN get mates for... And save the old connectors in
> case
> > you get
> > > > > > lucky some day...
> > > > > >
> > > > > > Sincerely, good luck! And if you are not sure how to find
> the
> > cable
> > > on
> > > > > > eBay, drop me an email...
> > > > > >
> > > > > > Cheers & 73,
> > > > > > Chuck WA3CEJ
> > > > > >
> > > > > > ----- Original Message -----
> > > > > > From: Bob
> > > > > > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > Sent: Tuesday, February 02, 2010 9:24 PM
> > > > > > Subject: [TS-520_820_530_830] Re: transceive cable for
> kenwood
> > twins
> > > > > > > > > > > > I have been looking for the ends to the connector cables
> the last
> > > > > > couple of months. I have hit every local shop here in
> Orange
> > County
> > > > > > California and the surplus places etc. they have checked
> with
> > there
> > > > > > suppliers and so on. The end of this process is that no
> one has
> > > found
> > > > > > the ends to the cable. IF someone has a connection and
> knows

> > where
> > > the
> > > > > > ends of the cable for the 599 twins can be purchased let
> me know.
> > > > > > Thank You
> > > > > > KB6KPK
> > > > > > Bob Musser
> > > > > > Orange, CA.
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, pmarkavage
> > > > > > <pmarkavage@> wrote:
> > > > > > >
> > > > > > > Wiring diagram for the cable/connectors can be pulled
> from the
> > > > > > > receiver/transmitter schematics. If you don't use a
> transceiver
> > > cable,
> > > > > > > the receiver has a jumper plug in the remote socket (so
> you
> > > already
> > > > > > have
> > > > > > > one plug) but the jumpers would have to be removed if
> you
> > use it
> > > as
> > > > > one
> > > > > > > cable end.
> > > > > > >
> > > > > > > Pete, wa2cwa
> > > > > > >
> > > > > > > On Sun, 31 Jan 2010 22:54:14 -0500 yash@ writes:
> > > > > > >
> > > > > > > Looking at a set of 599D kenwood twins,seller does not
> >
> > have the
> > > 16
> > > > > > > pin cable that goes between the receiver and
> transmitter.
> > needed
> > > for
> > > > > > > transceive operation. Dose anyone have a cable,or the
> 16 pin
> > > > > > > connectors and or a wiring diagram for the cable?
> > > > > > > any info on the cable assembly or a wiring diagram to
> >
> > build one,
> > > > > > > would really be greatful.

> > > > > > > > thanks
> > > > > > > > dale wt4t
> > > > > > > >
> > > > > > >
> > > > > >
> > > > > [
> > > > > >
> > > > >
> > > >
> > > >
> > > >
> > > >
> > > >
> > > >
> > > [Non-text portions of this message have been removed]
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> ------------------------------------
>
> Yahoo! Groups Links
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>

[Non-text portions of this message have been removed]

42330. FLAMED

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 04:01:59 UTC
From: rkings1956
Topic: 42330 Message: 42330

This is a reminder for people who say that no one gets FLAMED in this group for asking a question. This is the response I received this April when I asked a question about the plate current on the TS-530s.

Rob
KD6FSK

Plate CURRENT IS NOT THE SAME and IT IS NOT 225 ma FOR A TS-520.

For GOSH SAKES we are ham operators. This is a technical hobby. Read your owners operator manuals and if still uncertain then come here and ask. It is all there in front of you. Your manuals should be dog eared.

TS-520, TS,520S, TS-520SE and TS-820 Transmitters are all rated at 160 Watts DC Input Power. You load these to.... "ABOUT 200 ma"

TS-530 and TS-830 Transmitters are rated at 180 Watts DC Input Power. You load these to.... " Reduce the Carrier Control setting if Ip is over 265 ma"

1. Where did 225 ma come from? Ken Kempski K4EAA in his FAQ section suggests that 800v X 225 ma = 180 watt dc input power and it is pointless to exceed this level as it wont make perceptable difference on the receive end of a transmission and loading to this level (assuming proper loading technique) can extend final tube life. Without saying it Ken was obviously speaking about TS-530 and TS-830 rigs as they are the only two models with 180 watts dc input ratings. He would not recommend loading to 180 watts dc input power on a radio designed for 160 watts dc input power.

2. Why are the early rigs rated at 160 watts dc input and later rigs at 180 watts dc input? I Do Not Know With 100% Certainty. What I Believe is that it is due to the switch from S2001A finals to 6146B finals. I Believe 6146B tubes have higher Plate dissipation ratings. I have never seen a S2001A Data Sheet and do not know there plate dissipation or any of there ICAS max ratings. If anyone has one please send to Gordon N6WK so he can post on his site.

3. Is there any difference in the HV power supply capacities? No apparent or published differences that I have seen. Maybe we can ask Bob Mansker to hack transformers out of these rigs and weigh them to see if difference in copper and iron? Transformer weight roughly corresponds to KVA capacity.

4. Sorry about my frustration. This is suppose to be a thinking mans hobby. You have to be able to read and read with comprehension. Lacking this ability you are in trouble. Very easy to just ask and expect an instant answer with out doing any modest amount of homework. Maybe it is a age and cultural thing? I prefer to help those who are willing to help themselves.

5. Lets stop putting wrong information out on this forum. Easy to just "Parrot" what you have heard. This is how tribal myths perpetuate. If you are going to respond do so as an

"expert" or do so by qualifying your response. I will try to remember to preface my remarks by telling you what I "know" first and then what I "believe". Can be a big difference between those.

One of the worst things you can do is tell people what you know to be fact only to find out later you were wrong. Pity the poor Flat Earth folks!

Terry K9TW

42331. Re: FLAMED

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 11:07:40 UTC
From: k5hfg
Topic: 42330 Message: 42331

Good morning,
Let's not start this crap again. Unless you find error in any of the info I would suggest printing and filing it in the notebook you should be keeping. This is a technical hobby. Some of these guys are experts and I for one appreciate their willingness to help me. Besides, none of them are as tough as my old Elmer. Now, let's put on our big boy pants and pay ATTENTION. Stop acting like children. Of course, this is just my opinion. Yall are free to do as you see fit. Enjoy the rest of the day God has given us.
73 yall, from K5HFG DON

42332. Re: FLAMED

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 11:33:20 UTC
From: Terry Wagoner
Topic: 42330 Message: 42332

If you consider this getting "flamed" you are going to get your feelings hurt daily in this old life.

This is a technical hobby that use to have high entry level requirements. If you dont have the bug and a passion for learning you are in wrong hobby and certainly have purchased the wrong radio. Yahoo forums by design provide a place for people with parochial interest.

If the charter of this forum is to serve as a "Help Desk" for the general public or appliance operators who are staring at a electronic black box trying to figure out how to turn it on with the manual on the floor then I dont care to be a member of that club.

If you cant open your TS-530 instruction manual and read the transmitter section on how to tune and load it including the maximum full load current you should sell your hybrid. If you read the instructions and have some questions about what you read that is an entirely different matter and what this forum is for.

My idea of this forum is the members share a common bond. A love of Kenwood Hybrids and desire to keep them on the air. They are above average intelligence and they come here because they want to learn how to operate the rig properly, how to maintain it, how to troubleshoot and repair it, and most importantly learn how it works. You wont accomplish any of that without some effort.

To accomplish that requires something between the ears and a willingness to do a little work. There can be no real learning if the student has no aptitude, no interest, and no work ethic.

If that is not what this forum is about then I am sorry. My mistake.
I am not interested in sitting on a "Help Desk" for the general public or appliance operators who just want an answer.

Strongly suggest you sell your Kenwood hybrid and buy a no tune solid state rig and have fun with it. That way not much chance of getting your feelings hurt by a teacher who has some expectations for you. If it breaks throw it away and get a new one.

Man it is sad what has happened to this hobby. I would love it if I could find just one young person to mentor who was a voracious reader, had a questioning attitude, had a gleam in his eye and fire in the belly, and would not go crying down the hall like a little sissy when he was pressed to do a little work. I guess that was a very different time.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "rkings1956" <rkings1956@...> wrote:
>
>
> This is a reminder for people who say that no one gets FLAMED in this group for asking a question. This is the response I received this April when I asked a question about the plate current on the TS-530s.

>
> Rob
> KD6FSK
>
>
> Plate CURRENT IS NOT THE SAME and IT IS NOT 225 ma FOR A TS-520.
>
> For GOSH SAKES we are ham operators. This is a technical hobby. Read your owners operator manuals and if still uncertain then come here and ask. It is all there in front of you. Your manuals should be dog eared.
>
> TS-520, TS,520S, TS-520SE and TS-820 Transmitters are all rated at 160 Watts DC Input Power. You load these to.... "ABOUT 200 ma"
>
> TS-530 and TS-830 Transmitters are rated at 180 Watts DC Input Power. You load these to.... " Reduce the Carrier Control setting if Ip is over 265 ma"
>
> 1. Where did 225 ma come from? Ken Kempski K4EAA in his FAQ section suggests that 800v X 225 ma = 180 watt dc input power and it is pointless to exceed this level as it wont make perceptable difference on the receive end of a transmission and loading to this level (assuming proper loading technique) can extend final tube life. Without saying it Ken was obviously speaking about TS-530 and TS-830 rigs as they are the only two models with 180 watts dc input ratings. He would not recommend loading to 180 watts dc input power on a radio designed for 160 watts dc input power.
>
> 2. Why are the early rigs rated at 160 watts dc input and later rigs at 180 watts dc input? I Do Not Know With 100% Certainty. What I Believe is that it is due to the switch from S2001A finals to 6146B finals. I Believe 6146B tubes have higher Plate dissipation ratings. I have never seen a S2001A Data Sheet and do not know there plate dissipation or any of there ICAS max ratings. If anyone has one please send to Gordon N6WK so he can post on his site.
>
> 3. Is there any difference in the HV power supply capacities? No apparent or published differences that I have seen. Maybe we can ask Bob Mansker to hack transformers out of these rigs and weigh them to see if difference in copper and iron? Transformer weight roughly corresponds to KVA capacity.
>
> 4. Sorry about my frustration. This is suppose to be a thinking mans hobby. You have to be able to read and read with comprehension. Lacking this ability you are in trouble. Very easy to just ask and expect an instant answer with out doing any modest amount of homework. Maybe it is a age and cultural thing? I prefer to help those who are willing to help themselves.
>
> 5. Lets stop putting wrong information out on this forum. Easy to just "Parrot" what you have heard. This is how tribal myths perpetuate. If you are going to respond do so as an "expert" or do so by qualifying your response. I will try to remember to preface my remarks by telling you what I "know" first and then what I "believe". Can be a big difference between those.
>
> One of the worst things you can do is tell people what you know to be fact only to find

out later you were wrong. Pity the poor Flat Earth folks!
>
> Terry K9TW
>

42333. RE: [TS-520_820_530_830] Re: FLAMED

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 11:56:35 UTC
From: Rob
Topic: 42330 Message: 42333

Well said Don,

I suspect your thoughts pretty well sum up what the majority of the group thinks...

73's Rob VK3BRS

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of k5hfg
Sent: Wednesday, 29 May 2013 9:08 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: FLAMED

Good morning,
Let's not start this crap again. Unless you find error in any of the info I would suggest printing and filing it in the notebook you should be keeping. This is a technical hobby. Some of these guys are experts and I for one appreciate their willingness to help me. Besides, none of them are as tough as my old Elmer. Now, let's put on our big boy pants and pay ATTENTION. Stop acting like children. Of course, this is just my opinion. Yall are free to do as you see fit. Enjoy the rest of the day God has given us.
73 yall, from K5HFG DON

[Non-text portions of this message have been removed]

42334. Re: [TS-520_820_530_830] Re: FLAMED

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 13:08:48 UTC
From: Dave & Loraine
Topic: 42330 Message: 42334

Hi Terry,
Please don't rise to the bait. We all appreciate what you and many others contribute to this group.

Moderators,
Please stop this thread.
This group was founded for the repair and maintenance of our hybrids, no flaming allowed.
Bill would turn in his grave.

Thanks
Dave f4eyk

[Non-text portions of this message have been removed]

42335. Re: [TS-520_820_530_830] FLAMED

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 04:17:25 UTC
From: Wes Will
Topic: 42330 Message: 42335

On 05/28/2013 11:01 PM, rkings1956 wrote:
>
> This is a reminder for people who say that no one gets FLAMED in this
> group for asking a question. This is the response I received this April

Sorry, but that gave me a chuckle.

That was the politest "FLAME" I have ever bloody seen. Even included an apology for "frustration."

If that's the worst it gets in here, well, you ought to count your blessings and then spend some time on some of the USENET forae I've been on over the years....

The flames there will take the hide off of you, and no mistake.

--
Wes Will
N9KDY

42336. Re: [TS-520_820_530_830] Re: FLAMED - Amen, Brother Terry.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 12:55:05 UTC
From: Wes Will
Topic: 42330 Message: 42336

On 05/29/2013 06:33 AM, Terry Wagoner wrote:
> If you consider this getting "flamed" you are going to get your feelings
> hurt daily in this old life.

...

> Man it is sad what has happened to this hobby. I would love it if I
> could find just one young person to mentor who was a voracious reader,
> had a questioning attitude, had a gleam in his eye and fire in the
> belly, and would not go crying down the hall like a little sissy when he
> was pressed to do a little work.

Agree with every word of this.

Especially the "what has happened." I have been told by some of my Boy Scouts in previous years (not doing the BSA thing for some time now) that Ham radio is strictly

"For old, fat, rich, white guys."

I find that ineffably sad. All too true a lot of places in the U.S., unfortunately.

If you want to help bust that image up, do what I'm trying to do at my wife's school. (She is a teacher at a rural consolidated school district.) In the High School Physics and General Science classes next fall, I am being allowed to give a pitch for Amateur Radio, with a goal of setting up a club, complete with their own shack in a small, unused room in the school building.

This is precisely why I am wanting so badly to get this 520SE back into service. It's going to be the HF rig for a bunch of kids, I hope, as well as for my own use.

I have scrounged and repaired an antenna tuner, HF SWR meter, VHF/UHF swr meter, an ADI junker of a 2-meter mobile which I've mounted in a box to make it also semi-portable, and a 45-ampere DC variable voltage, current-limited power supply. I'll be keeping an eye out for 2-meter all-mode gear and something for use on 220 and 70cm, for later on.

(The power supply is the only bit of kit already in hand which still needs some work, the current limit pot is wonky, needs to be replaced and then the built-in meters calibrated. Nothing an hour on the bench won't fix.)

I'll be needing to get them an oscilloscope, signal generator, VTVM, and a DMM for their shack-to-be. That's a fur piece down the road, though. I have to get the kids involved and interested in it, first. That

means getting a radio working and an antenna up, enough to make some contacts and catch their interest a bit. Packet and other digital modes are high on the list to get in the early innings, too.

(I need to get a replacement o-scope for myself, too, but that will have to wait; the 60's vintage clunker I have still works, more or less, though calibration is getting to be dicey. Still gives you a ball-park idea of the wave form, but I am not counting on the measurements being correct any more. It's so old that it's not just a re-alignment job either. Can't just rotate the yoke a bit to square up and level the trace against the graticule and get on with things any more. The calibration circuit is first to get fixed, it's seriously out of kilter.)

If you're looking for a challenge, and some kids who can carry on the hobby, you might try going this route. Your "fire in their belly" line is exactly why I went to the school board last month about doing this. They are giving me a chance to stir up interest, and see where that leads.

Maybe there is a school in your area that could get the same treatment? It's certainly going to be a challenge to get them set up and running, with the budget I've got to work with. (Which is of course ZERO DOLLARS, there are no extra funds for anything except a sport in the state of Illinois. Zero bucks to work with, excepting what I can free up out of my own pocket. The young'uns will be having to wash some cars or something for any gear they get once the club gets on its feet.)

(IF the club gets on its feet.)

--
Wes Will
N9KDY

42337. Re: [TS-520_820_530_830] Re: FLAMED

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 14:05:01 UTC
From: Mike
Topic: 42330 Message: 42337

I agree 150%. Well said and it's the truth whether some of you believe it or not! We're not here to "coddle" you, treat you with kid gloves so your feelings don't get hurt. We are here to help but we are NOT here to do YOUR part for you! We expect YOU to put forth effort on YOUR part and "YES" that includes reading the manuals FIRST. If you are being told the same thing on other ham forums that you are being told here, then don't blame us for your mistakes, take responsibility for your inaction! If you are not willing to do any of this, expect us to do ALL the work for you, then complain/whine when you don't get the answer you expected and your feelings get hurt, then this group is not for you, it's that simple!

73
Mike W5RKL

On 5/29/2013 6:33 AM, Terry Wagoner wrote:
>
> If you consider this getting "flamed" you are going to get your
> feelings hurt daily in this old life.
>
> This is a technical hobby that use to have high entry level
> requirements. If you dont have the bug and a passion for learning you
> are in wrong hobby and certainly have purchased the wrong radio. Yahoo
> forums by design provide a place for people with parochial interest.
>
> If the charter of this forum is to serve as a "Help Desk" for the
> general public or appliance operators who are staring at a electronic
> black box trying to figure out how to turn it on with the manual on
> the floor then I dont care to be a member of that club.
>
> If you cant open your TS-530 instruction manual and read the
> transmitter section on how to tune and load it including the maximum
> full load current you should sell your hybrid. If you read the
> instructions and have some questions about what you read that is an
> entirely different matter and what this forum is for.
>
> My idea of this forum is the members share a common bond. A love of
> Kenwood Hybrids and desire to keep them on the air. They are above
> average intelligence and they come here because they want to learn how
> to operate the rig properly, how to maintain it, how to troubleshoot
> and repair it, and most importantly learn how it works. You wont
> accomplish any of that without some effort.
>
> To accomplish that requires something between the ears and a
> willingness to do a little work. There can be no real learning if the

> student has no aptitude, no interest, and no work ethic.
>
> If that is not what this forum is about then I am sorry. My mistake.
> I am not interested in sitting on a "Help Desk" for the general public
> or appliance operators who just want an answer.
>
> Strongly suggest you sell your Kenwood hybrid and buy a no tune solid
> state rig and have fun with it. That way not much chance of getting
> your feelings hurt by a teacher who has some expectations for you. If
> it breaks throw it away and get a new one.
>
> Man it is sad what has happened to this hobby. I would love it if I
> could find just one young person to mentor who was a voracious reader,
> had a questioning attitude, had a gleam in his eye and fire in the
> belly, and would not go crying down the hall like a little sissy when
> he was pressed to do a little work. I guess that was a very different
> time.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "rkings1956"
> <rkings1956@...> wrote:
> >
> >
> > This is a reminder for people who say that no one gets FLAMED in
> this group for asking a question. This is the response I received this
> April when I asked a question about the plate current on the TS-530s.
> >
> > Rob
> > KD6FSK
> >
> >
> > Plate CURRENT IS NOT THE SAME and IT IS NOT 225 ma FOR A TS-520.
> >
> > For GOSH SAKES we are ham operators. This is a technical hobby. Read
> your owners operator manuals and if still uncertain then come here and
> ask. It is all there in front of you. Your manuals should be dog eared.
> >
> > TS-520, TS,520S, TS-520SE and TS-820 Transmitters are all rated at
> 160 Watts DC Input Power. You load these to.... "ABOUT 200 ma"
> >
> > TS-530 and TS-830 Transmitters are rated at 180 Watts DC Input
> Power. You load these to.... " Reduce the Carrier Control setting if
> Ip is over 265 ma"
> >
> > 1. Where did 225 ma come from? Ken Kempski K4EAA in his FAQ section
> suggests that 800v X 225 ma = 180 watt dc input power and it is
> pointless to exceed this level as it wont make perceptable difference
> on the receive end of a transmission and loading to this level

> (assuming proper loading technique) can extend final tube life.
> Without saying it Ken was obviously speaking about TS-530 and TS-830
> rigs as they are the only two models with 180 watts dc input ratings.
> He would not recommend loading to 180 watts dc input power on a radio
> designed for 160 watts dc input power.
> >
> > 2. Why are the early rigs rated at 160 watts dc input and later rigs
> at 180 watts dc input? I Do Not Know With 100% Certainty. What I
> Believe is that it is due to the switch from S2001A finals to 6146B
> finals. I Believe 6146B tubes have higher Plate dissipation ratings. I
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> dissipation or any of there ICAS max ratings. If anyone has one please
> send to Gordon N6WK so he can post on his site.
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> see if difference in copper and iron? Transformer weight roughly
> corresponds to KVA capacity.
> >
> > 4. Sorry about my frustration. This is suppose to be a thinking mans
> hobby. You have to be able to read and read with comprehension.
> Lacking this ability you are in trouble. Very easy to just ask and
> expect an instant answer with out doing any modest amount of homework.
> Maybe it is a age and cultural thing? I prefer to help those who are
> willing to help themselves.
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> > 5. Lets stop putting wrong information out on this forum. Easy to
> just "Parrot" what you have heard. This is how tribal myths
> perpetuate. If you are going to respond do so as an "expert" or do so
> by qualifying your response. I will try to remember to preface my
> remarks by telling you what I "know" first and then what I "believe".
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> > One of the worst things you can do is tell people what you know to
> be fact only to find out later you were wrong. Pity the poor Flat
> Earth folks!
> >
> > Terry K9TW
> >
>
>

[Non-text portions of this message have been removed]

42338. RE: [TS-520_820_530_830] Re: FLAMED

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 14:05:17 UTC
From: Les Zwiebel WB6ORZ
Topic: 42330 Message: 42338

-------- Original message --------
From: Terry Wagoner <wagstw46@...m>
Date: 05/29/2013 7:33 AM (GMT-05:00)
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: FLAMED

If you consider this getting "flamed" you are going to get your feelings hurt daily in this old life.

This is a technical hobby that use to have high entry level requirements. If you dont have the bug and a passion for learning you are in wrong hobby and certainly have purchased the wrong radio. Yahoo forums by design provide a place for people with parochial interest.

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If that is not what this forum is about then I am sorry. My mistake.
I am not interested in sitting on a "Help Desk" for the general public or appliance operators who just want an answer.

Strongly suggest you sell your Kenwood hybrid and buy a no tune solid state rig and have fun with it. That way not much chance of getting your feelings hurt by a teacher who has some expectations for you. If it breaks throw it away and get a new one.

Man it is sad what has happened to this hobby. I would love it if I could find just one young person to mentor who was a voracious reader, had a questioning attitude, had a gleam in his eye and fire in the belly, and would not go crying down the hall like a little sissy when he was pressed to do a little work. I guess that was a very different time.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "rkings1956" <rkings1956@...> wrote:
>
>
> This is a reminder for people who say that no one gets FLAMED in this group for asking a question. This is the response I received this April when I asked a question about the plate current on the TS-530s.
>
> Rob
> KD6FSK
>
>
> Plate CURRENT IS NOT THE SAME and IT IS NOT 225 ma FOR A TS-520.
>
> For GOSH SAKES we are ham operators. This is a technical hobby. Read your owners operator manuals and if still uncertain then come here and ask. It is all there in front of you. Your manuals should be dog eared.
>
> TS-520, TS,520S, TS-520SE and TS-820 Transmitters are all rated at 160 Watts DC Input Power. You load these to.... "ABOUT 200 ma"
>
> TS-530 and TS-830 Transmitters are rated at 180 Watts DC Input Power. You load these to.... " Reduce the Carrier Control setting if Ip is over 265 ma"
>
> 1. Where did 225 ma come from? Ken Kempski K4EAA in his FAQ section suggests that 800v X 225 ma = 180 watt dc input power and it is pointless to exceed this level as it wont make perceptable difference on the receive end of a transmission and loading to this level (assuming proper loading technique) can extend final tube life. Without saying it Ken was obviously speaking about TS-530 and TS-830 rigs as they are the only two models with 180 watts dc input ratings. He would not recommend loading to 180 watts dc input power on a radio designed for 160 watts dc input power.
>
> 2. Why are the early rigs rated at 160 watts dc input and later rigs at 180 watts dc input? I Do Not Know With 100% Certainty. What I Believe is that it is due to the switch from S2001A finals to 6146B finals. I Believe 6146B tubes have higher Plate dissipation ratings. I have never seen a S2001A Data Sheet and do not know there plate dissipation or any of there ICAS max ratings. If anyone has one please send to Gordon N6WK so he can post on his site.
>
> 3. Is there any difference in the HV power supply capacities? No apparent or published differences that I have seen. Maybe we can ask Bob Mansker to hack transformers out of these rigs and weigh them to see if difference in copper and iron? Transformer weight roughly corresponds to KVA capacity.
>
> 4. Sorry about my frustration. This is suppose to be a thinking mans hobby. You have to be able to read and read with comprehension. Lacking this ability you are in trouble. Very easy to just ask and expect an instant answer with out doing any modest amount of homework. Maybe it is a age and cultural thing? I prefer to help those who are willing to help themselves.
>
> 5. Lets stop putting wrong information out on this forum. Easy to just "Parrot" what you have heard. This is how tribal myths perpetuate. If you are going to respond do so as an

"expert" or do so by qualifying your response. I will try to remember to preface my remarks by telling you what I "know" first and then what I "believe". Can be a big difference between those.
>
> One of the worst things you can do is tell people what you know to be fact only to find out later you were wrong. Pity the poor Flat Earth folks!
>
> Terry K9TW
>

[Non-text portions of this message have been removed]

42339. flamed

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 14:51:15 UTC
From: Joseph Stiles
Topic: 42339 Message: 42339

Greetings group,

    I respectfully request that we move on.....please

73 Joe
WB7UQU

[Non-text portions of this message have been removed]

42340. Re: FLAMED - Amen, Brother Terry.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 15:06:44 UTC
From: Terry Wagoner
Topic: 42330 Message: 42340

Wes:

I thought about approaching the schools and like you I have the time but not the budget. Very recently I was a little discouraged when had 18 year old nephew in the shack and gave him a demo including working a Russian station while he was here. He liked the service bench but when all done and we were outside looking up at my tri-bander on the tower he pulled out his cell phone and pointed at it and told me he still didnt understand why I went to all the bother!

I dont have any integration of computer other than do use my lap top and audio spectrum analyzer software for LSB/USB carrier adjust. I wish had SDR and IF connection and pan adapter to show him as an example of how it relates to his world. He is heading off to college and I encouraged him to check out the campus club station. Hope he does.

I will think about your approach and interested to here off list how it goes. Went to club meeting recently and saw 8 or 9 old guys like me and a couple guys maybe in 30s and two meters was the talk. No 16 year old kids there and no hybrids in sight.

Take Care
Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Wes Will <wwill@...> wrote:
>
> On 05/29/2013 06:33 AM, Terry Wagoner wrote:
> > If you consider this getting "flamed" you are going to get your feelings
> > hurt daily in this old life.
>
> ...
>
> > Man it is sad what has happened to this hobby. I would love it if I
> > could find just one young person to mentor who was a voracious reader,
> > had a questioning attitude, had a gleam in his eye and fire in the
> > belly, and would not go crying down the hall like a little sissy when he
> > was pressed to do a little work.
>
> Agree with every word of this.
>
> Especially the "what has happened." I have been told by some of my Boy
> Scouts in previous years (not doing the BSA thing for some time now)
> that Ham radio is strictly
>
> "For old, fat, rich, white guys."
>
> I find that ineffably sad. All too true a lot of places in the U.S.,
> unfortunately.
>

> If you want to help bust that image up, do what I'm trying to do at my
> wife's school. (She is a teacher at a rural consolidated school
> district.) In the High School Physics and General Science classes next
> fall, I am being allowed to give a pitch for Amateur Radio, with a goal
> of setting up a club, complete with their own shack in a small, unused
> room in the school building.
>
> This is precisely why I am wanting so badly to get this 520SE back into
> service. It's going to be the HF rig for a bunch of kids, I hope, as
> well as for my own use.
>
> I have scrounged and repaired an antenna tuner, HF SWR meter, VHF/UHF
> swr meter, an ADI junker of a 2-meter mobile which I've mounted in a box
> to make it also semi-portable, and a 45-ampere DC variable voltage,
> current-limited power supply. I'll be keeping an eye out for 2-meter
> all-mode gear and something for use on 220 and 70cm, for later on.
>
> (The power supply is the only bit of kit already in hand which still
> needs some work, the current limit pot is wonky, needs to be replaced
> and then the built-in meters calibrated. Nothing an hour on the bench
> won't fix.)
>
> I'll be needing to get them an oscilloscope, signal generator, VTVM, and
> a DMM for their shack-to-be. That's a fur piece down the road, though.
> I have to get the kids involved and interested in it, first. That
> means getting a radio working and an antenna up, enough to make some
> contacts and catch their interest a bit. Packet and other digital modes
> are high on the list to get in the early innings, too.
>
> (I need to get a replacement o-scope for myself, too, but that will have
> to wait; the 60's vintage clunker I have still works, more or less,
> though calibration is getting to be dicey. Still gives you a ball-park
> idea of the wave form, but I am not counting on the measurements being
> correct any more. It's so old that it's not just a re-alignment job
> either. Can't just rotate the yoke a bit to square up and level the
> trace against the graticule and get on with things any more. The
> calibration circuit is first to get fixed, it's seriously out of kilter.)
>
> If you're looking for a challenge, and some kids who can carry on the
> hobby, you might try going this route. Your "fire in their belly" line
> is exactly why I went to the school board last month about doing this.
> They are giving me a chance to stir up interest, and see where that leads.
>
> Maybe there is a school in your area that could get the same treatment?
> It's certainly going to be a challenge to get them set up and running,
> with the budget I've got to work with. (Which is of course ZERO
> DOLLARS, there are no extra funds for anything except a sport in the
> state of Illinois. Zero bucks to work with, excepting what I can free
> up out of my own pocket. The young'uns will be having to wash some cars
> or something for any gear they get once the club gets on its feet.)

>
> (IF the club gets on its feet.)
>
> --
> Wes Will
> N9KDY
>

42341. Re: [TS-520_820_530_830] flamed .... End it !!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 15:08:12 UTC
From: n6wk@...
Topic: 42339 Message: 42341

I agree,
Lets get back to discussing the radios and drop the Flaming issue.

Thanks
Gordon
N6WK
Group Co/Owner

On 5/29/2013 7:51 AM, Joseph Stiles wrote:
>
> Greetings group,
>
> I respectfully request that we move on.....please
>
>
> 73 Joe
> WB7UQU
>
> [Non-text portions of this message have been removed]
>
>

42342. Re: [TS-520_820_530_830] Re: FLAMED - Amen, Brother Terry.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 15:24:26 UTC
From: Bob Lazarow
Topic: 42330 Message: 42342

I have two sons, now aged 21 and 25. They have been "surrounded" by Ham Radio, electronics and audio, computers, etc. since they were born. Neither has any interest in radio nor electronics.

In answer to the cell phone, I usually answer that meat is available in stores, which works for most people, but some people still like to hunt and fish....the world has changed, and the internet is producing many more changes, not always for the best.

II believe, also, that things like SDR, digital modes, may be a great way to the youngsters back into our Hobby..

Bob/WA2JAJ

On 5/29/2013 11:06 AM, Terry Wagoner wrote:
>
> Wes:
>
> I thought about approaching the schools and like you I have the time
> but not the budget. Very recently I was a little discouraged when had
> 18 year old nephew in the shack and gave him a demo including working
> a Russian station while he was here. He liked the service bench but
> when all done and we were outside looking up at my tri-bander on the
> tower he pulled out his cell phone and pointed at it and told me he
> still didnt understand why I went to all the bother!
>
> I dont have any integration of computer other than do use my lap top
> and audio spectrum analyzer software for LSB/USB carrier adjust. I
> wish had SDR and IF connection and pan adapter to show him as an
> example of how it relates to his world. He is heading off to college
> and I encouraged him to check out the campus club station. Hope he does.
>
> I will think about your approach and interested to here off list how
> it goes. Went to club meeting recently and saw 8 or 9 old guys like me
> and a couple guys maybe in 30s and two meters was the talk. No 16 year
> old kids there and no hybrids in sight.
>
> Take Care
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Wes Will <wwill@...> wrote:
> >
> > On 05/29/2013 06:33 AM, Terry Wagoner wrote:
> > > If you consider this getting "flamed" you are going to get your
> feelings

> > > hurt daily in this old life.
> >
> > ...
> >
> > > Man it is sad what has happened to this hobby. I would love it if I
> > > could find just one young person to mentor who was a voracious reader,
> > > had a questioning attitude, had a gleam in his eye and fire in the
> > > belly, and would not go crying down the hall like a little sissy
> when he
> > > was pressed to do a little work.
> >
> > Agree with every word of this.
> >
> > Especially the "what has happened." I have been told by some of my Boy
> > Scouts in previous years (not doing the BSA thing for some time now)
> > that Ham radio is strictly
> >
> > "For old, fat, rich, white guys."
> >
> > I find that ineffably sad. All too true a lot of places in the U.S.,
> > unfortunately.
> >
> > If you want to help bust that image up, do what I'm trying to do at my
> > wife's school. (She is a teacher at a rural consolidated school
> > district.) In the High School Physics and General Science classes next
> > fall, I am being allowed to give a pitch for Amateur Radio, with a goal
> > of setting up a club, complete with their own shack in a small, unused
> > room in the school building.
> >
> > This is precisely why I am wanting so badly to get this 520SE back into
> > service. It's going to be the HF rig for a bunch of kids, I hope, as
> > well as for my own use.
> >
> > I have scrounged and repaired an antenna tuner, HF SWR meter, VHF/UHF
> > swr meter, an ADI junker of a 2-meter mobile which I've mounted in a
> box
> > to make it also semi-portable, and a 45-ampere DC variable voltage,
> > current-limited power supply. I'll be keeping an eye out for 2-meter
> > all-mode gear and something for use on 220 and 70cm, for later on.
> >
> > (The power supply is the only bit of kit already in hand which still
> > needs some work, the current limit pot is wonky, needs to be replaced
> > and then the built-in meters calibrated. Nothing an hour on the bench
> > won't fix.)
> >
> > I'll be needing to get them an oscilloscope, signal generator, VTVM,
> and
> > a DMM for their shack-to-be. That's a fur piece down the road, though.
> > I have to get the kids involved and interested in it, first. That
> > means getting a radio working and an antenna up, enough to make some

> > contacts and catch their interest a bit. Packet and other digital modes
> > are high on the list to get in the early innings, too.
> >
> > (I need to get a replacement o-scope for myself, too, but that will
> have
> > to wait; the 60's vintage clunker I have still works, more or less,
> > though calibration is getting to be dicey. Still gives you a ball-park
> > idea of the wave form, but I am not counting on the measurements being
> > correct any more. It's so old that it's not just a re-alignment job
> > either. Can't just rotate the yoke a bit to square up and level the
> > trace against the graticule and get on with things any more. The
> > calibration circuit is first to get fixed, it's seriously out of
> kilter.)
> >
> > If you're looking for a challenge, and some kids who can carry on the
> > hobby, you might try going this route. Your "fire in their belly" line
> > is exactly why I went to the school board last month about doing this.
> > They are giving me a chance to stir up interest, and see where that
> leads.
> >
> > Maybe there is a school in your area that could get the same treatment?
> > It's certainly going to be a challenge to get them set up and running,
> > with the budget I've got to work with. (Which is of course ZERO
> > DOLLARS, there are no extra funds for anything except a sport in the
> > state of Illinois. Zero bucks to work with, excepting what I can free
> > up out of my own pocket. The young'uns will be having to wash some cars
> > or something for any gear they get once the club gets on its feet.)
> >
> > (IF the club gets on its feet.)
> >
> > --
> > Wes Will
> > N9KDY
> >
>
>
>
> No virus found in this message.
> Checked by AVG - www.avg.com <http://www.avg.com>
> Version: 2013.0.3343 / Virus Database: 3184/6364 - Release Date: 05/28/13
>

[Non-text portions of this message have been removed]

42343. Re: [TS-520_820_530_830] Re: FLAMED

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 15:32:10 UTC
From: John Davidson
Topic: 42330 Message: 42343

From: Les Zwiebel WB6ORZ <wb6orz@comcast.net>
To: "TS-520_820_530_830@yahoogroups com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wednesday, May 29, 2013 10:05 AM
Subject: RE: [TS-520_820_530_830] Re: FLAMED???

That sure was a slap in the face with the gauntlet and a challenge to a duel at dawn with pistols or sabers !
OhMyGawd "read the book first " ??? what an insult !

-------- Original message --------
From: Terry Wagoner <wagstw46@...>
Date: 05/29/2013 7:33 AM (GMT-05:00)
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: FLAMED

If you consider this getting "flamed" you are going to get your feelings hurt daily in this old life.

This is a technical hobby that use to have high entry level requirements. If you dont have the bug and a passion for learning you are in wrong hobby and certainly have purchased the wrong radio. Yahoo forums by design provide a place for people with parochial interest.

If the charter of this forum is to serve as a "Help Desk" for the general public or appliance operators who are staring at a electronic black box trying to figure out how to turn it on with the manual on the floor then I dont care to be a member of that club.

If you cant open your TS-530 instruction manual and read the transmitter section on how to tune and load it including the maximum full load current you should sell your hybrid. If you read the instructions and have some questions about what you read that is an entirely different matter and what this forum is for.
f

up Start a New Topic Messages in this topic (9)
Recent Activity: * New Members 15 * New Photos 3
Visit Your Group

Switch to: Text-Only, Daily Digest • Unsubscribe • Terms of Use • Send us Feedback
.

[Non-text portions of this message have been removed]

42344. Re: [TS-520_820_530_830] Re: FLAMED - Amen, Brother Terry.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 15:36:29 UTC
From: Bob Macklin
Topic: 42330 Message: 42344

Terry,

The kids don't see any need for ham radio anymore. They have their cell phones and internet message boards.

We have two radio clubs in the Seattle/Tacoma area. People join these clubs because of the 2M FM repeaters. The cost of a 2M FM transceiver less than $200. Modern SSB HF transceivers is much more.

Then there is the problem of HF antennas. HF antennas in an apartment environment is almost impossible. just ask me! Most new homes have HOA restictions that make a decent HF antenna difficult.

I suspect that the few young people the do find an interest in HF buy a boatanchor like the hybrids do so because the cost is lower than a new RICEBOX. But most of these boatanchors purchased on eBay have some kind of issues.

Somehow I get the feeling that the Kenwood hybrids have more problems than the Heathkit SB /HW units. For one thing I don't see the PCB/connector problems with the Heathkit units.

The Drakes have a completely different set of problems.

The other problem is most of these people do not understand analog electronics or electronics at all. They often cause more damage to the units they are trying to repair.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Terry Wagoner
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 29, 2013 8:06 AM
Subject: [TS-520_820_530_830] Re: FLAMED - Amen, Brother Terry.

Wes:

I thought about approaching the schools and like you I have the time but not the budget. Very recently I was a little discouraged when had 18 year old nephew in the shack and gave him a demo including working a Russian station while he was here. He liked the service bench but when all done and we were outside looking up at my tri-bander on the tower he pulled out his cell phone and pointed at it and told me he still didnt understand why I went to all the bother!

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Take Care
Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Wes Will <wwill@...> wrote:
>
> On 05/29/2013 06:33 AM, Terry Wagoner wrote:
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> to make it also semi-portable, and a 45-ampere DC variable voltage,
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> all-mode gear and something for use on 220 and 70cm, for later on.
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> (The power supply is the only bit of kit already in hand which still
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> and then the built-in meters calibrated. Nothing an hour on the bench

> won't fix.)
>
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> a DMM for their shack-to-be. That's a fur piece down the road, though.
> I have to get the kids involved and interested in it, first. That
> means getting a radio working and an antenna up, enough to make some
> contacts and catch their interest a bit. Packet and other digital modes
> are high on the list to get in the early innings, too.
>
> (I need to get a replacement o-scope for myself, too, but that will have
> to wait; the 60's vintage clunker I have still works, more or less,
> though calibration is getting to be dicey. Still gives you a ball-park
> idea of the wave form, but I am not counting on the measurements being
> correct any more. It's so old that it's not just a re-alignment job
> either. Can't just rotate the yoke a bit to square up and level the
> trace against the graticule and get on with things any more. The
> calibration circuit is first to get fixed, it's seriously out of kilter.)
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> If you're looking for a challenge, and some kids who can carry on the
> hobby, you might try going this route. Your "fire in their belly" line
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> They are giving me a chance to stir up interest, and see where that leads.
>
> Maybe there is a school in your area that could get the same treatment?
> It's certainly going to be a challenge to get them set up and running,
> with the budget I've got to work with. (Which is of course ZERO
> DOLLARS, there are no extra funds for anything except a sport in the
> state of Illinois. Zero bucks to work with, excepting what I can free
> up out of my own pocket. The young'uns will be having to wash some cars
> or something for any gear they get once the club gets on its feet.)
>
> (IF the club gets on its feet.)
>
> --
> Wes Will
> N9KDY
>

[Non-text portions of this message have been removed]

42345. Re: [TS-520_820_530_830] DG-5 power connector

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 15:39:29 UTC
From: John Davidson
Topic: 42318 Message: 42345

I used my TS520 for 40 years without any digital display and I did fine. If you know how to use the Xtal Calibrator you can't go wrong.

From: Jerry Barr <kj6ntl@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, May 28, 2013 11:49 AM
Subject: Re: [TS-520_820_530_830] DG-5 power connector

i wud like to find a inexpensive dg-5 myself hi hi for my ts 520se

Jerry KJ6NTL

From: Alvin Chipmunk <n3kvl@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, May 28, 2013 8:03 AM
Subject: Re: [TS-520_820_530_830] DG-5 power connector

Yes, I would like one (maybe two) as well.....

From: tjb813 <mailto:tjb813%40gmail.com>
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Tuesday, May 28, 2013 10:33 AM
Subject: [TS-520_820_530_830] DG-5 power connector

Does anyone happen to know of a replacement part number for the power connector for the DG-5? (Kenwood number E08-0203-25). If anyone knows the manufacturer, that would help also. I need several plugs only. I know of one enterprise that is selling the complete cable kit for around $25. I am hoping for a more cost-effective solution. Thanks

Tim
KD8CN

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

42346. Re: [TS-520_820_530_830] flamed .... End it !!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 17:05:59 UTC
From: W2FID
Topic: 42339 Message: 42346

THANK YOU GORDON.
MARSHALL
W2FID

--- On Wed, 5/29/13, n6wk@... <n6wk@n6wk.com> wrote:

From: n6wk@... <n6wk@...>
Subject: Re: [TS-520_820_530_830] flamed .... End it !!
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, May 29, 2013, 8:08 AM

I agree,
Lets get back to discussing the radios and drop the Flaming issue.

Thanks
Gordon
N6WK
Group Co/Owner

On 5/29/2013 7:51 AM, Joseph Stiles wrote:
>
> Greetings group,
>
> I respectfully request that we move on.....please
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>
> 73 Joe
> WB7UQU
>
> [Non-text portions of this message have been removed]
>
>

Yahoo! Groups Links

[Non-text portions of this message have been removed]

42347. Re: [TS-520_820_530_830] Re: FLAMED - Amen, Brother Terry.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 15:44:19 UTC
From: Gregory Graham
Topic: 42330 Message: 42347

Terry
I am brand new to this thread. I have been out of the hobby for 15+ years. After retirement and a few moves I decided it was time to put up an antenna and get back on the air. Time to dust off my first station, an 820 with SM-220 etc. I also have a later Kenwood non hybrid. Last week my 16 year old grandson was visiting and I gave him a chance to witness a contact with the Indy 500 special event station and a contact with Venezuela. He said "Wow that is better than a phone" He of course is a world away from knowing what that box will do or what is inside. Don't know if he has ever seen a tube. The digital world has changed the land scape drastically. If you have had your license and hybrid for 30 to 40 years you certainly will have a love for what you did to get your license and how you use and used your equipment. It was eye opening to me to read about the mods on this thread to protect the hybrid radios. I would like to see a little more patience from those that are really knowledgeable about these radios in leading some of us that need a little guidance on keeping them running efficiently. And yes I can read the Manual.
Liked the K5MYJ comments by Bob, pretty much on the mark. Analog electronics and a place to learn it is a slowly dieing technology.

Gregory NR6C

On 5/29/2013 10:06 AM, Terry Wagoner wrote:
>
> Wes:
>
> I thought about approaching the schools and like you I have the time
> but not the budget. Very recently I was a little discouraged when had
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> Take Care
> Terry K9TW
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> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Wes Will <wwill@...> wrote:
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> > On 05/29/2013 06:33 AM, Terry Wagoner wrote:
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> > of setting up a club, complete with their own shack in a small, unused
> > room in the school building.
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> > service. It's going to be the HF rig for a bunch of kids, I hope, as
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> > --
> > Wes Will
> > N9KDY
> >
>
>

[Non-text portions of this message have been removed]

42348. Re: [TS-520_820_530_830] Re: FLAMED - Amen, Brother Terry.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 15:55:04 UTC
From: JIM LYNCH
Topic: 42330 Message: 42348

I think you nailed it Bob.I have made my living since 1960 in electronics of one sort or another,all in military or commercial communications.While I was doing that for a living, I certainly didn't come home and do it for fun.But now I am a 74 year old retiree and now I find it relaxing and fun.I don't get religious about what other people get out of this hobby,and it is a hobby, not a way of life,at least to me.Live and let live.The only dumb question is the one not asked, if you want this group to continue to be helpful to us novices, cut us some slack. Semper fi

---

From: Bob Macklin <macklinbob@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 29, 2013 7:36 AM
Subject: Re: [TS-520_820_530_830] Re: FLAMED - Amen, Brother Terry.

Terry,

The kids don't see any need for ham radio anymore. They have their cell phones and internet message boards.

We have two radio clubs in the Seattle/Tacoma area. People join these clubs because of the 2M FM repeaters. The cost of a 2M FM transceiver less than $200. Modern SSB HF transceivers is much more.

Then there is the problem of HF antennas. HF antennas in an apartment environment is almost impossible. just ask me! Most new homes have HOA restictions that make a decent HF antenna difficult.

I suspect that the few young people the do find an interest in HF buy a boatanchor like the hybrids do so because the cost is lower than a new RICEBOX. But most of these boatanchors purchased on eBay have some kind of issues.

Somehow I get the feeling that the Kenwood hybrids have more problems than the Heathkit SB /HW units. For one thing I don't see the PCB/connector problems with the Heathkit units.

The Drakes have a completely different set of problems.

The other problem is most of these people do not understand analog electronics or electronics at all. They often cause more damage to the units they are trying to repair.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
  ----- Original Message -----
  From: Terry Wagoner
  To: TS-520_820_530_830@yahoogroups.com
  Sent: Wednesday, May 29, 2013 8:06 AM

Subject: [TS-520_820_530_830] Re: FLAMED - Amen, Brother Terry.

Wes:

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Take Care
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Yahoo! Groups Links

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42349. eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 17:17:03 UTC
From: Jerry Barr
Topic: 42339 Message: 42349

hi all got a rf gen yest e=bay,contacts black how to clean and lube/any ideasand no rf but audio wrks
Jerry KJ6NTL

Yahoo! Groups Links

[Non-text portions of this message have been removed]

42350. Heathkit rides again?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 17:23:42 UTC
From: Ron _
Topic: 42330 Message: 42350

Just saw this link for what looks like preliminary preparation for a launch of a 'new' Heathkit. You may want to check it out. Good luck to them.

http://www.heathkit.com/survey/index.php/278489?lang=en

[Non-text portions of this message have been removed]

42351. Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 17:54:51 UTC
From: Bob Macklin
Topic: 42351 Message: 42351

Away from the flaming,

Terry and I have talked privately many times in the past. I am jealous of the test lab he has.

But I also have a decent one and I know how to use all the equipment.

I don't approve of people with out knowledge and test equipment trying to repair these radios. If they really want to do it they need some basic test equipment. I find that most of my needs are filled by Heathkit test equipment. About 10 years ago I started rebuilding my lab off eBay. I did buy a couple pieces that were beyond salvage but they did supply parts to repair others.

During period of severe unemployment in the 70's I sold my entire lab and when I started doing more computer work I had no need for RF test equipment.

In my humble opinion the first three items are a good VOM, a VTVM, and a decent signal generator.

I have a Triplett and a Heathkit VOM. For power supply work they both work just fine.

I have several versions of the Heathkit VTVM. The EICO VTVM is just as good. The problem I find with these being offered on eBay is that the probes are usually missing. But you can make probes. If you don't have the skill to make a VTVM probe you should probably not be trying to work with this stuff.

For a signal generator I have a Heathkit IG-102 and a Heathkit SG-8. They are both essentially the same, just different cases.

I do have much more than this, but these are the minimum you need to work on radios.

After watching this list and talking to Terry over the past few years I seem to think many of the problems are quality of the Kenwood PC boards. A skilled technician should be able to repair these boards. Once one is out of the unit I would just start by replacing all the electrolytic capacitors. In many cases you cannot measure the value of resistors in the circuit. You may have to lift one end of them.

It looks to me like the main problems encounters are with the connectors and relays.

I have a TS-520 I bought here locally a few years ago. It was demonstrated to me on a dummy load. The one problem it has is the carrier balance. You can get a good null on either LSB or USB but not on both. But in the three years I have had it I have only used it as a receiver.

I now have everything I need (EXCEPT SPACE) to set up a full hybrid station. I am going to work on that problem this year.

I would be willing to help anyone in the Puget Sound are solve hybrid problems.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: JIM LYNCH
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 29, 2013 8:55 AM
Subject: Re: [TS-520_820_530_830] Re: FLAMED - Amen, Brother Terry.

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Yahoo! Groups Links

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42352. Re: [TS-520_820_530_830] eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 17:57:32 UTC
From: Bob Macklin
Topic: 42339 Message: 42352

If you are saying the contacts on the switches are black that is OK. It's normal. Silver oxide is black but it still conducts. Get a can of DeOxit as a starter.

Do you have the manual? If not get one.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Jerry Barr
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 29, 2013 10:17 AM
Subject: [TS-520_820_530_830] eico324!!

hi all got a rf gen yest e=bay,contacts black how to clean and lube/any ideasand no rf but audio wrks
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Yahoo! Groups Links

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42353. Re: [TS-520_820_530_830] eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 18:01:28 UTC
From: Mike
Topic: 42339 Message: 42353

Jerry,

You have an RF generator from ebay but what else are you trying to say?

73
Mike W5RKL

On 5/29/2013 12:17 PM, Jerry Barr wrote:
>
>
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> hi all got a rf gen yest e=bay,contacts black how to clean and
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42354. Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 18:13:30 UTC
From: Louis Wilen
Topic: 42351 Message: 42354

When mentioning “VTVM”, are you using the term colloquially or do you mean a real VTVM?

I have a Fluke 179 DMM that I use to measure everything that can be measured by a DMM. Also have a Fluke 85RF probe that I bought new but cheap on Ebay long after Fluke discontinued them. Why would I need a VTVM?

Does a real VTVM (that is – Vacuum Tube Volt Meter) do something that a modern DMM doesn’t do just as well?

Louis
W3LMW

From: Bob Macklin
Sent: Wednesday, May 29, 2013 1:54 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

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But I also have a decent one and I know how to use all the equipment.

I don't approve of people with out knowledge and test equipment trying to repair these radios. If they really want to do it they need some basic test equipment. I find that most of my needs are filled by Heathkit test equipment. About 10 years ago I started rebuilding my lab off eBay. I did buy a couple pieces that were beyond salvage but they did supply parts to repair others.

During period of severe unemployment in the 70's I sold my entire lab and when I started doing more computer work I had no need for RF test equipment.

In my humble opinion the first three items are a good VOM, a VTVM, and a decent signal generator.

I have a Triplett and a Heathkit VOM. For power supply work they both work just fine.

I have several versions of the Heathkit VTVM. The EICO VTVM is just as good. The problem I find with these being offered on eBay is that the probes are usually missing. But you can make probes. If you don't have the skill to make a VTVM probe you should probably not be trying to work with this stuff.

For a signal generator I have a Heathkit IG-102 and a Heathkit SG-8. They are both essentially the same, just different cases.

[Non-text portions of this message have been removed]

42355. Re: [TS-520_820_530_830] eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 18:20:37 UTC
From: Wes Will
Topic: 42339 Message: 42355

On 05/29/2013 12:17 PM, Jerry Barr wrote:
>
>
> hi all got a rf gen yest e=bay,contacts black how to clean and
> lube/any ideasand no rf but audio wrks
> Jerry KJ6NTL

I think he is trying to say that he bought an Eico 324 signal generator on e-Bay yesterday, and it's dirty. He wants to clean it up and doesn't know how.

To clean the contacts and moving parts, there are spray cleaners, usually labeled "contact cleaner" or "volume control cleaner."

And there are as many different opinions about which one works the best as there are Hams using them. Find one locally available and give it a squirt.

Simple mechanical scrubbing with a clean cloth and some of the spray cleaner will clear up things like edge connectors. Potentiometers should be sprayed and worked full-range while spraying. Likewise toggle switches or rotary switches. Open-plate capacitors (tuning capacitors) can be cleaned the same way.

I use "canned air" (nitrogen tank, much cheaper over the long haul) to blow out dust-bunnies and to dry the spray cleaner off of things once they're no longer corroded or dirty.

Another thing for connectors and any kind of contact that you can get to easily, such as the traces in a rotary switch, is a simple clean pencil eraser. I use one for commutator pads in electric motors, too. Just rub gently at the copper pads, and the gunk will come off. Clean it off of the eraser onto something, a piece of paper usually works.

Do I need to say "UNPLUGGED," here? Or is that enough of a given with this group? I suspect opinions on THAT differ as well....

Continue with spray cleaner and erasers and just plain scrubbing until the thing is tidy inside.

--
Wes Will
N9KDY

42356. Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 18:28:55 UTC
From: Bob Macklin
Topic: 42351 Message: 42356

Yes a REAL VTVM does at least one thing better than a DMM.

When you are trying to find a peak or trying to peak a circuit an analog meter is better because it is easier to see the peak on the moving needle.

In most cases on these radios the accuracy of a DMM is not needed and a VOM or VTVM are satisfactory..

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Louis Wilen
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 29, 2013 11:13 AM
Subject: Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

When mentioning “VTVM”, are you using the term colloquially or do you mean a real VTVM?

I have a Fluke 179 DMM that I use to measure everything that can be measured by a DMM. Also have a Fluke 85RF probe that I bought new but cheap on Ebay long after Fluke discontinued them. Why would I need a VTVM?

Does a real VTVM (that is – Vacuum Tube Volt Meter) do something that a modern DMM doesn’t do just as well?

Louis
W3LMW

From: Bob Macklin
Sent: Wednesday, May 29, 2013 1:54 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

Away from the flaming,

Terry and I have talked privately many times in the past. I am jealous of the test lab he has.

But I also have a decent one and I know how to use all the equipment.

I don't approve of people with out knowledge and test equipment trying to repair these radios. If they really want to do it they need some basic test equipment. I find that most of my needs are filled by Heathkit test equipment. About 10 years ago I started rebuilding my lab off eBay. I did buy a couple pieces that were beyond salvage but they did supply parts to repair others.

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[Non-text portions of this message have been removed]

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42357. Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 18:32:26 UTC
From: Terry Wagoner
Topic: 42351 Message: 42357

Hi Bob:

Interesting perspectives about why new folks are buying the hybrids and/or going with 2 meters. I had a new fellow visit the shack a year or so ago and he took a class conducted by a local club and they strongly recommended he buy two meter rig and if he bought a HF rig that first required accessory was an antenna tuner. I had hard time explaining to him why I had no tuner and when I did what kind of antenna it was.

One of the scariest things to me that I worry about all the time about giving advice to new Hybrid owners is these folks getting in the inside of these rigs with no appreciation for the safety risks or how to apply standard safe electrical work practices. Real chance to get hurt or worse. Maybe unfounded. I agree cant hope to maintain without modest test gear and understanding how to use it and knowing its limitations.

Nothing wrong with Heath level bench at all as we have discussed. Most if not all of us started with Heath, Knight, Eico. I still have some Heath test gear. I dont have laboratory RF bench. I am one step above Heath and only after raising 5 children and retiring. It was test gear or Corvettes and I got the Corvettes out of my system (70 LT-1 bumper car and 93 LT-1 both black beauties). Only memories now!

Probably the best upgrade you can do is in the RF Sig Gen area followed by RF millivolt meter. I upgraded from IG-102 to URM/25 and then HP-606 and finally now have a nice Wavetek 3002. A HP8640B or Wavetek 3002 gives you stable, accurate,calibrated output levels,and low level leakage required for accurate alignment and measurements.

The pieces I use the most include a Boonton 92E RF Millivolt meter, HP5334 Freq Counter, Wavetek 3002 RF sig gen, BK2712 DMM, and now a brand new Rigol DS1102E 100 mhz digital scope. Started many moons ago with RCA O-scope with 5 mhz BW and then built couple of Heath scopes, finally got a surplus 100mhz Lavoie Labs that took up half the bench. Then a Tek465 and then Tek475 and Tek475A. Still have the 475A but it needs some help. Still learning how to use this Digital scope. Jury is out.

I agree the hybrid boards are poor quality and the plating isnt good. Very easy to lift a foil and pull molex pins and have cracked trace at the pads. I upgraded to a Hakko 808 and man what a difference from solder sucker and solder wick. No comparison whatsoever especially for bandswitch removal and repair. Boards and connectors do present significant challenge. Certainly not the G10 quality.

I see boards that I will not have in any of my personal rigs.

I was hoping someone would reproduce them to todays standards. Would be a task to populate them, but I would be interested in buying sets for my rigs. Doubt it will ever happen.

Take Care
Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@...> wrote:
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> I do have much more than this, but these are the minimum you need to work on radios.
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> After watching this list and talking to Terry over the past few years I seem to think many of the problems are quality of the Kenwood PC boards. A skilled technician should be able to repair these boards. Once one is out of the unit I would just start by replacing all the electrolytic capacitors. In many cases you cannot measure the value of resistors in the circuit. You may have to lift one end of them.
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>
> I now have everything I need (EXCEPT SPACE) to set up a full hybrid station. I am going to work on that problem this year.
>
> I would be willing to help anyone in the Puget Sound are solve hybrid problems.
>

> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: JIM LYNCH
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, May 29, 2013 8:55 AM
> Subject: Re: [TS-520_820_530_830] Re: FLAMED - Amen, Brother Terry.
>
>
>
> I think you nailed it Bob.I have made my living since 1960 in electronics of one sort or another,all in military or commercial communications.While I was doing that for a living, I certainly didn't come home and do it for fun.But now I am a 74 year old retiree and now I find it relaxing and fun.I don't get religious about what other people get out of this hobby,and it is a hobby, not a way of life,at least to me.Live and let live.The only dumb question is the one not asked, if you want this group to continue to be helpful to us novices, cut us some slack. Semper fi
>
>
>
> _____
> From: Bob Macklin <macklinbob@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, May 29, 2013 7:36 AM
> Subject: Re: [TS-520_820_530_830] Re: FLAMED - Amen, Brother Terry.
>
>
> Terry,
>
> The kids don't see any need for ham radio anymore. They have their cell phones and internet message boards.
>
> We have two radio clubs in the Seattle/Tacoma area. People join these clubs because of the 2M FM repeaters. The cost of a 2M FM transceiver less than $200. Modern SSB HF transceivers is much more.
>
> Then there is the problem of HF antennas. HF antennas in an apartment environment is almost impossible. just ask me! Most new homes have HOA restictions that make a decent HF antenna difficult.
>
> I suspect that the few young people the do find an interest in HF buy a boatanchor like the hybrids do so because the cost is lower than a new RICEBOX. But most of these boatanchors purchased on eBay have some kind of issues.
>
> Somehow I get the feeling that the Kenwood hybrids have more problems than the Heathkit SB /HW units. For one thing I don't see the PCB/connector problems with the Heathkit units.
>
> The Drakes have a completely different set of problems.

>
> The other problem is most of these people do not understand analog electronics or electronics at all. They often cause more damage to the units they are trying to repair.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Terry Wagoner
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, May 29, 2013 8:06 AM
> Subject: [TS-520_820_530_830] Re: FLAMED - Amen, Brother Terry.
>
>
> Wes:
>
> I thought about approaching the schools and like you I have the time but not the budget. Very recently I was a little discouraged when had 18 year old nephew in the shack and gave him a demo including working a Russian station while he was here. He liked the service bench but when all done and we were outside looking up at my tri-bander on the tower he pulled out his cell phone and pointed at it and told me he still didnt understand why I went to all the bother!
>
> I dont have any integration of computer other than do use my lap top and audio spectrum analyzer software for LSB/USB carrier adjust. I wish had SDR and IF connection and pan adapter to show him as an example of how it relates to his world. He is heading off to college and I encouraged him to check out the campus club station. Hope he does.
>
> I will think about your approach and interested to here off list how it goes. Went to club meeting recently and saw 8 or 9 old guys like me and a couple guys maybe in 30s and two meters was the talk. No 16 year old kids there and no hybrids in sight.
>
> Take Care
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, Wes Will <wwill@> wrote:
> >
> > On 05/29/2013 06:33 AM, Terry Wagoner wrote:
> > > If you consider this getting "flamed" you are going to get your feelings
> > > hurt daily in this old life.
> >
> > ...
> >
> > > Man it is sad what has happened to this hobby. I would love it if I
> > > could find just one young person to mentor who was a voracious reader,
> > > had a questioning attitude, had a gleam in his eye and fire in the
> > > belly, and would not go crying down the hall like a little sissy when he
> > > was pressed to do a little work.
> >

> > Agree with every word of this.
> >
> > Especially the "what has happened." I have been told by some of my Boy
> > Scouts in previous years (not doing the BSA thing for some time now)
> > that Ham radio is strictly
> >
> > "For old, fat, rich, white guys."
> >
> > I find that ineffably sad. All too true a lot of places in the U.S.,
> > unfortunately.
> >
> > If you want to help bust that image up, do what I'm trying to do at my
> > wife's school. (She is a teacher at a rural consolidated school
> > district.) In the High School Physics and General Science classes next
> > fall, I am being allowed to give a pitch for Amateur Radio, with a goal
> > of setting up a club, complete with their own shack in a small, unused
> > room in the school building.
> >
> > This is precisely why I am wanting so badly to get this 520SE back into
> > service. It's going to be the HF rig for a bunch of kids, I hope, as
> > well as for my own use.
> >
> > I have scrounged and repaired an antenna tuner, HF SWR meter, VHF/UHF
> > swr meter, an ADI junker of a 2-meter mobile which I've mounted in a box
> > to make it also semi-portable, and a 45-ampere DC variable voltage,
> > current-limited power supply. I'll be keeping an eye out for 2-meter
> > all-mode gear and something for use on 220 and 70cm, for later on.
> >
> > (The power supply is the only bit of kit already in hand which still
> > needs some work, the current limit pot is wonky, needs to be replaced
> > and then the built-in meters calibrated. Nothing an hour on the bench
> > won't fix.)
> >
> > I'll be needing to get them an oscilloscope, signal generator, VTVM, and
> > a DMM for their shack-to-be. That's a fur piece down the road, though.
> > I have to get the kids involved and interested in it, first. That
> > means getting a radio working and an antenna up, enough to make some
> > contacts and catch their interest a bit. Packet and other digital modes
> > are high on the list to get in the early innings, too.
> >
> > (I need to get a replacement o-scope for myself, too, but that will have
> > to wait; the 60's vintage clunker I have still works, more or less,
> > though calibration is getting to be dicey. Still gives you a ball-park
> > idea of the wave form, but I am not counting on the measurements being
> > correct any more. It's so old that it's not just a re-alignment job
> > either. Can't just rotate the yoke a bit to square up and level the
> > trace against the graticule and get on with things any more. The
> > calibration circuit is first to get fixed, it's seriously out of kilter.)
> >
> > If you're looking for a challenge, and some kids who can carry on the

> > hobby, you might try going this route. Your "fire in their belly" line
> > is exactly why I went to the school board last month about doing this.
> > They are giving me a chance to stir up interest, and see where that leads.
> >
> > Maybe there is a school in your area that could get the same treatment?
> > It's certainly going to be a challenge to get them set up and running,
> > with the budget I've got to work with. (Which is of course ZERO
> > DOLLARS, there are no extra funds for anything except a sport in the
> > state of Illinois. Zero bucks to work with, excepting what I can free
> > up out of my own pocket. The young'uns will be having to wash some cars
> > or something for any gear they get once the club gets on its feet.)
> >
> > (IF the club gets on its feet.)
> >
> > --
> > Wes Will
> > N9KDY
> >
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42358. Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 18:43:17 UTC
From: Louis Wilen
Topic: 42351 Message: 42358

Thanks for that reply, Bob. Makes sense. Actually, I do have an old VOM that is rated at 50K ohms / volt, although it's transistorized, not a VTVM. Same idea and same "peak" benefits as a VTVM, though.

That said, I haven't used the old VOM in over a decade. I'm able to see the peaks easily on a digital meter, which I suppose is a side-effect of having grown up in a digital world.

Louis
W3LMW

From: Bob Macklin
Sent: Wednesday, May 29, 2013 2:28 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

Yes a REAL VTVM does at least one thing better than a DMM.

When you are trying to find a peak or trying to peak a circuit an analog meter is better because it is easier to see the peak on the moving needle.

In most cases on these radios the accuracy of a DMM is not needed and a VOM or VTVM are satisfactory..

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Louis Wilen
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Wednesday, May 29, 2013 11:13 AM
Subject: Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

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Does a real VTVM (that is – Vacuum Tube Volt Meter) do something that a modern DMM doesn't do just as well?

Louis
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From: Bob Macklin
Sent: Wednesday, May 29, 2013 1:54 PM
To: mailto:TS-520_820_530_830%40yahoogroups.com

Subject: Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

Away from the flaming,

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[Non-text portions of this message have been removed]

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42359. Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 18:48:24 UTC
From: Bob Macklin
Topic: 42351 Message: 42359

Hi Terry,

Since I am now 79 and limited to what I can do on Social Security I am limited to what I can spend on test equipment now.

For what I do I can use an external attenuator with the Heath signal generators. The one item I really do want is a RF milivoltmeter.

Would it be practical to do the artworks(maybe just copy the Kenwood board) and get someone to produce the bare boards. Then let people buy the boards and assemble them themselves?

What kind of quality are the Farr Circuits PC boards?

In watching the Kenwood items on eBay I have been seeing lots of Kenwood items being parted out. The same has been true of Heathkit ham radios.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Terry Wagoner
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 29, 2013 11:32 AM
Subject: Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

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Take Care
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>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: JIM LYNCH
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, May 29, 2013 8:55 AM
> Subject: Re: [TS-520_820_530_830] Re: FLAMED - Amen, Brother Terry.
>
>
>
> I think you nailed it Bob.I have made my living since 1960 in electronics of one sort or another,all in military or commercial communications.While I was doing that for a living, I certainly didn't come home and do it for fun.But now I am a 74 year old retiree and now I find it relaxing and fun.I don't get religious about what other people get out of this hobby,and it is a hobby, not a way of life,at least to me.Live and let live.The only dumb question is the one not asked, if you want this group to continue to be helpful to us novices, cut us some slack. Semper fi
>
>
>
> _____
> From: Bob Macklin <macklinbob@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, May 29, 2013 7:36 AM
> Subject: Re: [TS-520_820_530_830] Re: FLAMED - Amen, Brother Terry.
>
>

> Terry,
>
> The kids don't see any need for ham radio anymore. They have their cell phones and internet message boards.
>
> We have two radio clubs in the Seattle/Tacoma area. People join these clubs because of the 2M FM repeaters. The cost of a 2M FM transceiver less than $200. Modern SSB HF transceivers is much more.
>
> Then there is the problem of HF antennas. HF antennas in an apartment environment is almost impossible. just ask me! Most new homes have HOA restictions that make a decent HF antenna difficult.
>
> I suspect that the few young people the do find an interest in HF buy a boatanchor like the hybrids do so because the cost is lower than a new RICEBOX. But most of these boatanchors purchased on eBay have some kind of issues.
>
> Somehow I get the feeling that the Kenwood hybrids have more problems than the Heathkit SB /HW units. For one thing I don't see the PCB/connector problems with the Heathkit units.
>
> The Drakes have a completely different set of problems.
>
> The other problem is most of these people do not understand analog electronics or electronics at all. They often cause more damage to the units they are trying to repair.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Terry Wagoner
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, May 29, 2013 8:06 AM
> Subject: [TS-520_820_530_830] Re: FLAMED - Amen, Brother Terry.
>
>
> Wes:
>
> I thought about approaching the schools and like you I have the time but not the budget. Very recently I was a little discouraged when had 18 year old nephew in the shack and gave him a demo including working a Russian station while he was here. He liked the service bench but when all done and we were outside looking up at my tri-bander on the tower he pulled out his cell phone and pointed at it and told me he still didnt understand why I went to all the bother!
>
> I dont have any integration of computer other than do use my lap top and audio spectrum analyzer software for LSB/USB carrier adjust. I wish had SDR and IF connection and pan adapter to show him as an example of how it relates to his world. He is heading off to college and I encouraged him to check out the campus club station. Hope he does.
>

> I will think about your approach and interested to here off list how it goes. Went to club meeting recently and saw 8 or 9 old guys like me and a couple guys maybe in 30s and two meters was the talk. No 16 year old kids there and no hybrids in sight.
>
> Take Care
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, Wes Will <wwill@> wrote:
> >
> > On 05/29/2013 06:33 AM, Terry Wagoner wrote:
> > > If you consider this getting "flamed" you are going to get your feelings
> > > hurt daily in this old life.
> >
> > ...
> >
> > > Man it is sad what has happened to this hobby. I would love it if I
> > > could find just one young person to mentor who was a voracious reader,
> > > had a questioning attitude, had a gleam in his eye and fire in the
> > > belly, and would not go crying down the hall like a little sissy when he
> > > was pressed to do a little work.
> >
> > Agree with every word of this.
> >
> > Especially the "what has happened." I have been told by some of my Boy
> > Scouts in previous years (not doing the BSA thing for some time now)
> > that Ham radio is strictly
> >
> > "For old, fat, rich, white guys."
> >
> > I find that ineffably sad. All too true a lot of places in the U.S.,
> > unfortunately.
> >
> > If you want to help bust that image up, do what I'm trying to do at my
> > wife's school. (She is a teacher at a rural consolidated school
> > district.) In the High School Physics and General Science classes next
> > fall, I am being allowed to give a pitch for Amateur Radio, with a goal
> > of setting up a club, complete with their own shack in a small, unused
> > room in the school building.
> >
> > This is precisely why I am wanting so badly to get this 520SE back into
> > service. It's going to be the HF rig for a bunch of kids, I hope, as
> > well as for my own use.
> >
> > I have scrounged and repaired an antenna tuner, HF SWR meter, VHF/UHF
> > swr meter, an ADI junker of a 2-meter mobile which I've mounted in a box
> > to make it also semi-portable, and a 45-ampere DC variable voltage,
> > current-limited power supply. I'll be keeping an eye out for 2-meter
> > all-mode gear and something for use on 220 and 70cm, for later on.
> >
> > (The power supply is the only bit of kit already in hand which still

> > needs some work, the current limit pot is wonky, needs to be replaced
> > and then the built-in meters calibrated. Nothing an hour on the bench
> > won't fix.)
> >
> > I'll be needing to get them an oscilloscope, signal generator, VTVM, and
> > a DMM for their shack-to-be. That's a fur piece down the road, though.
> > I have to get the kids involved and interested in it, first. That
> > means getting a radio working and an antenna up, enough to make some
> > contacts and catch their interest a bit. Packet and other digital modes
> > are high on the list to get in the early innings, too.
> >
> > (I need to get a replacement o-scope for myself, too, but that will have
> > to wait; the 60's vintage clunker I have still works, more or less,
> > though calibration is getting to be dicey. Still gives you a ball-park
> > idea of the wave form, but I am not counting on the measurements being
> > correct any more. It's so old that it's not just a re-alignment job
> > either. Can't just rotate the yoke a bit to square up and level the
> > trace against the graticule and get on with things any more. The
> > calibration circuit is first to get fixed, it's seriously out of kilter.)
> >
> > If you're looking for a challenge, and some kids who can carry on the
> > hobby, you might try going this route. Your "fire in their belly" line
> > is exactly why I went to the school board last month about doing this.
> > They are giving me a chance to stir up interest, and see where that leads.
> >
> > Maybe there is a school in your area that could get the same treatment?
> > It's certainly going to be a challenge to get them set up and running,
> > with the budget I've got to work with. (Which is of course ZERO
> > DOLLARS, there are no extra funds for anything except a sport in the
> > state of Illinois. Zero bucks to work with, excepting what I can free
> > up out of my own pocket. The young'uns will be having to wash some cars
> > or something for any gear they get once the club gets on its feet.)
> >
> > (IF the club gets on its feet.)
> >
> > --
> > Wes Will
> > N9KDY
> >
>
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> [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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42360. Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 18:51:13 UTC
From: Mike
Topic: 42351 Message: 42360

Analog VTVM meter movements are much better than DVM changing digits when performing peak alignment steps. Don't get me wrong, DVMs do have a place on the work bench. They are very good when measuring resistances, AC and DC voltages. But for alignment where I need to see how the adjustment is going, I will use a VTVM every time.

Like Bob, I have simple VTVMs from Heathkit and Eico. Most have transformers with secondary AC voltages of 120VAC at 20ma or so that's fed to a half wave rectifier and 6.3VACat 500ma or so for filaments. Most Heathkit VTVMs are basically the same, excluding the solid state VTVM, except for differences in the color scheme and probe design. Probes are not difficult to make if the meter doesn't come with them. Schematics are pretty much all one need's to fix a broken VTVM.

Not all DVMs, at least the one I have doesn't have any adjustments other than the voltage, current, and resistance switch, do not have adjustments to zero the display, especially on low resistance scale. The analog VTVMs have a front panel meter zero control.

I use the same siggen Bob uses, IG-102 but I connect a frequency counter in parallel with the generator's output using a BNC "T" connector. I also replaced the screw on connectors with female BNCs which make it much easier to connect different devices and probes to the generator.

I would add to Bob's bench collection, a frequency counter and a scope. The frequency counter is a good item to have especially when dealing with oscillators. I use a Synometer VC-2000. This counter will measure frequency from 10hz up to 2.5Ghz plus it has a simple crystal oscillator test feature where a crystal can be plugged into the front and the counter displays the crystal's frequency. This feature will only display the "Fundamental" frequency. Fundamental frequencies are typically frequencies 20Mhz and below. Unfortunately my scope has an upper limit of 20Mhz so it's not good for those hybrid measurements that require a 100Mhz scope.

Learning how to use test equipment is very easy. You don't have to have a Phd in electrical engineering and have spent many months in space on the space shuttle to learn how to use basic test gear.

73
Mike W5RKL

On 5/29/2013 1:13 PM, Louis Wilen wrote:
>
> When mentioning “VTVM”, are you using the term colloquially or do you
> mean a real VTVM?
>

> I have a Fluke 179 DMM that I use to measure everything that can be
> measured by a DMM. Also have a Fluke 85RF probe that I bought new but
> cheap on Ebay long after Fluke discontinued them. Why would I need a VTVM?
>
> Does a real VTVM (that is – Vacuum Tube Volt Meter) do something that
> a modern DMM doesn't do just as well?
>
> Louis
> W3LMW
>
> From: Bob Macklin
> Sent: Wednesday, May 29, 2013 1:54 PM
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)
>
> Away from the flaming,
>
> Terry and I have talked privately many times in the past. I am jealous
> of the test lab he has.
>
> But I also have a decent one and I know how to use all the equipment.
>
> I don't approve of people with out knowledge and test equipment trying
> to repair these radios. If they really want to do it they need some
> basic test equipment. I find that most of my needs are filled by
> Heathkit test equipment. About 10 years ago I started rebuilding my
> lab off eBay. I did buy a couple pieces that were beyond salvage but
> they did supply parts to repair others.
>
> During period of severe unemployment in the 70's I sold my entire lab
> and when I started doing more computer work I had no need for RF test
> equipment.
>
> In my humble opinion the first three items are a good VOM, a VTVM, and
> a decent signal generator.
>
> I have a Triplett and a Heathkit VOM. For power supply work they both
> work just fine.
>
> I have several versions of the Heathkit VTVM. The EICO VTVM is just as
> good. The problem I find with these being offered on eBay is that the
> probes are usually missing. But you can make probes. If you don't have
> the skill to make a VTVM probe you should probably not be trying to
> work with this stuff.
>
> For a signal generator I have a Heathkit IG-102 and a Heathkit SG-8.
> They are both essentially the same, just different cases.
>
> [Non-text portions of this message have been removed]

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42361. Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 19:02:57 UTC
From: Bob Lazarow
Topic: 42351 Message: 42361

Also, as I remember, a "real VTVM" came with, or has available probes designed to handle AC,DC, and RF High Voltage, with high impedance. Gosh, I remember the days when "HVAC" stood for High Voltage Alt. Current, and NOT Heating, Ventilation, and Air Conditioning!!! I am truly a relic !!

Seriously, I think it's possible to do serious damage to yourself or your test equipment playing around in The Big Leagues of Power, unless you know for certain that the instrument AND test leads can handle High Power, including maybe RF if you go past the power supply, with high impedance. so as not to load down RF circuits.

At least, that's what I remember being taught

Bob
WA2JAJ

On 5/29/2013 2:28 PM, Bob Macklin wrote:
>
> Yes a REAL VTVM does at least one thing better than a DMM.
>
> When you are trying to find a peak or trying to peak a circuit an
> analog meter is better because it is easier to see the peak on the
> moving needle.
>
> In most cases on these radios the accuracy of a DMM is not needed and
> a VOM or VTVM are satisfactory..
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Louis Wilen
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Wednesday, May 29, 2013 11:13 AM
> Subject: Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)
>
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> a modern DMM doesn’t do just as well?
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> From: Bob Macklin
> Sent: Wednesday, May 29, 2013 1:54 PM
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)
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>
> [Non-text portions of this message have been removed]
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>
> No virus found in this message.
> Checked by AVG - www.avg.com <http://www.avg.com>
> Version: 2013.0.3343 / Virus Database: 3184/6364 - Release Date: 05/28/13
>

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42362. Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 19:17:45 UTC
From: Ken Winterling
Topic: 42351 Message: 42362

Another "plus" of a REAL VTVM is that the DC probe has a 1M resistor at the probe tip. This resistor decouples the probe cable from the circuit and significantly reduces the load on an oscillator circuit. A DMM probe/cable can load down an oscillator and pull it off frequency, reduce its output, and/or cause it to stop working.

Ken
WA2LBI

On Wed, May 29, 2013 at 2:28 PM, Bob Macklin <macklinbob@...> wrote:

> **
>
>
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>
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> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
>
> ----- Original Message -----
> From: Louis Wilen
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, May 29, 2013 11:13 AM
> Subject: Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)
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> W3LMW
>

> From: Bob Macklin
> Sent: Wednesday, May 29, 2013 1:54 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)
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42363. VTVM vs DMM

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 18:33:14 UTC
From: Wes Will
Topic: 42351 Message: 42363

On 05/29/2013 01:28 PM, Bob Macklin wrote:
> Yes a REAL VTVM does at least one thing better than a DMM.
>
> When you are trying to find a peak or trying to peak a circuit an analog
> meter is better because it is easier to see the peak on the moving needle.
>
> In most cases on these radios the accuracy of a DMM is not needed and a
> VOM or VTVM are satisfactory..

What he said plus one other thing. A good VTVM generally will have a lesser loading effect on the circuit under test.

This is a function of input REACTANCE (not just input resistance), I am pretty sure.

If you check the same RF circuit with a VTVM and a DMM the VTVM will measure a higher voltage in every case I've done this comparison. Less load on the circuit equals greater -accuracy-.

Knowing the difference between "precision" and "accuracy" is key.

--
Wes Will
N9KDY

42364. Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 19:13:00 UTC
From: Wes Will
Topic: 42351 Message: 42364

> Power, including maybe RF if you go past the power supply, with high
> impedance. so as not to load down RF circuits.
>
> At least, that's what I remember being taught

Load down, and de-tune. The wrong kind of test equipment load can make an oscillator stop, and an amplifier start.... More of a problem in the higher frequencies, in my (military) experience. Accuracy vs. precision again...

Also, RF burns are the WORST. Serious pain.

Even little ones. Cooked fingers, ye-ouch!!

--
Wes Will
N9KDY

42365. Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 18:46:19 UTC
From: Wes Will
Topic: 42351 Message: 42365

> I was hoping someone would reproduce them to todays standards. Would be
> a task to populate them, but I would be interested in buying sets for my
> rigs. Doubt it will ever happen.

Now -this- is something I might be able to get done. Which radio (in your guesstimation) would be the one most likely to generate a quantity greater than say, 50 people, willing to do this sort of thing?

I think there wouldn't be a problem with the copyright for a non-profit break-even quantity of something they don't have any interest in supplying ever again.

(Especially if we hit Kenwood up for permission, though it probably isn't needed. I'll ask my lawyer a question about that if this goes any further.)

I know the artwork/layout can be recreated (I've done it with just GIMP, an HP LJ4 printer, and a clothes iron).

There are small-run jobbers that can do this sort of production run, lots of them are in folk's garages or a storage shed in the back yard. My little brother has a CNC laser etching business he runs in his garage. He can put a picture or words on about anything with that laser, so long as you supply a picture or the text.

But those sorts of small shops are capable of small quantity runs (given the artwork) of very high quality circuit boards. Cost per board wouldn't be too great, though they wouldn't be exactly cheap either. Say, ballpark, ten to twenty dollars per, depending on size and complexity? That's a GUESS, please don't hold me to it.

We could even include a few 'tweaks' just for fun, if you like....

--
Wes Will
N9KDY

42366. Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 19:37:08 UTC
From: Bob Macklin
Topic: 42351 Message: 42366

I do have several scopes. The best for me has been a Heathkit IO-4235. 35MHz. I like it because I have the full assembly manual. When I bought it (ebay of course) it had a LV power supply problem. It was easy to fix. I just had to replace two LV electrolytic filter capacitors. The second problem occurred after I had been using this scope for more than a year. One of the capacitors in the timebase failed. It took a couple days to repair. The first problem was finding it.

I also have a Korean made 35MHz scope I purchased new about 25 years ago. In it one of the LV voltage regulators failed. I don't have the manual for this scope but I do have the manual for the 20MHz version made by the same company. The power supply was close enough for me to find the bad chip.

I also have a 250MHz Heathkit counter. I have done the same. Connecting it to the output of the IG-102. I have been planning to put a RCA connector on the back of the IG-102 so the counter would not be affected by the attenuator. You also need to remember to turn off the modulation when reading the counter.

I tried using the counter to set the LO in a couple tube type receivers I found the counter or the scope would add enough capacacitance to the LO to effect the tuning. I need to try and find a low impedance point (cathode) on these oscillators for the measurement but they are often difficult to get to.

But my main point is that people that want to work on old radios need to have at least the three items I initially mentioned.

I did consider a Tek 4XX series scope. I worked with them for many years. I have the manuals on several. I deiced on the Heathkit scope because I can usually fix them. I'm not sure ant my age I want to try working inside a Tek 4XX scope.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Mike
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 29, 2013 11:51 AM
Subject: Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

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I use the same siggen Bob uses, IG-102 but I connect a frequency counter in parallel with the generator's output using a BNC "T" connector. I also replaced the screw on connectors with female BNCs which make it much easier to connect different devices and probes to the generator.

I would add to Bob's bench collection, a frequency counter and a scope. The frequency counter is a good item to have especially when dealing with oscillators. I use a Synometer VC-2000. This counter will measure frequency from 10hz up to 2.5Ghz plus it has a simple crystal oscillator test feature where a crystal can be plugged into the front and the counter displays the crystal's frequency. This feature will only display the "Fundamental" frequency. Fundamental frequencies are typically frequencies 20Mhz and below. Unfortunately my scope has an upper limit of 20Mhz so it's not good for those hybrid measurements that require a 100Mhz scope.

Learning how to use test equipment is very easy. You don't have to have a Phd in electrical engineering and have spent many months in space on the space shuttle to learn how to use basic test gear.

73
Mike W5RKL

On 5/29/2013 1:13 PM, Louis Wilen wrote:
>
> When mentioning “VTVM”, are you using the term colloquially or do you
> mean a real VTVM?
>
> I have a Fluke 179 DMM that I use to measure everything that can be
> measured by a DMM. Also have a Fluke 85RF probe that I bought new but
> cheap on Ebay long after Fluke discontinued them. Why would I need a VTVM?
>
> Does a real VTVM (that is – Vacuum Tube Volt Meter) do something that
> a modern DMM doesn’t do just as well?
>
> Louis
> W3LMW
>
> From: Bob Macklin
> Sent: Wednesday, May 29, 2013 1:54 PM
> To: TS-520_820_530_830@yahoogroups.com

> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)
>
> Away from the flaming,
>
> Terry and I have talked privately many times in the past. I am jealous
> of the test lab he has.
>
> But I also have a decent one and I know how to use all the equipment.
>
> I don't approve of people with out knowledge and test equipment trying
> to repair these radios. If they really want to do it they need some
> basic test equipment. I find that most of my needs are filled by
> Heathkit test equipment. About 10 years ago I started rebuilding my
> lab off eBay. I did buy a couple pieces that were beyond salvage but
> they did supply parts to repair others.
>
> During period of severe unemployment in the 70's I sold my entire lab
> and when I started doing more computer work I had no need for RF test
> equipment.
>
> In my humble opinion the first three items are a good VOM, a VTVM, and
> a decent signal generator.
>
> I have a Triplett and a Heathkit VOM. For power supply work they both
> work just fine.
>
> I have several versions of the Heathkit VTVM. The EICO VTVM is just as
> good. The problem I find with these being offered on eBay is that the
> probes are usually missing. But you can make probes. If you don't have
> the skill to make a VTVM probe you should probably not be trying to
> work with this stuff.
>
> For a signal generator I have a Heathkit IG-102 and a Heathkit SG-8.
> They are both essentially the same, just different cases.
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

42367. Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 19:47:37 UTC
From: Bob Macklin
Topic: 42351 Message: 42367

Ten or twenty bucks to save a radio from being scrap is really a small cost. Much less than buying a new radio.

Newer radios have ICs that are not replaceable. That is another problem.

But one thing to consider is the relays used in the hybrids. Would it be advisable to design the replacement PCBs to use modern (current production) relays?

Should we feel that the people repairing these radio could assemble the replacement PCBs themselves. We could supply a Mouser or DigiKey parts list.

Is there a particular problem board?

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: Wes Will
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 29, 2013 11:46 AM
Subject: Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

> I was hoping someone would reproduce them to todays standards. Would be
> a task to populate them, but I would be interested in buying sets for my
> rigs. Doubt it will ever happen.

Now -this- is something I might be able to get done. Which radio (in your guesstimation) would be the one most likely to generate a quantity greater than say, 50 people, willing to do this sort of thing?

I think there wouldn't be a problem with the copyright for a non-profit break-even quantity of something they don't have any interest in supplying ever again.

(Especially if we hit Kenwood up for permission, though it probably isn't needed. I'll ask my lawyer a question about that if this goes any further.)

I know the artwork/layout can be recreated (I've done it with just GIMP, an HP LJ4 printer, and a clothes iron).

There are small-run jobbers that can do this sort of production run, lots of them are in folk's garages or a storage shed in the back yard. My little brother has a CNC laser etching business he runs in his garage. He can put a picture or words on about anything with that laser, so long as you supply a picture or the text.

But those sorts of small shops are capable of small quantity runs (given the artwork) of very high quality circuit boards. Cost per board wouldn't be too great, though they wouldn't be exactly cheap either. Say, ballpark, ten to twenty dollars per, depending on size and complexity? That's a GUESS, please don't hold me to it.

We could even include a few 'tweaks' just for fun, if you like....

--
Wes Will
N9KDY

[Non-text portions of this message have been removed]

42368. Re: [TS-520_820_530_830] eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 19:55:31 UTC
From: Jerry Barr
Topic: 42339 Message: 42368

well it puts out audio but no rf/and it does hav serius 60 cycles/ everything looks originalcaps coils etc/wud it be wise to re cap it?

Jerry KJ6NTL

From: Mike <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 29, 2013 11:01 AM
Subject: Re: [TS-520_820_530_830] eico324!!

Jerry,

You have an RF generator from ebay but what else are you trying to say?

73
Mike W5RKL

On 5/29/2013 12:17 PM, Jerry Barr wrote:
>
>
>
> hi all got a rf gen yest e=bay,contacts black how to clean and
> lube/any ideasand no rf but audio wrks
> Jerry KJ6NTL
>
> ------------------------------------
>
> Yahoo! Groups Links
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> [Non-text portions of this message have been removed]
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[Non-text portions of this message have been removed]

42369. Re: [TS-520_820_530_830] eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 20:07:09 UTC
From: Bob Macklin
Topic: 42339 Message: 42369

Do you have the manual? What test equipment do you have?

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Jerry Barr
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 29, 2013 12:55 PM
Subject: Re: [TS-520_820_530_830] eico324!!

well it puts out audio but no rf/and it does hav serius 60 cycles/ everything looks originalcaps coils etc/wud it be wise to re cap it?

Jerry KJ6NTL

From: Mike <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 29, 2013 11:01 AM
Subject: Re: [TS-520_820_530_830] eico324!!

Jerry,

You have an RF generator from ebay but what else are you trying to say?

73
Mike W5RKL

On 5/29/2013 12:17 PM, Jerry Barr wrote:
>
>
>
> hi all got a rf gen yest e=bay,contacts black how to clean and
> lube/any ideasand no rf but audio wrks
> Jerry KJ6NTL
>
> ------------------------------------
>
> Yahoo! Groups Links
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[Non-text portions of this message have been removed]

42370. Re: [TS-520_820_530_830] eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 20:04:16 UTC
From: Wes Will
Topic: 42339 Message: 42370

On 05/29/2013 02:55 PM, Jerry Barr wrote:
> well it puts out audio but no rf/and it does hav serius 60 cycles/
> everything looks originalcaps coils etc/wud it be wise to re cap it?
>
> Jerry KJ6NTL

Yes. That would be a good start on about any piece of old kit.
Replacing the electrolytics that may have dried out or failed in other
ways couldn't be a bad way to begin.

42371. Re: [TS-520_820_530_830] VTVM vs DMM

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 20:10:38 UTC
From: Louis Wilen
Topic: 42351 Message: 42371

Thanks for all the replies.

I never considered that a DMM might have enough reactance to affect readings. My DMM (Fluke 179) is a “true RMS” meter, so I would expect that it has some circuitry that removes the reactive component from measurements – but I’m not certain. Maybe others can comment on this.

Louis
W3LMW

From: Wes Will
Sent: Wednesday, May 29, 2013 2:33 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] VTVM vs DMM

On 05/29/2013 01:28 PM, Bob Macklin wrote:
> Yes a REAL VTVM does at least one thing better than a DMM.
>
> When you are trying to find a peak or trying to peak a circuit an analog
> meter is better because it is easier to see the peak on the moving needle.
>
> In most cases on these radios the accuracy of a DMM is not needed and a
> VOM or VTVM are satisfactory..

What he said plus one other thing. A good VTVM generally will have a
lesser loading effect on the circuit under test.

This is a function of input REACTANCE (not just input resistance), I am
pretty sure.

If you check the same RF circuit with a VTVM and a DMM the VTVM will
measure a higher voltage in every case I've done this comparison. Less
load on the circuit equals greater -accuracy-.

Knowing the difference between "precision" and "accuracy" is key.

--
Wes Will
N9KDY

[Non-text portions of this message have been removed]

42372. Re: [TS-520_820_530_830] eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 20:17:48 UTC
From: Jerry Barr
Topic: 42339 Message: 42372

sori i was alittle out of it when i wrote that/ a little sick todayi did use some de-oxit spray contact cleaner while rotating switches etc but dint seem to help/and i do see some ac on the audio out/and get some ac between it and my scope grnd/ any kind of lubeto use or no/ oh and unplugged is good hihi

Jerry KJ6NTL

From: Wes Will <wwill@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 29, 2013 11:20 AM
Subject: Re: [TS-520_820_530_830] eico324!!

On 05/29/2013 12:17 PM, Jerry Barr wrote:
>
>
> hi all got a rf gen yest e=bay,contacts black how to clean and
> lube/any ideasand no rf but audio wrks
> Jerry KJ6NTL

I think he is trying to say that he bought an Eico 324 signal generator on e-Bay yesterday, and it's dirty. He wants to clean it up and doesn't know how.

To clean the contacts and moving parts, there are spray cleaners, usually labeled "contact cleaner" or "volume control cleaner."

And there are as many different opinions about which one works the best as there are Hams using them. Find one locally available and give it a squirt.

Simple mechanical scrubbing with a clean cloth and some of the spray cleaner will clear up things like edge connectors. Potentiometers should be sprayed and worked full-range while spraying. Likewise toggle switches or rotary switches. Open-plate capacitors (tuning capacitors) can be cleaned the same way.

I use "canned air" (nitrogen tank, much cheaper over the long haul) to blow out dust-bunnies and to dry the spray cleaner off of things once they're no longer corroded or dirty.

Another thing for connectors and any kind of contact that you can get to easily, such as the traces in a rotary switch, is a simple clean pencil eraser. I use one for commutator pads in electric motors, too. Just rub gently at the copper pads, and the gunk will come off. Clean it off of the eraser onto something, a piece of paper usually works.

Do I need to say "UNPLUGGED," here? Or is that enough of a given with this group? I suspect opinions on THAT differ as well....

Continue with spray cleaner and erasers and just plain scrubbing until the thing is tidy inside.

--
Wes Will
N9KDY

[Non-text portions of this message have been removed]

42373. Re: [TS-520_820_530_830] eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 20:36:17 UTC
From: Jerry Barr
Topic: 42339 Message: 42373

i do have the schematic/ and a tek 2236(100mhz) scope,fluke dvm and old simpson 260and a copy of the manual

Jerry KJ6NTL

From: Bob Macklin <macklinbob@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 29, 2013 1:07 PM
Subject: Re: [TS-520_820_530_830] eico324!!

Do you have the manual? What test equipment do you have?

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Jerry Barr
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Wednesday, May 29, 2013 12:55 PM
Subject: Re: [TS-520_820_530_830] eico324!!

well it puts out audio but no rf/and it does hav serius 60 cycles/ everything looks originalcaps coils etc/wud it be wise to re cap it?

Jerry KJ6NTL

From: Mike <mailto:w5rkl%40yahoo.com>
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Wednesday, May 29, 2013 11:01 AM
Subject: Re: [TS-520_820_530_830] eico324!!

Jerry,

You have an RF generator from ebay but what else are you trying to say?

73
Mike W5RKL

On 5/29/2013 12:17 PM, Jerry Barr wrote:
>
>
>
> hi all got a rf gen yest e=bay,contacts black how to clean and
> lube/any ideasand no rf but audio wrks
> Jerry KJ6NTL
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42374. Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 20:53:55 UTC
From: Terry Wagoner
Topic: 42351 Message: 42374

Bob: I understand fixed income. Blowing thru my retirement and if live long enough will be limited to SS. Hopefully the kids will take me in!

I have never seen a FAR produced PC board. On his site he says he specializes in one off ham projects. He states the boards are made of G10 with 1oz copper traces that are tinned. That alone is better than our old phenolic boards in the hybrids.

Not smart enough to know how the art work could be produced.

Well yes must have external step attenuator, but still have problem of knowing precisely what your base level from the IG-102 is. Cant assume what it is. Can measure it fairly close with an O-scope of sufficient bandwidth.

I use to drive a commercial receiver with my IG-102 and assume the S-meter in it was calibrated accurately and then use attenuator from what ever S-meter level I used. Problem is most S-meters are not linear. So for example I would drive the receiver for an S-9 reading and assume that the receiver had been calibrated for 50uv = S-9. Then could use step attenuator to get "accurate" lower levels.

If it was just for my personal radios I would not need a good RF signal generator, but when you charge people to perform full factory alignments on their hybrids you owe it to them not to skip any steps and to return the rig as close to factory spec as you can. No guessing allowed there.

Before I would send any radio to anyone who advertises Hybrid repair I would want to see a list of their test gear and ask them a couple of questions like how they check the bandpass filter alignment, how they set the VBT oscillator, etc.

This isnt rocket science, but it has to be more than set by ear and just good enough in my opinion.

Take Care
Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@...> wrote:
>
> Hi Terry,
>
> Since I am now 79 and limited to what I can do on Social Security I am limited to what I can spend on test equipment now.
>
> For what I do I can use an external attenuator with the Heath signal generators. The one item I really do want is a RF milivoltmeter.
>
> Would it be practical to do the artworks(maybe just copy the Kenwood board) and get someone to produce the bare boards. Then let people buy the boards and assemble them themselves?

>
> What kind of quality are the Farr Circuits PC boards?
>
> In watching the Kenwood items on eBay I have been seeing lots of Kenwood items being parted out. The same has been true of Heathkit ham radios.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Terry Wagoner
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, May 29, 2013 11:32 AM
> Subject: Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)
>
>
>
> Hi Bob:
>
> Interesting perspectives about why new folks are buying the hybrids and/or going with 2 meters. I had a new fellow visit the shack a year or so ago and he took a class conducted by a local club and they strongly recommended he buy two meter rig and if he bought a HF rig that first required accessory was an antenna tuner. I had hard time explaining to him why I had no tuner and when I did what kind of antenna it was.
>
> One of the scariest things to me that I worry about all the time about giving advice to new Hybrid owners is these folks getting in the inside of these rigs with no appreciation for the safety risks or how to apply standard safe electrical work practices. Real chance to get hurt or worse. Maybe unfounded. I agree cant hope to maintain without modest test gear and understanding how to use it and knowing its limitations.
>
> Nothing wrong with Heath level bench at all as we have discussed. Most if not all of us started with Heath, Knight, Eico. I still have some Heath test gear. I dont have laboratory RF bench. I am one step above Heath and only after raising 5 children and retiring. It was test gear or Corvettes and I got the Corvettes out of my system (70 LT-1 bumper car and 93 LT-1 both black beauties). Only memories now!
>
> Probably the best upgrade you can do is in the RF Sig Gen area followed by RF millivolt meter. I upgraded from IG-102 to URM/25 and then HP-606 and finally now have a nice Wavetek 3002. A HP8640B or Wavetek 3002 gives you stable, accurate,calibrated output levels,and low level leakage required for accurate alignment and measurements.
>
> The pieces I use the most include a Boonton 92E RF Millivolt meter, HP5334 Freq Counter, Wavetek 3002 RF sig gen, BK2712 DMM, and now a brand new Rigol DS1102E 100 mhz digital scope. Started many moons ago with RCA O-scope with 5 mhz BW and then built couple of Heath scopes, finally got a surplus 100mhz Lavoie Labs that took up half the bench. Then a Tek465 and then Tek475 and Tek475A. Still have the 475A but it needs some help. Still learning how to use this Digital scope. Jury is out.
>

> I agree the hybrid boards are poor quality and the plating isnt good. Very easy to lift a foil and pull molex pins and have cracked trace at the pads. I upgraded to a Hakko 808 and man what a difference from solder sucker and solder wick. No comparison whatsoever especially for bandswitch removal and repair. Boards and connectors do present significant challenge. Certainly not the G10 quality.
>
> I see boards that I will not have in any of my personal rigs.
>
> I was hoping someone would reproduce them to todays standards. Would be a task to populate them, but I would be interested in buying sets for my rigs. Doubt it will ever happen.
>
> Take Care
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@> wrote:
> >
> > Away from the flaming,
> >
> > Terry and I have talked privately many times in the past. I am jealous of the test lab he has.
> >
> > But I also have a decent one and I know how to use all the equipment.
> >
> > I don't approve of people with out knowledge and test equipment trying to repair these radios. If they really want to do it they need some basic test equipment. I find that most of my needs are filled by Heathkit test equipment. About 10 years ago I started rebuilding my lab off eBay. I did buy a couple pieces that were beyond salvage but they did supply parts to repair others.
> >
> > During period of severe unemployment in the 70's I sold my entire lab and when I started doing more computer work I had no need for RF test equipment.
> >
> > In my humble opinion the first three items are a good VOM, a VTVM, and a decent signal generator.
> >
> > I have a Triplett and a Heathkit VOM. For power supply work they both work just fine.
> >
> > I have several versions of the Heathkit VTVM. The EICO VTVM is just as good. The problem I find with these being offered on eBay is that the probes are usually missing. But you can make probes. If you don't have the skill to make a VTVM probe you should probably not be trying to work with this stuff.
> >
> > For a signal generator I have a Heathkit IG-102 and a Heathkit SG-8. They are both essentially the same, just different cases.
> >
> > I do have much more than this, but these are the minimum you need to work on radios.
> >
> > After watching this list and talking to Terry over the past few years I seem to think many of the problems are quality of the Kenwood PC boards. A skilled technician should be

able to repair these boards. Once one is out of the unit I would just start by replacing all the electrolytic capacitors. In many cases you cannot measure the value of resistors in the circuit. You may have to lift one end of them.
> >
> > It looks to me like the main problems encounters are with the connectors and relays.
> >
> > I have a TS-520 I bought here locally a few years ago. It was demonstrated to me on a dummy load. The one problem it has is the carrier balance. You can get a good null on either LSB or USB but not on both. But in the three years I have had it I have only used it as a receiver.
> >
> > I now have everything I need (EXCEPT SPACE) to set up a full hybrid station. I am going to work on that problem this year.
> >
> > I would be willing to help anyone in the Puget Sound are solve hybrid problems.
> >
> > Bob Macklin
> > K5MYJ
> > Seattle, Wa.
> > "Real Radios Glow In The Dark"
> > ----- Original Message -----
> > From: JIM LYNCH
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Wednesday, May 29, 2013 8:55 AM
> > Subject: Re: [TS-520_820_530_830] Re: FLAMED - Amen, Brother Terry.
> >
> >
> >
> > I think you nailed it Bob.I have made my living since 1960 in electronics of one sort or another,all in military or commercial communications.While I was doing that for a living, I certainly didn't come home and do it for fun.But now I am a 74 year old retiree and now I find it relaxing and fun.I don't get religious about what other people get out of this hobby,and it is a hobby, not a way of life,at least to me.Live and let live.The only dumb question is the one not asked, if you want this group to continue to be helpful to us novices, cut us some slack. Semper fi
> >
> >
> >
> > _____
> > From: Bob Macklin <macklinbob@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Wednesday, May 29, 2013 7:36 AM
> > Subject: Re: [TS-520_820_530_830] Re: FLAMED - Amen, Brother Terry.
> >
> >
> > Terry,
> >
> > The kids don't see any need for ham radio anymore. They have their cell phones and internet message boards.
> >
> > We have two radio clubs in the Seattle/Tacoma area. People join these clubs because of

the 2M FM repeaters. The cost of a 2M FM transceiver less than $200. Modern SSB HF transceivers is much more.
> >
> > Then there is the problem of HF antennas. HF antennas in an apartment environment is almost impossible. just ask me! Most new homes have HOA restictions that make a decent HF antenna difficult.
> >
> > I suspect that the few young people the do find an interest in HF buy a boatanchor like the hybrids do so because the cost is lower than a new RICEBOX. But most of these boatanchors purchased on eBay have some kind of issues.
> >
> > Somehow I get the feeling that the Kenwood hybrids have more problems than the Heathkit SB /HW units. For one thing I don't see the PCB/connector problems with the Heathkit units.
> >
> > The Drakes have a completely different set of problems.
> >
> > The other problem is most of these people do not understand analog electronics or electronics at all. They often cause more damage to the units they are trying to repair.
> >
> > Bob Macklin
> > K5MYJ
> > Seattle, Wa.
> > "Real Radios Glow In The Dark"
> > ----- Original Message -----
> > From: Terry Wagoner
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Wednesday, May 29, 2013 8:06 AM
> > Subject: [TS-520_820_530_830] Re: FLAMED - Amen, Brother Terry.
> >
> >
> > Wes:
> >
> > I thought about approaching the schools and like you I have the time but not the budget. Very recently I was a little discouraged when had 18 year old nephew in the shack and gave him a demo including working a Russian station while he was here. He liked the service bench but when all done and we were outside looking up at my tri-bander on the tower he pulled out his cell phone and pointed at it and told me he still didnt understand why I went to all the bother!
> >
> > I dont have any integration of computer other than do use my lap top and audio spectrum analyzer software for LSB/USB carrier adjust. I wish had SDR and IF connection and pan adapter to show him as an example of how it relates to his world. He is heading off to college and I encouraged him to check out the campus club station. Hope he does.
> >
> > I will think about your approach and interested to here off list how it goes. Went to club meeting recently and saw 8 or 9 old guys like me and a couple guys maybe in 30s and two meters was the talk. No 16 year old kids there and no hybrids in sight.
> >
> > Take Care
> > Terry K9TW
> >

> > --- In TS-520_820_530_830@yahoogroups.com, Wes Will <wwill@> wrote:
> > >
> > > On 05/29/2013 06:33 AM, Terry Wagoner wrote:
> > > > If you consider this getting "flamed" you are going to get your feelings
> > > > hurt daily in this old life.
> > >
> > > ...
> > >
> > > > Man it is sad what has happened to this hobby. I would love it if I
> > > > could find just one young person to mentor who was a voracious reader,
> > > > had a questioning attitude, had a gleam in his eye and fire in the
> > > > belly, and would not go crying down the hall like a little sissy when he
> > > > was pressed to do a little work.
> > >
> > > Agree with every word of this.
> > >
> > > Especially the "what has happened." I have been told by some of my Boy
> > > Scouts in previous years (not doing the BSA thing for some time now)
> > > that Ham radio is strictly
> > >
> > > "For old, fat, rich, white guys."
> > >
> > > I find that ineffably sad. All too true a lot of places in the U.S.,
> > > unfortunately.
> > >
> > > If you want to help bust that image up, do what I'm trying to do at my
> > > wife's school. (She is a teacher at a rural consolidated school
> > > district.) In the High School Physics and General Science classes next
> > > fall, I am being allowed to give a pitch for Amateur Radio, with a goal
> > > of setting up a club, complete with their own shack in a small, unused
> > > room in the school building.
> > >
> > > This is precisely why I am wanting so badly to get this 520SE back into
> > > service. It's going to be the HF rig for a bunch of kids, I hope, as
> > > well as for my own use.
> > >
> > > I have scrounged and repaired an antenna tuner, HF SWR meter, VHF/UHF
> > > swr meter, an ADI junker of a 2-meter mobile which I've mounted in a box
> > > to make it also semi-portable, and a 45-ampere DC variable voltage,
> > > current-limited power supply. I'll be keeping an eye out for 2-meter
> > > all-mode gear and something for use on 220 and 70cm, for later on.
> > >
> > > (The power supply is the only bit of kit already in hand which still
> > > needs some work, the current limit pot is wonky, needs to be replaced
> > > and then the built-in meters calibrated. Nothing an hour on the bench
> > > won't fix.)
> > >
> > > I'll be needing to get them an oscilloscope, signal generator, VTVM, and
> > > a DMM for their shack-to-be. That's a fur piece down the road, though.
> > > I have to get the kids involved and interested in it, first. That

> > > means getting a radio working and an antenna up, enough to make some
> > > contacts and catch their interest a bit. Packet and other digital modes
> > > are high on the list to get in the early innings, too.
> > >
> > > (I need to get a replacement o-scope for myself, too, but that will have
> > > to wait; the 60's vintage clunker I have still works, more or less,
> > > though calibration is getting to be dicey. Still gives you a ball-park
> > > idea of the wave form, but I am not counting on the measurements being
> > > correct any more. It's so old that it's not just a re-alignment job
> > > either. Can't just rotate the yoke a bit to square up and level the
> > > trace against the graticule and get on with things any more. The
> > > calibration circuit is first to get fixed, it's seriously out of kilter.)
> > >
> > > If you're looking for a challenge, and some kids who can carry on the
> > > hobby, you might try going this route. Your "fire in their belly" line
> > > is exactly why I went to the school board last month about doing this.
> > > They are giving me a chance to stir up interest, and see where that leads.
> > >
> > > Maybe there is a school in your area that could get the same treatment?
> > > It's certainly going to be a challenge to get them set up and running,
> > > with the budget I've got to work with. (Which is of course ZERO
> > > DOLLARS, there are no extra funds for anything except a sport in the
> > > state of Illinois. Zero bucks to work with, excepting what I can free
> > > up out of my own pocket. The young'uns will be having to wash some cars
> > > or something for any gear they get once the club gets on its feet.)
> > >
> > > (IF the club gets on its feet.)
> > >
> > > --
> > > Wes Will
> > > N9KDY
> > >
> >
> >
> >
> > [Non-text portions of this message have been removed]
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> > ------------------------------------
> >
> > Yahoo! Groups Links
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42375. Re: [TS-520_820_530_830] eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 20:59:51 UTC
From: Bob Macklin
Topic: 42339 Message: 42375

The start by putting the scope on the HV power supply and looking at the ripple. There should not be very much if any.

Go here and get the complete manual:
http://bama.edebris.com/manuals/eico/324/

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: Jerry Barr
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 29, 2013 1:36 PM
Subject: Re: [TS-520_820_530_830] eico324!!

i do have the schematic/ and a tek 2236(100mhz) scope,fluke dvm and old simpson 260and a copy of the manual

Jerry KJ6NTL

From: Bob Macklin <macklinbob@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 29, 2013 1:07 PM
Subject: Re: [TS-520_820_530_830] eico324!!

Do you have the manual? What test equipment do you have?

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Jerry Barr
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Wednesday, May 29, 2013 12:55 PM
Subject: Re: [TS-520_820_530_830] eico324!!

well it puts out audio but no rf/and it does hav serius 60 cycles/ everything looks originalcaps coils etc/wud it be wise to re cap it?

Jerry KJ6NTL

From: Mike <mailto:w5rkl%40yahoo.com>
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Wednesday, May 29, 2013 11:01 AM
Subject: Re: [TS-520_820_530_830] eico324!!

Jerry,

You have an RF generator from ebay but what else are you trying to say?

73
Mike W5RKL

On 5/29/2013 12:17 PM, Jerry Barr wrote:
>
>
>
> hi all got a rf gen yest e=bay,contacts black how to clean and
> lube/any ideasand no rf but audio wrks
> Jerry KJ6NTL
>
> ------------------------------------
>
> Yahoo! Groups Links
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42376. Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 21:03:14 UTC
From: Terry Wagoner
Topic: 42351 Message: 42376

IF board is plugged and unplugged the most to change and sell filters. I see more jumpers and solder jobs that look like open flame and acid core solder on the IF boards. Some real abortions.

RF bandswitch boards would sell to just about everyone I would think. The silver ink repair in my opinion is not as good as the small jumper wire repair. Having to do neither would be nice.

If I could buy factory new RF boards and IF boards for my two TS-830s without mortgaging the house I would be first in line.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@...> wrote:
>
> Ten or twenty bucks to save a radio from being scrap is really a small cost. Much less than buying a new radio.
>
> Newer radios have ICs that are not replaceable. That is another problem.
>
> But one thing to consider is the relays used in the hybrids. Would it be advisable to design the replacement PCBs to use modern (current production) relays?
>
> Should we feel that the people repairing these radio could assemble the replacement PCBs themselves. We could supply a Mouser or DigiKey parts list.
>
> Is there a particular problem board?
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
>
>
> ----- Original Message -----
> From: Wes Will
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, May 29, 2013 11:46 AM
> Subject: Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)
>
>
>
> > I was hoping someone would reproduce them to todays standards. Would be
> > a task to populate them, but I would be interested in buying sets for my
> > rigs. Doubt it will ever happen.
>

> Now -this- is something I might be able to get done. Which radio (in
> your guesstimation) would be the one most likely to generate a quantity
> greater than say, 50 people, willing to do this sort of thing?
>
> I think there wouldn't be a problem with the copyright for a non-profit
> break-even quantity of something they don't have any interest in
> supplying ever again.
>
> (Especially if we hit Kenwood up for permission, though it probably
> isn't needed. I'll ask my lawyer a question about that if this goes any
> further.)
>
> I know the artwork/layout can be recreated (I've done it with just GIMP,
> an HP LJ4 printer, and a clothes iron).
>
> There are small-run jobbers that can do this sort of production run,
> lots of them are in folk's garages or a storage shed in the back yard.
> My little brother has a CNC laser etching business he runs in his
> garage. He can put a picture or words on about anything with that
> laser, so long as you supply a picture or the text.
>
> But those sorts of small shops are capable of small quantity runs (given
> the artwork) of very high quality circuit boards. Cost per board
> wouldn't be too great, though they wouldn't be exactly cheap either.
> Say, ballpark, ten to twenty dollars per, depending on size and
> complexity? That's a GUESS, please don't hold me to it.
>
> We could even include a few 'tweaks' just for fun, if you like....
>
> --
> Wes Will
> N9KDY
>
>
>
>
> [Non-text portions of this message have been removed]
>

42377. Re: [TS-520_820_530_830] eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 21:05:45 UTC
From: Mike
Topic: 42339 Message: 42377

Okay, no problem.

The manual and schematic, including the assembly manual (listed as "CONST" in the link below) which I recommend you download, can be found at the following link:

http://bama.edebris.com/manuals/eico/

I agree, as others have said, replace the electrolytic caps first. There's one multi-section capacitor with two 20ufd 150VDC caps. You can purchase from Mouser (www.mouser.com) new 22ufd 160VDC axial lead replacement caps. You can either restuff the original cap's body or remove the old cap and install new axial lead caps tie wrapped together. You will need some heat schrink tubing over the positive leads to ensure they don't short to the chassis. The original cap is mounted to the chassis with a strap Simply look where the positive leads connect, make a note or better yet take a picture of the connections, then remove the old cap and install the new caps.

Next, you should clean all the switches and pots with contact cleaner. I use DeoXit D5 on switch and DeoXit F5 fader cleaner and lub on pots. I also recommend purchasing a few cans of canned air, you can find it at Walmart's stereo/TV/DVD section. Once you have cleaned the switches and pots, use generous amounts of canned air to remove any/all cleaner residue. Adhere to the cleaner's warning on the can.

Take some time and read the manual so you will have an idea of how the generator works, how to use the generator etc.

73
Mike W5RKL

On 5/29/2013 3:17 PM, Jerry Barr wrote:
>
> sori i was alittle out of it when i wrote that/ a little sick todayi
> did use some de-oxit spray contact cleaner while rotating switches etc
> but dint seem to help/and i do see some ac on the audio out/and get
> some ac between it and my scope grnd/ any kind of lubeto use or no/
> oh and unplugged is good hihi
>
> Jerry KJ6NTL
>
> From: Wes Will <wwill@... <mailto:wwill%40siu.edu>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Wednesday, May 29, 2013 11:20 AM
> Subject: Re: [TS-520_820_530_830] eico324!!

>
>
> On 05/29/2013 12:17 PM, Jerry Barr wrote:
> >
> >
> > hi all got a rf gen yest e=bay,contacts black how to clean and
> > lube/any ideasand no rf but audio wrks
> > Jerry KJ6NTL
>
> I think he is trying to say that he bought an Eico 324 signal generator
> on e-Bay yesterday, and it's dirty. He wants to clean it up and doesn't
> know how.
>
> To clean the contacts and moving parts, there are spray cleaners,
> usually labeled "contact cleaner" or "volume control cleaner."
>
> And there are as many different opinions about which one works the best
> as there are Hams using them. Find one locally available and give it a
> squirt.
>
> Simple mechanical scrubbing with a clean cloth and some of the spray
> cleaner will clear up things like edge connectors. Potentiometers
> should be sprayed and worked full-range while spraying. Likewise toggle
> switches or rotary switches. Open-plate capacitors (tuning capacitors)
> can be cleaned the same way.
>
> I use "canned air" (nitrogen tank, much cheaper over the long haul) to
> blow out dust-bunnies and to dry the spray cleaner off of things once
> they're no longer corroded or dirty.
>
> Another thing for connectors and any kind of contact that you can get to
> easily, such as the traces in a rotary switch, is a simple clean pencil
> eraser. I use one for commutator pads in electric motors, too. Just
> rub gently at the copper pads, and the gunk will come off. Clean it off
> of the eraser onto something, a piece of paper usually works.
>
> Do I need to say "UNPLUGGED," here? Or is that enough of a given with
> this group? I suspect opinions on THAT differ as well....
>
> Continue with spray cleaner and erasers and just plain scrubbing until
> the thing is tidy inside.
>
> --
> Wes Will
> N9KDY
>
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42378. Re: [TS-520_820_530_830] eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 21:09:29 UTC
From: Mike
Topic: 42339 Message: 42378

You beat me to it Bob.

Jerry, if you do not have the assembly manual for the 324 then download it. The assembly manual will have pictorials that show how the generator is constructed, with part numbers, values etc.

Visually inspect the tubes. If either one of the tubes show "white" coating on the inside, throw them away and order a replacement. I've run into this when purchasing test gear on eBay. Check to ensure the filaments are lit. If the filament is open then the tube is bad and needs replaced.

73
Mike W5RKL

On 5/29/2013 3:36 PM, Jerry Barr wrote:
>
> i do have the schematic/ and a tek 2236(100mhz) scope,fluke dvm and
> old simpson 260and a copy of the manual
>
> Jerry KJ6NTL
>
> From: Bob Macklin <macklinbob@... <mailto:macklinbob%40gmail.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Wednesday, May 29, 2013 1:07 PM
> Subject: Re: [TS-520_820_530_830] eico324!!
>
>
> Do you have the manual? What test equipment do you have?
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Jerry Barr
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Wednesday, May 29, 2013 12:55 PM
> Subject: Re: [TS-520_820_530_830] eico324!!
>
> well it puts out audio but no rf/and it does hav serius 60 cycles/
> everything looks originalcaps coils etc/wud it be wise to re cap it?
>
> Jerry KJ6NTL
>

> From: Mike <mailto:w5rkl%40yahoo.com>
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Wednesday, May 29, 2013 11:01 AM
> Subject: Re: [TS-520_820_530_830] eico324!!
>
> Jerry,
>
> You have an RF generator from ebay but what else are you trying to say?
>
> 73
> Mike W5RKL
>
> On 5/29/2013 12:17 PM, Jerry Barr wrote:
> >
> >
> >
> > hi all got a rf gen yest e=bay,contacts black how to clean and
> > lube/any ideasand no rf but audio wrks
> > Jerry KJ6NTL
> >
> > ------------------------------------
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42379. Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 21:11:31 UTC
From: Bob Macklin
Topic: 42351 Message: 42379

If Far could do these two boards that would be a good start.

I assume that someone that knew what he was doing could assemble and test these boards before they were put in a radio.

I'll contact Far and see what he says.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Terry Wagoner
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 29, 2013 2:03 PM
Subject: Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

IF board is plugged and unplugged the most to change and sell filters. I see more jumpers and solder jobs that look like open flame and acid core solder on the IF boards. Some real abortions.

RF bandswitch boards would sell to just about everyone I would think. The silver ink repair in my opinion is not as good as the small jumper wire repair. Having to do neither would be nice.

If I could buy factory new RF boards and IF boards for my two TS-830s without mortgaging the house I would be first in line.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@...> wrote:
>
> Ten or twenty bucks to save a radio from being scrap is really a small cost. Much less than buying a new radio.
>
> Newer radios have ICs that are not replaceable. That is another problem.
>
> But one thing to consider is the relays used in the hybrids. Would it be advisable to design the replacement PCBs to use modern (current production) relays?
>
> Should we feel that the people repairing these radio could assemble the replacement PCBs themselves. We could supply a Mouser or DigiKey parts list.
>
> Is there a particular problem board?
>
> Bob Macklin
> K5MYJ

> Seattle, Wa.
> "Real Radios Glow In The Dark"
>
>
> ----- Original Message -----
> From: Wes Will
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, May 29, 2013 11:46 AM
> Subject: Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)
>
>
>
> > I was hoping someone would reproduce them to todays standards. Would be
> > a task to populate them, but I would be interested in buying sets for my
> > rigs. Doubt it will ever happen.
>
> Now -this- is something I might be able to get done. Which radio (in
> your guesstimation) would be the one most likely to generate a quantity
> greater than say, 50 people, willing to do this sort of thing?
>
> I think there wouldn't be a problem with the copyright for a non-profit
> break-even quantity of something they don't have any interest in
> supplying ever again.
>
> (Especially if we hit Kenwood up for permission, though it probably
> isn't needed. I'll ask my lawyer a question about that if this goes any
> further.)
>
> I know the artwork/layout can be recreated (I've done it with just GIMP,
> an HP LJ4 printer, and a clothes iron).
>
> There are small-run jobbers that can do this sort of production run,
> lots of them are in folk's garages or a storage shed in the back yard.
> My little brother has a CNC laser etching business he runs in his
> garage. He can put a picture or words on about anything with that
> laser, so long as you supply a picture or the text.
>
> But those sorts of small shops are capable of small quantity runs (given
> the artwork) of very high quality circuit boards. Cost per board
> wouldn't be too great, though they wouldn't be exactly cheap either.
> Say, ballpark, ten to twenty dollars per, depending on size and
> complexity? That's a GUESS, please don't hold me to it.
>
> We could even include a few 'tweaks' just for fun, if you like....
>
> --
> Wes Will
> N9KDY
>
>

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>
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42380. Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 21:29:26 UTC
From: Bob Macklin
Topic: 42351 Message: 42380

Terry,

Before I contact Far are these single sided PCBs? I am not opening my TS-520 until I have to?

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Terry Wagoner
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 29, 2013 2:03 PM
Subject: Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

IF board is plugged and unplugged the most to change and sell filters. I see more jumpers and solder jobs that look like open flame and acid core solder on the IF boards. Some real abortions.

RF bandswitch boards would sell to just about everyone I would think. The silver ink repair in my opinion is not as good as the small jumper wire repair. Having to do neither would be nice.

If I could buy factory new RF boards and IF boards for my two TS-830s without mortgaging the house I would be first in line.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@...> wrote:
>
> Ten or twenty bucks to save a radio from being scrap is really a small cost. Much less than buying a new radio.
>
> Newer radios have ICs that are not replaceable. That is another problem.
>
> But one thing to consider is the relays used in the hybrids. Would it be advisable to design the replacement PCBs to use modern (current production) relays?
>
> Should we feel that the people repairing these radio could assemble the replacement PCBs themselves. We could supply a Mouser or DigiKey parts list.
>
> Is there a particular problem board?
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"

>
>
> ----- Original Message -----
> From: Wes Will
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, May 29, 2013 11:46 AM
> Subject: Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)
>
>
>
> > I was hoping someone would reproduce them to todays standards. Would be
> > a task to populate them, but I would be interested in buying sets for my
> > rigs. Doubt it will ever happen.
>
> Now -this- is something I might be able to get done. Which radio (in
> your guesstimation) would be the one most likely to generate a quantity
> greater than say, 50 people, willing to do this sort of thing?
>
> I think there wouldn't be a problem with the copyright for a non-profit
> break-even quantity of something they don't have any interest in
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>
> (Especially if we hit Kenwood up for permission, though it probably
> isn't needed. I'll ask my lawyer a question about that if this goes any
> further.)
>
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> an HP LJ4 printer, and a clothes iron).
>
> There are small-run jobbers that can do this sort of production run,
> lots of them are in folk's garages or a storage shed in the back yard.
> My little brother has a CNC laser etching business he runs in his
> garage. He can put a picture or words on about anything with that
> laser, so long as you supply a picture or the text.
>
> But those sorts of small shops are capable of small quantity runs (given
> the artwork) of very high quality circuit boards. Cost per board
> wouldn't be too great, though they wouldn't be exactly cheap either.
> Say, ballpark, ten to twenty dollars per, depending on size and
> complexity? That's a GUESS, please don't hold me to it.
>
> We could even include a few 'tweaks' just for fun, if you like....
>
> --
> Wes Will
> N9KDY
>
>
>
>

> [Non-text portions of this message have been removed]
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42381. Re: eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 21:45:08 UTC
From: Terry Wagoner
Topic: 42339 Message: 42381

To add to the good advise you have already received. The Eico 324 was available in kit form and factory assembled.

For any LC type signal generator of the Heath,Knight, Eico vintage I would suggest the following:
1. As already recommended the manual and schematic is a must.
2. Do a good visual inspection. Look for signs of leakage at the filter cap vents. Personally I would just recap it. Dont worry about original configuration. You are not restoring to original. Just need a functional generator. Look for wires not soldered or broken leads. Look for signs of overheated components.
3. Use contact cleaner and canned air on all the switches and pots.
4. Plug and unplug and re-seat the two tubes in their sockets to wipe the pins. I would buy NOS tubes and replace them.
5. This unit has a selenium rectifier in it. I would replace it with silicon rectifier. Cant just swap one for one, but if you decide can tell you how to figure series resistor.
6. Tighten all the terminal strip mounting hardware. Often the kit built units the builder failed to tighten the phenolic terminal strip hardware and you may have bad ground connections.
7. If it powers on take tube dc voltages and compare to schematic.
8. Best to look at output with Freq Counter to see if it is aligned and tracks reasonably well.

Did it come with original test lead? These can be in bad shape. I would change out to front panel connector to BNC type.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@...> wrote:
>
> The start by putting the scope on the HV power supply and looking at the ripple. There should not be very much if any.
>
> Go here and get the complete manual:
> http://bama.edebris.com/manuals/eico/324/
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
>
>
> ----- Original Message -----
> From: Jerry Barr
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, May 29, 2013 1:36 PM
> Subject: Re: [TS-520_820_530_830] eico324!!

>
>
>
> i do have the schematic/ and a tek 2236(100mhz) scope,fluke dvm and old simpson 260and a copy of the manual
>
> Jerry KJ6NTL
>
> From: Bob Macklin <macklinbob@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, May 29, 2013 1:07 PM
> Subject: Re: [TS-520_820_530_830] eico324!!
>
>
> Do you have the manual? What test equipment do you have?
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Jerry Barr
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Wednesday, May 29, 2013 12:55 PM
> Subject: Re: [TS-520_820_530_830] eico324!!
>
> well it puts out audio but no rf/and it does hav serius 60 cycles/ everything looks originalcaps coils etc/wud it be wise to re cap it?
>
> Jerry KJ6NTL
>
> From: Mike <mailto:w5rkl%40yahoo.com>
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Wednesday, May 29, 2013 11:01 AM
> Subject: Re: [TS-520_820_530_830] eico324!!
>
> Jerry,
>
> You have an RF generator from ebay but what else are you trying to say?
>
> 73
> Mike W5RKL
>
> On 5/29/2013 12:17 PM, Jerry Barr wrote:
> >
> >
> >
> > hi all got a rf gen yest e=bay,contacts black how to clean and
> > lube/any ideasand no rf but audio wrks
> > Jerry KJ6NTL

> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
> >
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42382. Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 21:48:07 UTC
From: Terry Wagoner
Topic: 42351 Message: 42382

Yes single sided in your TS-520. Now we do have boards with plated thru holes but that is another story. Some 820 owners can speak up here about what boards they would like to see. I dont believe FAR does any double sided boards?

Terry

--- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@...> wrote:
>
> Terry,
>
> Before I contact Far are these single sided PCBs? I am not opening my TS-520 until I have to?
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Terry Wagoner
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, May 29, 2013 2:03 PM
> Subject: Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)
>
>
>
> IF board is plugged and unplugged the most to change and sell filters. I see more jumpers and solder jobs that look like open flame and acid core solder on the IF boards. Some real abortions.
>
> RF bandswitch boards would sell to just about everyone I would think. The silver ink repair in my opinion is not as good as the small jumper wire repair. Having to do neither would be nice.
>
> If I could buy factory new RF boards and IF boards for my two TS-830s without mortgaging the house I would be first in line.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@> wrote:
> >
> > Ten or twenty bucks to save a radio from being scrap is really a small cost. Much less than buying a new radio.
> >
> > Newer radios have ICs that are not replaceable. That is another problem.
> >

> > But one thing to consider is the relays used in the hybrids. Would it be advisable to design the replacement PCBs to use modern (current production) relays?
> >
> > Should we feel that the people repairing these radio could assemble the replacement PCBs themselves. We could supply a Mouser or DigiKey parts list.
> >
> > Is there a particular problem board?
> >
> > Bob Macklin
> > K5MYJ
> > Seattle, Wa.
> > "Real Radios Glow In The Dark"
> >
> >
> > ----- Original Message -----
> > From: Wes Will
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Wednesday, May 29, 2013 11:46 AM
> > Subject: Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)
> >
> >
> >
> > > I was hoping someone would reproduce them to todays standards. Would be
> > > a task to populate them, but I would be interested in buying sets for my
> > > rigs. Doubt it will ever happen.
> >
> > Now -this- is something I might be able to get done. Which radio (in
> > your guesstimation) would be the one most likely to generate a quantity
> > greater than say, 50 people, willing to do this sort of thing?
> >
> > I think there wouldn't be a problem with the copyright for a non-profit
> > break-even quantity of something they don't have any interest in
> > supplying ever again.
> >
> > (Especially if we hit Kenwood up for permission, though it probably
> > isn't needed. I'll ask my lawyer a question about that if this goes any
> > further.)
> >
> > I know the artwork/layout can be recreated (I've done it with just GIMP,
> > an HP LJ4 printer, and a clothes iron).
> >
> > There are small-run jobbers that can do this sort of production run,
> > lots of them are in folk's garages or a storage shed in the back yard.
> > My little brother has a CNC laser etching business he runs in his
> > garage. He can put a picture or words on about anything with that
> > laser, so long as you supply a picture or the text.
> >
> > But those sorts of small shops are capable of small quantity runs (given
> > the artwork) of very high quality circuit boards. Cost per board
> > wouldn't be too great, though they wouldn't be exactly cheap either.

> > Say, ballpark, ten to twenty dollars per, depending on size and
> > complexity? That's a GUESS, please don't hold me to it.
> >
> > We could even include a few 'tweaks' just for fun, if you like....
> >
> > --
> > Wes Will
> > N9KDY
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
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>
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>
> [Non-text portions of this message have been removed]
>

42383. Re: [TS-520_820_530_830] eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 21:14:30 UTC
From: Wes Will
Topic: 42339 Message: 42383

On 05/29/2013 03:17 PM, Jerry Barr wrote:
> Sorry, but I was a little out of it when i wrote that. I'm a little sick today.
> I did use some De-Oxit spray contact cleaner while rotating switches etc.,
> but it didnt seem to help. And I do see some A/C on the audio out, and am getting
> some A/C between it and my scope ground. Any kind of lube to use, or no? Oh, and
> unplugged is good.

Just use more cleaning spray. Some light work with a medium-stiff brush to remove any caked-on dirt/dust. CAREFULLY. De-Oxit 5 (if I remember a-right) has a lubricant in it, so just use that. I DON'T RECOMMEND petroleum jelly, it tends to get into places it oughtn't.

Any of the control-linkage sprays or lubes for electronics will loosen the knobs, if the shafts aren't kinked or bent. No WD-40, either, by the way. Just haven't had any good luck with that stuff for anything electronic. Works fine of cabinet hinges, though...

If you can, search the internet (GOOGLE.COM or I use IXQUICK.COM) for

eico model 324 signal generator schematic manual

You should be able to turn up a PDF file manual somewhere. (I'm being lazy, didn't search it myself.) You can copy and paste that line above to the search engine page.

See what comes up, but DO NOT pay money for it on-line. Check here FIRST, most of those "We'll sell you a manual," places add "SUCKER!" when you hang up the phone.

This is BASIC cleaning of equipment. It more or less applies to ANYTHING, old, new, or in-between:

Check the circuit boards for obvious damage. Burned spots on the phenolic side, blackened components, burned or missing traces on the copper side, if there are circuit boards and it's not all point-to-point. (I don't remember if I've ever been under the hood of a 324, so I don't have any idea of the construction methods.) Cracked or lifted traces on circuit boards. Cold solder joints. Cracking insulation on point-to-point wiring. Loose or corroded connectors.

Also look for popped or bulging capacitors, leaking electrolytic compound, any sort of crystallized powdery residue particularly on or underneath capacitors, and particularly electrolytic capacitors.

Excess flux on solder joints, that will leave a whitish or resiny coating on things. Clean it off with flux remover (best) or isopropyl (rubbing) alcohol (cheapest) and dry THOROUGHLY.

Check coils for mashed, displaced, or broken windings. You have to lift one end of a coil (and a resistor, and a diode, and about anything else, if it's a 2-lead device) and check it for simple continuity. Won't tell you if it's still the right electrical size, but will tell you if the windings are broken.

Anyone else here still use a grid dipper?? Or am I REALLY a dinosaur??

If you take ANYTHING apart (even the CASE if it's a tricky disassembly) TAKE NOTES, or a digital snapshot of the thing as it comes apart (BOTH NOTES AND PIX), so you know how it goes back together.

Keep the screws in something that you're not going to tip over every time you reach for a tool and spread ballistically all over the room.

If possible, and if they won't be in the way of getting the next bit out, PUT THE SCREWS BACK IN THE HOLES THEY CAME OUT OF after the sub-assembly or component has been taken off the chassis or whatever. That way, you know for sure where the screw came from.

Replace and repair as you find problems. Once the obvious stuff is taken care of, then you dive into the schematic and start tracing signals and verifying biases, and making sure that power supplies are supplying power, and that kind of stuff.

The Mark I Eyeball is your best diagnostic tool when you begin with an old piece of gear.

Good Luck.

--
Wes Will
N9KDY

42384. Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 21:30:29 UTC
From: Wes Will
Topic: 42351 Message: 42384

> Before I would send any radio to anyone who advertises Hybrid repair I
> would want to see a list of their test gear and ask them a couple of
> questions like how they check the bandpass filter alignment, how they
> set the VBT oscillator, etc.

Preaching to the choir here, man. I wish everyone who was looking for paid repair work on the internet would apply due diligence and check out the bona fides of the results of their google searches. Just taking the first one that pops up in the list might not be a good enough way to get a top-notch job done on a treasured piece of gear.

The good ones will provide their set-up and a clear picture of their procedures without even asking. Check some of the ones referenced here by several people on this list in the past; hybridrestore and K4EAA's repair site mainly.

I have not personally used either, but have had a conversation via email about the 520SE I am trying to fix. CANNOT say definitively from personal experience if either are good or bad, but only because I have never used them.

(Going by a couple of brief emails, their web sites, and their on-line reputations, I'd trust either of these two to do anything at all with a hybrid. If I could afford to, one of those two would get this job. There are assuredly others, but these two sites pop up -constantly- with high recommendations.)

--
Wes Will
N9KDY

42385. Re: [TS-520_820_530_830] eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 22:09:01 UTC
From: Bob Macklin
Topic: 42339 Message: 42385

Jerry,

The manuals on BAMA are really USER manuals. No assembly information.

I have the assembly manual but I need your email address to send it to you.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Jerry Barr
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 29, 2013 1:36 PM
Subject: Re: [TS-520_820_530_830] eico324!!

i do have the schematic/ and a tek 2236(100mhz) scope,fluke dvm and old simpson 260and a copy of the manual

Jerry KJ6NTL

From: Bob Macklin <macklinbob@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 29, 2013 1:07 PM
Subject: Re: [TS-520_820_530_830] eico324!!

Do you have the manual? What test equipment do you have?

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Jerry Barr
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Wednesday, May 29, 2013 12:55 PM
Subject: Re: [TS-520_820_530_830] eico324!!

well it puts out audio but no rf/and it does hav serius 60 cycles/ everything looks originalcaps coils etc/wud it be wise to re cap it?

Jerry KJ6NTL

From: Mike <mailto:w5rkl%40yahoo.com>
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Wednesday, May 29, 2013 11:01 AM
Subject: Re: [TS-520_820_530_830] eico324!!

Jerry,

You have an RF generator from ebay but what else are you trying to say?

73
Mike W5RKL

On 5/29/2013 12:17 PM, Jerry Barr wrote:
>
>
>
> hi all got a rf gen yest e=bay,contacts black how to clean and
> lube/any ideasand no rf but audio wrks
> Jerry KJ6NTL
>
> ------------------------------------
>
> Yahoo! Groups Links
>
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42386. Re: [TS-520_820_530_830] Re: FLAMED

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 22:17:34 UTC
From: Robert Reyes
Topic: 42330 Message: 42386

Hello Terry,

I’m responding to you email for the first time since I didn’t reply to your original email for good reasons. I am a bit concern that you assume that my feelings were hurt. I’m sure when you sent you email you assume many things. First of all, I spend 20yrs in the U.S. Marine Corps proudly severing my Country.
I severed from 1972-1992 and fought in two wars dodging bullets and IEDs while having to witness the killing of Marines in my unit. I wonder your activity during that time that made you a big man as to call someone “little sissy”. I retired from the Marines and continued to work for the government in the Department of Treasury and recently took an early retirement. I’ve been married for 39yrs to the same woman and a father of 3 grown adults, with 5 grandchildren. The point is this you knew nothing about me and the sad thing is you ranted like a child, this is the reason I didn’t reply. My point is if a 19yrs old person ask this question and received your rant it may have discouraged them. Maybe you need to change your mind set it doesn't matter what other group do, it's what we do in this group that counts. If you feel like ranting don’t answer the email the earth will continue to turn and maybe they’ll ready their manual. Remember that
Ham Radio is not just about tubes it also about people. I hope this helps you and thanks again for all the good Info you give. I hope this answered your question about my feeling.

Note: I did read the manual and knew what the plate current was for the
TS-530, but wanted to know if 265mA was the setting used by current owners. Terry you know from your own experience and others in the group that sometimes what the manual states and what people actually experience with their rigs can be different. Terry I’m very sorry I didn’t word the question to your liking. I’ll do better next time.

73
Rob
KD6FSK

--- On Wed, 5/29/13, Terry Wagoner <wagstw46@...> wrote:

From: Terry Wagoner <wagstw46@...>
Subject: [TS-520_820_530_830] Re: FLAMED
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, May 29, 2013, 11:33 AM

If you consider this getting "flamed" you are going to get your feelings hurt daily in this old life.

This is a technical hobby that use to have high entry level requirements. If you dont have the bug and a passion for learning you are in wrong hobby and certainly have purchased the wrong radio. Yahoo forums by design provide a place for people with parochial interest.

If the charter of this forum is to serve as a "Help Desk" for the general public or appliance operators who are staring at a electronic black box trying to figure out how to turn it on with the manual on the floor then I dont care to be a member of that club.

If you cant open your TS-530 instruction manual and read the transmitter section on how to tune and load it including the maximum full load current you should sell your hybrid. If you read the instructions and have some questions about what you read that is an entirely different matter and what this forum is for.

My idea of this forum is the members share a common bond. A love of Kenwood Hybrids and desire to keep them on the air. They are above average intelligence and they come here because they want to learn how to operate the rig properly, how to maintain it, how to troubleshoot and repair it, and most importantly learn how it works. You wont accomplish any of that without some effort.

To accomplish that requires something between the ears and a willingness to do a little work. There can be no real learning if the student has no aptitude, no interest, and no work ethic.

If that is not what this forum is about then I am sorry. My mistake.
I am not interested in sitting on a "Help Desk" for the general public or appliance operators who just want an answer.

Strongly suggest you sell your Kenwood hybrid and buy a no tune solid state rig and have fun with it. That way not much chance of getting your feelings hurt by a teacher who has some expectations for you. If it breaks throw it away and get a new one.

Man it is sad what has happened to this hobby. I would love it if I could find just one young person to mentor who was a voracious reader, had a questioning attitude, had a gleam in his eye and fire in the belly, and would not go crying down the hall like a little sissy when he was pressed to do a little work. I guess that was a very different time.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "rkings1956" <rkings1956@...> wrote:
>
>
> This is a reminder for people who say that no one gets FLAMED in this group for asking a question. This is the response I received this April when I asked a question about the plate current on the TS-530s.
>
> Rob
> KD6FSK
>
>
> Plate CURRENT IS NOT THE SAME and IT IS NOT 225 ma FOR A TS-520.
>
> For GOSH SAKES we are ham operators. This is a technical hobby. Read your owners operator manuals and if still uncertain then come here and ask. It is all there in front of you. Your manuals should be dog eared.
>
> TS-520, TS,520S, TS-520SE and TS-820 Transmitters are all rated at 160 Watts DC Input Power. You load these to.... "ABOUT 200 ma"
>
> TS-530 and TS-830 Transmitters are rated at 180 Watts DC Input Power. You load these to.... " Reduce the Carrier Control setting if Ip is over 265 ma"
>

> 1. Where did 225 ma come from? Ken Kempski K4EAA in his FAQ section suggests that 800v X 225 ma = 180 watt dc input power and it is pointless to exceed this level as it wont make perceptable difference on the receive end of a transmission and loading to this level (assuming proper loading technique) can extend final tube life. Without saying it Ken was obviously speaking about TS-530 and TS-830 rigs as they are the only two models with 180 watts dc input ratings. He would not recommend loading to 180 watts dc input power on a radio designed for 160 watts dc input power.
>
> 2. Why are the early rigs rated at 160 watts dc input and later rigs at 180 watts dc input? I Do Not Know With 100% Certainty. What I Believe is that it is due to the switch from S2001A finals to 6146B finals. I Believe 6146B tubes have higher Plate dissipation ratings. I have never seen a S2001A Data Sheet and do not know there plate dissipation or any of there ICAS max ratings. If anyone has one please send to Gordon N6WK so he can post on his site.
>
> 3. Is there any difference in the HV power supply capacities? No apparent or published differences that I have seen. Maybe we can ask Bob Mansker to hack transformers out of these rigs and weigh them to see if difference in copper and iron? Transformer weight roughly corresponds to KVA capacity.
>
> 4. Sorry about my frustration. This is suppose to be a thinking mans hobby. You have to be able to read and read with comprehension. Lacking this ability you are in trouble. Very easy to just ask and expect an instant answer with out doing any modest amount of homework. Maybe it is a age and cultural thing? I prefer to help those who are willing to help themselves.
>
> 5. Lets stop putting wrong information out on this forum. Easy to just "Parrot" what you have heard. This is how tribal myths perpetuate. If you are going to respond do so as an "expert" or do so by qualifying your response. I will try to remember to preface my remarks by telling you what I "know" first and then what I "believe". Can be a big difference between those.
>
> One of the worst things you can do is tell people what you know to be fact only to find out later you were wrong. Pity the poor Flat Earth folks!
>
> Terry K9TW
>

Yahoo! Groups Links

[Non-text portions of this message have been removed]

42387. Re: Heathkit rides again?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 22:23:10 UTC
From: k5hfg
Topic: 42330 Message: 42387

Thanks for the update Ron. I am excited about it. Hope it doesn't fizzle again.

--- In TS-520_820_530_830@yahoogroups.com, Ron _ <rc303@...> wrote:
>
>
>
>
>
>
>
>
> Just saw this link for what looks like preliminary preparation for a launch of a 'new' Heathkit. You may want to check it out. Good luck to them.
>
> http://www.heathkit.com/survey/index.php/278489?lang=en
>
>
>
> [Non-text portions of this message have been removed]
>

42388. Re: [TS-520_820_530_830] Re: FLAMED

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 22:23:41 UTC
From: Robert Reyes
Topic: 42330 Message: 42388

Hello Terry,

I’m responding to you email for the first time since I didn’t reply to your original email for good reasons. I am a bit concern that you assume that my feelings were hurt. I’m sure when you sent you email you assume many things. First of all, I spend 20yrs in the U.S. Marine Corps proudly severing my Country.
I severed from 1972-1992 and fought in two wars dodging bullets and IEDs while having to witness the killing of Marines in my unit. I wonder your activity during that time that made you a big man as to call someone “little sissy”. I retired from the Marines and continued to work for the government in the Department of Treasury and recently took an early retirement. I’ve been married for 39yrs to the same woman and a father of 3 grown adults, with 5 grandchildren. The point is this you knew nothing about me and the sad thing is you ranted like a child, this is the reason I didn’t reply. My point is if a 19yrs old person ask this question and received your rant it may have discouraged them. Maybe you need to change your mind set. If you feel like ranting don’t answer the email the earth will continue to turn and maybe they’ll ready their manual. Remember that Ham Radio is not just about tubes it also about people. I hope this helps you
and thanks again for all the good Info you give. I hope this answered your question about my feeling.

73
Rob
KD6FSK

--- On Wed, 5/29/13, Terry Wagoner <wagstw46@yahoo.com> wrote:

From: Terry Wagoner <wagstw46@...>
Subject: [TS-520_820_530_830] Re: FLAMED
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, May 29, 2013, 11:33 AM

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If you cant open your TS-530 instruction manual and read the transmitter section on how to tune and load it including the maximum full load current you should sell your hybrid. If you read the instructions and have some questions about what you read that is an entirely different matter and what this forum is for.

My idea of this forum is the members share a common bond. A love of Kenwood Hybrids and desire to keep them on the air. They are above average intelligence and they come here because they want to learn how to operate the rig properly, how to maintain it, how to troubleshoot and repair it, and most importantly learn how it works. You wont accomplish any of that without some effort.

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I am not interested in sitting on a "Help Desk" for the general public or appliance operators who just want an answer.

Strongly suggest you sell your Kenwood hybrid and buy a no tune solid state rig and have fun with it. That way not much chance of getting your feelings hurt by a teacher who has some expectations for you. If it breaks throw it away and get a new one.

Man it is sad what has happened to this hobby. I would love it if I could find just one young person to mentor who was a voracious reader, had a questioning attitude, had a gleam in his eye and fire in the belly, and would not go crying down the hall like a little sissy when he was pressed to do a little work. I guess that was a very different time.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "rkings1956" <rkings1956@...> wrote:
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> This is a reminder for people who say that no one gets FLAMED in this group for asking a question. This is the response I received this April when I asked a question about the plate current on the TS-530s.
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> Rob
> KD6FSK
>
>
> Plate CURRENT IS NOT THE SAME and IT IS NOT 225 ma FOR A TS-520.
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> For GOSH SAKES we are ham operators. This is a technical hobby. Read your owners operator manuals and if still uncertain then come here and ask. It is all there in front of you. Your manuals should be dog eared.
>
> TS-520, TS,520S, TS-520SE and TS-820 Transmitters are all rated at 160 Watts DC Input Power. You load these to.... "ABOUT 200 ma"
>
> TS-530 and TS-830 Transmitters are rated at 180 Watts DC Input Power. You load these to.... " Reduce the Carrier Control setting if Ip is over 265 ma"
>
> 1. Where did 225 ma come from? Ken Kempski K4EAA in his FAQ section suggests that 800v X 225 ma = 180 watt dc input power and it is pointless to exceed this level as it wont make perceptable difference on the receive end of a transmission and loading to this level (assuming proper loading technique) can extend final tube life. Without saying it Ken was obviously speaking about TS-530 and TS-830 rigs as they are the only two models with 180

watts dc input ratings. He would not recommend loading to 180 watts dc input power on a radio designed for 160 watts dc input power.
>
> 2. Why are the early rigs rated at 160 watts dc input and later rigs at 180 watts dc input? I Do Not Know With 100% Certainty. What I Believe is that it is due to the switch from S2001A finals to 6146B finals. I Believe 6146B tubes have higher Plate dissipation ratings. I have never seen a S2001A Data Sheet and do not know there plate dissipation or any of there ICAS max ratings. If anyone has one please send to Gordon N6WK so he can post on his site.
>
> 3. Is there any difference in the HV power supply capacities? No apparent or published differences that I have seen. Maybe we can ask Bob Mansker to hack transformers out of these rigs and weigh them to see if difference in copper and iron? Transformer weight roughly corresponds to KVA capacity.
>
> 4. Sorry about my frustration. This is suppose to be a thinking mans hobby. You have to be able to read and read with comprehension. Lacking this ability you are in trouble. Very easy to just ask and expect an instant answer with out doing any modest amount of homework. Maybe it is a age and cultural thing? I prefer to help those who are willing to help themselves.
>
> 5. Lets stop putting wrong information out on this forum. Easy to just "Parrot" what you have heard. This is how tribal myths perpetuate. If you are going to respond do so as an "expert" or do so by qualifying your response. I will try to remember to preface my remarks by telling you what I "know" first and then what I "believe". Can be a big difference between those.
>
> One of the worst things you can do is tell people what you know to be fact only to find out later you were wrong. Pity the poor Flat Earth folks!
>
> Terry K9TW
>

Yahoo! Groups Links

[Non-text portions of this message have been removed]

42389. Re: [TS-520_820_530_830] Re: FLAMED

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 22:33:03 UTC
From: JIM LYNCH
Topic: 42330 Message: 42389

Dress Blues and Tennis Shoes and a Light Coat of Oil. Semper Fi and Amen Robert

---
From: Robert Reyes <rkings1956@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 29, 2013 2:23 PM
Subject: Re: [TS-520_820_530_830] Re: FLAMED

Hello Terry,

I’m responding to you email for the first time since I didn’t reply to your original email for good reasons. I am a bit concern that you assume that my feelings were hurt. I’m sure when you sent you email you assume many things. First of all, I spend 20yrs in the U.S. Marine Corps proudly severing my Country.
I severed from 1972-1992 and fought in two wars dodging bullets and IEDs while having to witness the killing of Marines in my unit. I wonder your activity during that time that made you a big man as to call someone “little sissy”. I retired from the Marines and continued to work for the government in the Department of Treasury and recently took an early retirement. I’ve been married for 39yrs to the same woman and a father of 3 grown adults, with 5 grandchildren. The point is this you knew nothing about me and the sad thing is you ranted like a child, this is the reason I didn’t reply. My point is if a 19yrs old person ask this question and received your rant it may have discouraged them. Maybe you need to change your mind set. If you feel like ranting don’t answer the email the earth will continue to turn and maybe they’ll ready their manual. Remember that Ham Radio is not just about tubes it also about people. I hope this helps you
and thanks again for all the good Info you give. I hope this answered your question about my feeling.

73
Rob
KD6FSK

--- On Wed, 5/29/13, Terry Wagoner <wagstw46@...> wrote:

From: Terry Wagoner <wagstw46@...>
Subject: [TS-520_820_530_830] Re: FLAMED
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, May 29, 2013, 11:33 AM

If you consider this getting "flamed" you are going to get your feelings hurt daily in this old life.

This is a technical hobby that use to have high entry level requirements. If you dont have the bug and a passion for learning you are in wrong hobby and certainly have purchased the wrong radio. Yahoo forums by design provide a place for people with parochial interest.

If the charter of this forum is to serve as a "Help Desk" for the general public or appliance operators who are staring at a electronic black box trying to figure out how to turn it on with the manual on the floor then I dont care to be a member of that club.

If you cant open your TS-530 instruction manual and read the transmitter section on how to tune and load it including the maximum full load current you should sell your hybrid. If you read the instructions and have some questions about what you read that is an entirely different matter and what this forum is for.

My idea of this forum is the members share a common bond. A love of Kenwood Hybrids and desire to keep them on the air. They are above average intelligence and they come here because they want to learn how to operate the rig properly, how to maintain it, how to troubleshoot and repair it, and most importantly learn how it works. You wont accomplish any of that without some effort.

To accomplish that requires something between the ears and a willingness to do a little work. There can be no real learning if the student has no aptitude, no interest, and no work ethic.

If that is not what this forum is about then I am sorry. My mistake.
I am not interested in sitting on a "Help Desk" for the general public or appliance operators who just want an answer.

Strongly suggest you sell your Kenwood hybrid and buy a no tune solid state rig and have fun with it. That way not much chance of getting your feelings hurt by a teacher who has some expectations for you. If it breaks throw it away and get a new one.

Man it is sad what has happened to this hobby. I would love it if I could find just one young person to mentor who was a voracious reader, had a questioning attitude, had a gleam in his eye and fire in the belly, and would not go crying down the hall like a little sissy when he was pressed to do a little work. I guess that was a very different time.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "rkings1956" <rkings1956@...> wrote:
>
>
> This is a reminder for people who say that no one gets FLAMED in this group for asking a question. This is the response I received this April when I asked a question about the plate current on the TS-530s.
>
> Rob
> KD6FSK
>
>
> Plate CURRENT IS NOT THE SAME and IT IS NOT 225 ma FOR A TS-520.
>
> For GOSH SAKES we are ham operators. This is a technical hobby. Read your owners operator manuals and if still uncertain then come here and ask. It is all there in front of you. Your manuals should be dog eared.
>
> TS-520, TS,520S, TS-520SE and TS-820 Transmitters are all rated at 160 Watts DC Input Power. You load these to.... "ABOUT 200 ma"

>
> TS-530 and TS-830 Transmitters are rated at 180 Watts DC Input Power. You load these to.... " Reduce the Carrier Control setting if Ip is over 265 ma"
>
> 1. Where did 225 ma come from? Ken Kempski K4EAA in his FAQ section suggests that 800v X 225 ma = 180 watt dc input power and it is pointless to exceed this level as it wont make perceptable difference on the receive end of a transmission and loading to this level (assuming proper loading technique) can extend final tube life. Without saying it Ken was obviously speaking about TS-530 and TS-830 rigs as they are the only two models with 180 watts dc input ratings. He would not recommend loading to 180 watts dc input power on a radio designed for 160 watts dc input power.
>
> 2. Why are the early rigs rated at 160 watts dc input and later rigs at 180 watts dc input? I Do Not Know With 100% Certainty. What I Believe is that it is due to the switch from S2001A finals to 6146B finals. I Believe 6146B tubes have higher Plate dissipation ratings. I have never seen a S2001A Data Sheet and do not know there plate dissipation or any of there ICAS max ratings. If anyone has one please send to Gordon N6WK so he can post on his site.
>
> 3. Is there any difference in the HV power supply capacities? No apparent or published differences that I have seen. Maybe we can ask Bob Mansker to hack transformers out of these rigs and weigh them to see if difference in copper and iron? Transformer weight roughly corresponds to KVA capacity.
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> 4. Sorry about my frustration. This is suppose to be a thinking mans hobby. You have to be able to read and read with comprehension. Lacking this ability you are in trouble. Very easy to just ask and expect an instant answer with out doing any modest amount of homework. Maybe it is a age and cultural thing? I prefer to help those who are willing to help themselves.
>
> 5. Lets stop putting wrong information out on this forum. Easy to just "Parrot" what you have heard. This is how tribal myths perpetuate. If you are going to respond do so as an "expert" or do so by qualifying your response. I will try to remember to preface my remarks by telling you what I "know" first and then what I "believe". Can be a big difference between those.
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>
> Terry K9TW
>

Yahoo! Groups Links

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Yahoo! Groups Links

[Non-text portions of this message have been removed]

42390. Re: VTVM vs DMM

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 22:43:52 UTC
From: Terry Wagoner
Topic: 42351 Message: 42390

You do not have to worry about any "reactive component" at input of your Fluke.

People have already pretty much described why you want analog VTVM for tuning, peaking, nulling. If you ever want to do any FM discriminator work you would appreciate the large zero center analog meter. Cant use a DMM to check inter-stage capacitor leakage. The DMM will miss the charge kick. Also the analog VTVM can be placed across 8 ohm dummy load at speaker and measure the audio frequency voltage (a service manual test)as they have AF ac ranges of approx 15khz to 20khz. Most DMMs fall off at 1 khz ac voltage max.

Lastly, the ability to look up from the rig with your hands in it and at a glance see what you have is better than watching and waiting on your DMM. Experienced bench tech appreciates this ability. Part of the reason digital watches never really took off and replaced analog.

Wait a minute I have a bar graph on mine to see nulls and peaks. Yes but still not same as analog meter movement. Analog is continuous and your bar graph is being updated at 20 to 40 times per second if you have a good DMM.

In addition to being better for peaking Het Osc, carrier suppression, and neutralizing the high input impedance of the VTVM is a must for AGC and ALC bus work and Oscillator work as the others have pointed out.

Problem is that not all DMMs are true 10 meg ohm and/or not on all ranges. Many cheaper DMMs are designed for home and auto use and for electricians and not for radio electronics.

An electrician does not want a high Z meter. He is usually more interested in detecting the presence of voltage and proving it is not there before he installs safety grounds or bare hand touches. If he uses a high-Z DMM to check voltage in a distribution panel where feed breaker has been opened he may still read voltage. This voltage is ghost or phantom voltage due to the cables running in close proximity in the duct or raceway. The long runs results in inductive and capacitive coupling from an energized conductor to the de-energized one. He cannot ignore this voltage. To do so can result in a flash or electrocution. So he wants a DMM designed for an electrician. When it reads voltage that voltage is really there. When there is this phantom voltage present the low-Z input of the DMM will pull down this voltage and not display it and present this problem for him. Many DMMs that you see at Lowes or Home Depot are designed for electricians and not radio electronics.

Fluke among others make DMMs with certain ranges that are low Z by design just for industrial electricians.

Lesson is you need to read the specs on any DMM you intend to purchase. Some of the worst ones I have measured are the Harbor Freight $9.95 meters and some of the Sears meters. The Harbor Freights measure around 900k ohm input making them not useable for our Kenwood work beyond power supply measurements. As previously noted we cannot use a low Z DMM. It will pull or shut down our oscillators and will peg the S-meter and shut down the receiver AGC control bus and pull down the ALC bus to no indication.

If you already have a DMM you can test it by:
1. RF gain full CW
2. Rig on dummy load
3. AF gain at comfortable listening level
4. Locate your AGC bus connection at the IF board or RF board molex connectors. Connect your DMM and try to measure this voltage (voltage should be same as you have set your RF-1 at AVR board typically around 3.3 to 3.6vdc).
5. Anything less than 10 meg input will drive the S-meter up scale and drive the receiver gain down. Even with a 10 meg meter you will not be able to accurately measure the AGC bus voltage. The Harbor Freight special I mentioned will peg the S-meter and shut down your receiver.

Summary:
1. If have no meter buy a 11 meg analog VTVM and single diode and 3 diode rf probe. With this meter and probes you can make every AC, DC and RF voltage reading in the radio including all required and listed in the service manual.

2. A 10 meg FET based analog meter may be ok as long as the input Z is not range dependent. Some will be OK and others can go as low as 2 megs on some ranges.

3. There is a place for a DMM on Hybrid bench as Mike and others note. Great for power supply measurements, transistor CBE, FET DSG, and resistance readings.

4. If you are going to buy a DMM go on line and read specs. Pay attention to the input Z on all ranges and also look at current reading burden. Not a function you will use a lot, but some have horrible burden and cannot accurately read DC ma levels. Can need this for power supply troubleshooting.

5. Buy as much speed and resolution as you can afford in your DMM. Dont confuse resolution with accuracy. I have a 40,000 count true RMS and it is sure nice to be able to hand pick resistors like a 2.7k resistor at 2699.85 ohms. A must for picking meter multipliers.

Lastly, if after you do the AGC bus test with your DMM and are interested in measuring the input Z of your DMM contact me off list and I can describe a simple procedure. For a very quick you test can tell if your meter is too low by doing this:

1. With your DMM measure any hybrid voltage you are interested in and write the reading down.
2. Insert a 100k resistor in series with your plus probe tip and re-measure.
3. If the two readings are significantly different your meter is not adequate for the circuit you are working on.
4. In a pinch you can insert a 1 meg resistor in series and take your readings. Readings will be approx 10% low, but the meter will now not pull down the circuit as much.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Louis Wilen" <louis.wilen@...> wrote:
>
> Thanks for all the replies.
>
> I never considered that a DMM might have enough reactance to affect readings. My DMM (Fluke 179) is a â□□true RMSâ□□ meter, so I would expect that it has some circuitry that removes the reactive component from measurements â□" but Iâ□□m not certain. Maybe others can comment on this.

>
> Louis
> W3LMW
>
>
>
> From: Wes Will
> Sent: Wednesday, May 29, 2013 2:33 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] VTVM vs DMM
>
>
> On 05/29/2013 01:28 PM, Bob Macklin wrote:
> > Yes a REAL VTVM does at least one thing better than a DMM.
> >
> > When you are trying to find a peak or trying to peak a circuit an analog
> > meter is better because it is easier to see the peak on the moving needle.
> >
> > In most cases on these radios the accuracy of a DMM is not needed and a
> > VOM or VTVM are satisfactory..
>
> What he said plus one other thing. A good VTVM generally will have a
> lesser loading effect on the circuit under test.
>
> This is a function of input REACTANCE (not just input resistance), I am
> pretty sure.
>
> If you check the same RF circuit with a VTVM and a DMM the VTVM will
> measure a higher voltage in every case I've done this comparison. Less
> load on the circuit equals greater -accuracy-.
>
> Knowing the difference between "precision" and "accuracy" is key.
>
> --
> Wes Will
> N9KDY
>
>
>
>
> [Non-text portions of this message have been removed]
>

42391. Re: Moving Forward (Was FLAMED)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 23:14:40 UTC
From: larry shorthill
Topic: 42351 Message: 42391

As far as I know, FAR does not do 2 sided boards or plated through holes. I don't recall that any of the boards in the 830 are 2 sided. Plated through holes with pads on top are almost a requirement for rugged construction and longevity. The reason the boards fail at the connector pins is because the traces underneath crack and cause opens. Plated through holes would have stopped this a long time ago.

There are much better board houses that do short runs for very reasonable costs--PCB Express is one and there are many others who can do this for a reasonable cost if the volumes are reasonable.

73
Larry KS7J

[Non-text portions of this message have been removed]

42392. Re: FLAMED

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-29 23:39:18 UTC
From: Terry Wagoner
Topic: 42330 Message: 42392

I truly respect your service to this country and I am grateful to you for it as I am not ashamed to be a patriot which is out of favor in the new America.

However that has nothing to do with your posting of my response to your question as an example of a "FLAME" or "RANT". Just couple of questions:

1. Did you read my response?
2. Did you comprehend my response?
3. Did you understand it was directed also to the person who was bum doping you?
4. Are you telling me you would rather be patted on the head and given bum dope than to be challenged to ask the question properly and at the same time given the correct information and the basis for the answer?

Had you couched it as "I have read my TS-530 owners manual and it says to not let plate Ip exceed 265ma yet I hear on this forum and others not to exceed either 200ma or 225ma. Which is correct Ip level and why?"

A much different question than you posed. Tells us you are a thinking person. You would have gotten your answer without being asked if you had the manual and if you had made any effort and the other person would have still been admonished to not bum dope people with parroted responses.

Gordon has asked us to drop this. I will not respond to anymore of this. If you cant understand your ownership I am wasting my time and the forums time.

Terry K9TW

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42393. Re: [TS-520_820_530_830] Re: FLAMED

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-30 00:29:32 UTC
From: Robert Reyes
Topic: 42330 Message: 42393

I also will respect Gordon’s request and drop the subject. You can’t understand your behavior so I too will not waste my anymore time.

73
Rob
KD6FSK

--- On Wed, 5/29/13, Terry Wagoner <wagstw46@yahoo.com> wrote:

From: Terry Wagoner <wagstw46@...>
Subject: [TS-520_820_530_830] Re: FLAMED
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, May 29, 2013, 11:39 PM

I truly respect your service to this country and I am grateful to you for it as I am not ashamed to be a patriot which is out of favor in the new America.

However that has nothing to do with your posting of my response to your question as an example of a "FLAME" or "RANT". Just couple of questions:

1. Did you read my response?
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Yahoo! Groups Links

[Non-text portions of this message have been removed]

42394. Re: [TS-520_820_530_830] Re: VTVM vs DMM

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-30 00:56:05 UTC
From: Louis Wilen
Topic: 42351 Message: 42394

Thanks for the detailed answer, Terry.

The input impedance for my meter is > 10 MΩ < 100 pF (see http://assets.fluke.com/datasheets/2155a.pdf), so it should be fine for measuring most of the stable things that I deal with.

For capacitor testing, I have a capacitance meter and a “Blue ESR meter”. My Fluke 179 also has a capacitor test function, but my dedicated capacitance meter has a wider range that the Fluke, so it was worth the cost (to me).

But I understand your points about the advantages of using an analog meter to see nulls and peaks. Thanks for all this info.

Louis
W3LMW

From: Terry Wagoner
Sent: Wednesday, May 29, 2013 6:43 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: VTVM vs DMM

You do not have to worry about any "reactive component" at input of your Fluke.

People have already pretty much described why you want analog VTVM for tuning, peaking, nulling. If you ever want to do any FM discriminator work you would appreciate the large zero center analog meter. Cant use a DMM to check inter-stage capacitor leakage. The DMM will miss the charge kick. Also the analog VTVM can be placed across 8 ohm dummy load at speaker and measure the audio frequency voltage (a service manual test)as they have AF ac ranges of approx 15khz to 20khz. Most DMMs fall off at 1 khz ac voltage max.

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breaker has been opened he may still read voltage. This voltage is ghost or phantom voltage due to the cables running in close proximity in the duct or raceway. The long runs results in inductive and capacitive coupling from an energized conductor to the de-energized one. He cannot ignore this voltage. To do so can result in a flash or electrocution. So he wants a DMM designed for an electrician. When it reads voltage that voltage is really there. When there is this phantom voltage present the low-Z input of the DMM will pull down this voltage and not display it and present this problem for him. Many DMMs that you see at Lowes or Home Depot are designed for electricians and not radio electronics.

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Lesson is you need to read the specs on any DMM you intend to purchase. Some of the worst ones I have measured are the Harbor Freight $9.95 meters and some of the Sears meters. The Harbor Freights measure around 900k ohm input making them not useable for our Kenwood work beyond power supply measurements. As previously noted we cannot use a low Z DMM. It will pull or shut down our oscillators and will peg the S-meter and shut down the receiver AGC control bus and pull down the ALC bus to no indication.

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quick you test can tell if your meter is too low by doing this:

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2. Insert a 100k resistor in series with your plus probe tip and re-measure.
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Terry K9TW

--- In mailto:TS-520_820_530_830%40yahoogroups.com, "Louis Wilen" <louis.wilen@...> wrote:
>
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>
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>
> Louis
> W3LMW
>
>
>
> From: Wes Will
> Sent: Wednesday, May 29, 2013 2:33 PM
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Subject: [TS-520_820_530_830] VTVM vs DMM
>
>
> On 05/29/2013 01:28 PM, Bob Macklin wrote:
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> pretty sure.
>
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> load on the circuit equals greater -accuracy-.
>
> Knowing the difference between "precision" and "accuracy" is key.

>
> --
> Wes Will
> N9KDY
>
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> [Non-text portions of this message have been removed]
>

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.3343 / Virus Database: 3184/6368 - Release Date: 05/29/13

[Non-text portions of this message have been removed]

42395. Re: [TS-520_820_530_830] eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-30 00:44:01 UTC
From: Jerry Barr
Topic: 42339 Message: 42395

hi Bob/ my e-mail is KJ6NTL@.../ do wanna get it going so i can work on the ts520se it does work but wwv doesnt/ where abouts u live in seattle/ lived in sultan for a while/ good salmon fishing in the snohomish and steelhead

Jerry KJ6NTL

From: Bob Macklin <macklinbob@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 29, 2013 3:09 PM
Subject: Re: [TS-520_820_530_830] eico324!!

Jerry,

The manuals on BAMA are really USER manuals. No assembly information.

I have the assembly manual but I need your email address to send it to you.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Jerry Barr
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Wednesday, May 29, 2013 1:36 PM
Subject: Re: [TS-520_820_530_830] eico324!!

i do have the schematic/ and a tek 2236(100mhz) scope,fluke dvm and old simpson 260and a copy of the manual

Jerry KJ6NTL

From: Bob Macklin <mailto:macklinbob%40gmail.com>
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Wednesday, May 29, 2013 1:07 PM
Subject: Re: [TS-520_820_530_830] eico324!!

Do you have the manual? What test equipment do you have?

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Jerry Barr
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Wednesday, May 29, 2013 12:55 PM
Subject: Re: [TS-520_820_530_830] eico324!!

well it puts out audio but no rf/and it does hav serius 60 cycles/ everything looks originalcaps coils etc/wud it be wise to re cap it?

Jerry KJ6NTL

From: Mike <mailto:w5rkl%40yahoo.com>
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Wednesday, May 29, 2013 11:01 AM
Subject: Re: [TS-520_820_530_830] eico324!!

Jerry,

You have an RF generator from ebay but what else are you trying to say?

73
Mike W5RKL

On 5/29/2013 12:17 PM, Jerry Barr wrote:
>
>
>
> hi all got a rf gen yest e=bay,contacts black how to clean and
> lube/any ideasand no rf but audio wrks
> Jerry KJ6NTL
>
> ------------------------------------
>
> Yahoo! Groups Links
>
> [Non-text portions of this message have been removed]
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42396. Re: VTVM vs DMM

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-30 01:27:25 UTC
From: Terry Wagoner
Topic: 42351 Message: 42396

Well best test for your Fluke is to try to measure your hybrid AGC bus voltage. That will tell you all you need to know.

Yes I use my LCR bridge to measure capacitance even though my DMM has the feature as you say it is not as accurate. I also have the Antek Blue ESR meter and find it not to be very useful on hybrids due to the way the capacitors are mounted flush on the boards. In most cases not possible to get on the leads to test them in circuit. If I have to remover board to access the cap then most likely will replace it. Also takes some experience to interpret the results and even with some rules of thumb I have developed I find it is best to have a new cap to compare with. I try to look at data sheets, but cant always find them and they dont always list the ESR. I think the ESR meter would be more useful in older boat anchor gear that has point to point wiring and caps mounted on terminal strips.

Take Care
Terry

--- In TS-520_820_530_830@yahoogroups.com, "Louis Wilen" <louis.wilen@...> wrote:
>
> Thanks for the detailed answer, Terry.
>
> The input impedance for my meter is > 10 MÎ© < 100 pF (see http://assets.fluke.com/datasheets/2155a.pdf), so it should be fine for measuring most of the stable things that I deal with.
>
> For capacitor testing, I have a capacitance meter and a â□□Blue ESR meterâ□□. My Fluke 179 also has a capacitor test function, but my dedicated capacitance meter has a wider range that the Fluke, so it was worth the cost (to me).
>
> But I understand your points about the advantages of using an analog meter to see nulls and peaks. Thanks for all this info.
>
> Louis
> W3LMW
>
>
>
> From: Terry Wagoner
> Sent: Wednesday, May 29, 2013 6:43 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: VTVM vs DMM
>
>
> You do not have to worry about any "reactive component" at input of your Fluke.
>
> People have already pretty much described why you want analog VTVM for tuning, peaking, nulling. If you ever want to do any FM discriminator work you would appreciate the large zero center analog meter. Cant use a DMM to check

inter-stage capacitor leakage. The DMM will miss the charge kick. Also the analog VTVM can be placed across 8 ohm dummy load at speaker and measure the audio frequency voltage (a service manual test)as they have AF ac ranges of approx 15khz to 20khz. Most DMMs fall off at 1 khz ac voltage max.
>
> Lastly, the ability to look up from the rig with your hands in it and at a glance see what you have is better than watching and waiting on your DMM. Experienced bench tech appreciates this ability. Part of the reason digital watches never really took off and replaced analog.
>
> Wait a minute I have a bar graph on mine to see nulls and peaks. Yes but still not same as analog meter movement. Analog is continuous and your bar graph is being updated at 20 to 40 times per second if you have a good DMM.
>
> In addition to being better for peaking Het Osc, carrier suppression, and neutralizing the high input impedance of the VTVM is a must for AGC and ALC bus work and Oscillator work as the others have pointed out.
>
> Problem is that not all DMMs are true 10 meg ohm and/or not on all ranges. Many cheaper DMMs are designed for home and auto use and for electricians and not for radio electronics.
>
> An electrician does not want a high Z meter. He is usually more interested in detecting the presence of voltage and proving it is not there before he installs safety grounds or bare hand touches. If he uses a high-Z DMM to check voltage in a distribution panel where feed breaker has been opened he may still read voltage. This voltage is ghost or phantom voltage due to the cables running in close proximity in the duct or raceway. The long runs results in inductive and capacitive coupling from an energized conductor to the de-energized one. He cannot ignore this voltage. To do so can result in a flash or electrocution. So he wants a DMM designed for an electrician. When it reads voltage that voltage is really there. When there is this phantom voltage present the low-Z input of the DMM will pull down this voltage and not display it and present this problem for him. Many DMMs that you see at Lowes or Home Depot are designed for electricians and not radio electronics.
>
> Fluke among others make DMMs with certain ranges that are low Z by design just for industrial electricians.
>
> Lesson is you need to read the specs on any DMM you intend to purchase. Some of the worst ones I have measured are the Harbor Freight $9.95 meters and some of the Sears meters. The Harbor Freights measure around 900k ohm input making them not useable for our Kenwood work beyond power supply measurements. As previously noted we cannot use a low Z DMM. It will pull or shut down our oscillators and will peg the S-meter and shut down the receiver AGC control bus and pull down the ALC bus to no indication.
>
> If you already have a DMM you can test it by:
> 1. RF gain full CW
> 2. Rig on dummy load
> 3. AF gain at comfortable listening level
> 4. Locate your AGC bus connection at the IF board or RF board molex connectors. Connect your DMM and try to measure this voltage (voltage should be same as you have set your RF-1 at AVR board typically around 3.3 to 3.6vdc).
> 5. Anything less than 10 meg input will drive the S-meter up scale and drive the receiver gain down. Even with a 10 meg meter you will not be able to accurately measure the AGC bus voltage. The Harbor Freight special I mentioned will peg the S-meter and shut down your receiver.
>
> Summary:
> 1. If have no meter buy a 11 meg analog VTVM and single diode and 3 diode rf probe. With this meter and probes you can make every AC, DC and RF voltage reading in the radio including all required and listed in the service manual.
>
> 2. A 10 meg FET based analog meter may be ok as long as the input Z is not range dependent. Some will be OK and

others can go as low as 2 megs on some ranges.
>
> 3. There is a place for a DMM on Hybrid bench as Mike and others note. Great for power supply measurements, transistor CBE, FET DSG, and resistance readings.
>
> 4. If you are going to buy a DMM go on line and read specs. Pay attention to the input Z on all ranges and also look at current reading burden. Not a function you will use a lot, but some have horrible burden and cannot accurately read DC ma levels. Can need this for power supply troubleshooting.
>
> 5. Buy as much speed and resolution as you can afford in your DMM. Dont confuse resolution with accuracy. I have a 40,000 count true RMS and it is sure nice to be able to hand pick resistors like a 2.7k resistor at 2699.85 ohms. A must for picking meter multipliers.
>
> Lastly, if after you do the AGC bus test with your DMM and are interested in measuring the input Z of your DMM contact me off list and I can describe a simple procedure. For a very quick you test can tell if your meter is too low by doing this:
>
> 1. With your DMM measure any hybrid voltage you are interested in and write the reading down.
> 2. Insert a 100k resistor in series with your plus probe tip and re-measure.
> 3. If the two readings are significantly different your meter is not adequate for the circuit you are working on.
> 4. In a pinch you can insert a 1 meg resistor in series and take your readings. Readings will be approx 10% low, but the meter will now not pull down the circuit as much.
>
> Terry K9TW
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Louis Wilen" <louis.wilen@> wrote:
> >
> > Thanks for all the replies.
> >
> > I never considered that a DMM might have enough reactance to affect readings. My DMM (Fluke 179) is a Ã¢Â□Â□true RMSÃ¢Â□Â□ meter, so I would expect that it has some circuitry that removes the reactive component from measurements Ã¢Â□" but IÃ¢Â□Â□m not certain. Maybe others can comment on this.
> >
> > Louis
> > W3LMW
> >
> >
> >
> > From: Wes Will
> > Sent: Wednesday, May 29, 2013 2:33 PM
> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > Subject: [TS-520_820_530_830] VTVM vs DMM
> >
> >
> > On 05/29/2013 01:28 PM, Bob Macklin wrote:
> > > Yes a REAL VTVM does at least one thing better than a DMM.
> > >
> > > When you are trying to find a peak or trying to peak a circuit an analog
> > > meter is better because it is easier to see the peak on the moving needle.
> > >

> > > In most cases on these radios the accuracy of a DMM is not needed and a
> > > VOM or VTVM are satisfactory..
> >
> > What he said plus one other thing. A good VTVM generally will have a
> > lesser loading effect on the circuit under test.
> >
> > This is a function of input REACTANCE (not just input resistance), I am
> > pretty sure.
> >
> > If you check the same RF circuit with a VTVM and a DMM the VTVM will
> > measure a higher voltage in every case I've done this comparison. Less
> > load on the circuit equals greater -accuracy-.
> >
> > Knowing the difference between "precision" and "accuracy" is key.
> >
> > --
> > Wes Will
> > N9KDY
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
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>
> No virus found in this message.
> Checked by AVG - www.avg.com
> Version: 2013.0.3343 / Virus Database: 3184/6368 - Release Date: 05/29/13
>
>
> [Non-text portions of this message have been removed]
>

42397. RE: [Bulk] Re: [TS-520_820_530_830] VTVM vs DMM

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-30 06:18:16 UTC
From: Brad Allen
Topic: 42351 Message: 42397

I do not use a DMM for troubleshooting in my shop. I learned on a RCA senior voltohmist in high school tv shop and have one of these to this day with 3 more in the closet for backup. There is a battery in them that needs to be changed and I rotate them each year after going thru them before replace it back on the bench. These meters are large and I am so used to it I hardly ever need to "Look" at the meter, just glance and I know what it says. The DMM I use for on the road troubleshooting because the RCA is too big for the toolbox. Brad KB2CHY

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Louis Wilen
Sent: Wednesday, May 29, 2013 4:11 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [Bulk] Re: [TS-520_820_530_830] VTVM vs DMM

Thanks for all the replies.

I never considered that a DMM might have enough reactance to affect readings. My DMM (Fluke 179) is a "true RMS" meter, so I would expect that it has some circuitry that removes the reactive component from measurements - but I'm not certain. Maybe others can comment on this.

Louis
W3LMW

From: Wes Will
Sent: Wednesday, May 29, 2013 2:33 PM
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Subject: [TS-520_820_530_830] VTVM vs DMM

On 05/29/2013 01:28 PM, Bob Macklin wrote:
> Yes a REAL VTVM does at least one thing better than a DMM.
>
> When you are trying to find a peak or trying to peak a circuit an analog
> meter is better because it is easier to see the peak on the moving needle.
>
> In most cases on these radios the accuracy of a DMM is not needed and a
> VOM or VTVM are satisfactory..

What he said plus one other thing. A good VTVM generally will have a lesser loading effect on the circuit under test.

This is a function of input REACTANCE (not just input resistance), I am pretty sure.

If you check the same RF circuit with a VTVM and a DMM the VTVM will measure a higher voltage in every case I've done this comparison. Less load on the circuit equals greater -accuracy-.

Knowing the difference between "precision" and "accuracy" is key.

--
Wes Will
N9KDY

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[Non-text portions of this message have been removed]

42398. [Bulk] Re: [TS-520_820_530_830] VTVM vs DMM

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-30 11:42:26 UTC
From: Terry Wagoner
Topic: 42351 Message: 42398

Brad: You were rich! I could never afford a Senior Voltohmyst.

A very nice meter. Same 12AU7 bridge circuit as all the others, but nicer package ,PC board instead of point to point wiring, and bigger meter. I like the low 0.50 vdc range that others dont have. Smart to have spares. Can keep going for a life time. Enjoy.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Brad Allen" <kb2chy@...> wrote:
>
> I do not use a DMM for troubleshooting in my shop. I learned on a RCA senior
> voltohmist in high school tv shop and have one of these to this day with 3
> more in the closet for backup. There is a battery in them that needs to be
> changed and I rotate them each year after going thru them before replace it
> back on the bench. These meters are large and I am so used to it I hardly
> ever need to "Look" at the meter, just glance and I know what it says. The
> DMM I use for on the road troubleshooting because the RCA is too big for the
> toolbox. Brad KB2CHY
>
>
>
> _____
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Louis Wilen
> Sent: Wednesday, May 29, 2013 4:11 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [Bulk] Re: [TS-520_820_530_830] VTVM vs DMM
>
>
>
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> Thanks for all the replies.
>
> I never considered that a DMM might have enough reactance to affect
> readings. My DMM (Fluke 179) is a "true RMS" meter, so I would expect that
> it has some circuitry that removes the reactive component from measurements
> - but I'm not certain. Maybe others can comment on this.
>
> Louis
> W3LMW
>
> From: Wes Will
> Sent: Wednesday, May 29, 2013 2:33 PM
> To: TS-520_820_530_830@yahoogroups.com

> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: [TS-520_820_530_830] VTVM vs DMM
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> On 05/29/2013 01:28 PM, Bob Macklin wrote:
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> > In most cases on these radios the accuracy of a DMM is not needed and a
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> What he said plus one other thing. A good VTVM generally will have a
> lesser loading effect on the circuit under test.
>
> This is a function of input REACTANCE (not just input resistance), I am
> pretty sure.
>
> If you check the same RF circuit with a VTVM and a DMM the VTVM will
> measure a higher voltage in every case I've done this comparison. Less
> load on the circuit equals greater -accuracy-.
>
> Knowing the difference between "precision" and "accuracy" is key.
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> --
> Wes Will
> N9KDY
>
> [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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42399. Re: [TS-520_820_530_830] eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-30 11:59:33 UTC
From: Mike
Topic: 42339 Message: 42399

Good morning Bob and Jerry,

Bama does have the 324's construction manual at the following bama.edu link

http://bama.edebris.com/download/eico/324const/EICO%20324%20CONSTRUCTION%20MANUAL.pdf

Bama also has the 324's instruction manual at the following bama.edu link

http://bama.edebris.com/download/eico/324/RF%20Gen%20Mod%20324.pdf

Jerry, if you already have the two manuals, construction and
instruction, for the 324 then disregard this.

A check of the voltages would be my first suggestion, after a thorough visual inspection and, where necessary, replacement of components such as the filter caps C3A/B. Also check all grounds, especially those that connect to the chassis through a terminal strip and/or ground lug to the chassis with machine screw, washer, and nut. Loosen the nuts and clean the area between the washer and the chassis either by moving the ground lugs side to side or by giving that area a shot of cleaner and repeat the movement. If the connection has a star washer, a simple movement (side to side) will usually regain the connection once the nut is tightened.

You might consider changing the 2 prong AC power cable and plug with a 3 prong grounded power cable. If you do that, the new 3 prong power cable's "Black" wire and fuse holder should be in series with the main power switch, S2B, Black wire to one side of the fuse holder and main power switch wafer S2B to the other side of the fuse holder. The "White" wire is connected to the power transformer's other primary winding (see the 324's schematic in the manual for details on power transformer's primary wiring and switch S2B).

73
Mike W5RKL

On 5/29/2013 5:09 PM, Bob Macklin wrote:
>
> Jerry,
>
> The manuals on BAMA are really USER manuals. No assembly information.
>
> I have the assembly manual but I need your email address to send it to
> you.
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> Bob Macklin
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> Seattle, Wa.

> "Real Radios Glow In The Dark"
> ----- Original Message -----
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> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Wednesday, May 29, 2013 1:36 PM
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> i do have the schematic/ and a tek 2236(100mhz) scope,fluke dvm and
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> Jerry KJ6NTL
>
> From: Bob Macklin <macklinbob@gmail.com <mailto:macklinbob%40gmail.com>>
> To: TS-520_820_530_830@yahoogroups.com
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> well it puts out audio but no rf/and it does hav serius 60 cycles/
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>
> Jerry KJ6NTL
>
> From: Mike <mailto:w5rkl%40yahoo.com>
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Wednesday, May 29, 2013 11:01 AM
> Subject: Re: [TS-520_820_530_830] eico324!!
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> Jerry,
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> You have an RF generator from ebay but what else are you trying to say?
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> 73
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> >
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> > hi all got a rf gen yest e=bay,contacts black how to clean and
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> > ------------------------------------
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> > Yahoo! Groups Links
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42400. RE: [TS-520_820_530_830] Re: FLAMED

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-30 12:26:57 UTC
From: dennis hatch
Topic: 42330 Message: 42400

People's ego can effect their common sense.... LOL

--- On Wed, 5/29/13, Rob <roberts@...> wrote:

From: Rob <roberts@...>
Subject: RE: [TS-520_820_530_830] Re: FLAMED
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, May 29, 2013, 6:56 AM

Well said Don,

I suspect your thoughts pretty well sum up what the majority of the group thinks...

73's Rob VK3BRS

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of k5hfg
Sent: Wednesday, 29 May 2013 9:08 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: FLAMED

Good morning,
Let's not start this crap again. Unless you find error in any of the info I would suggest printing and filing it in the notebook you should be keeping. This is a technical hobby. Some of these guys are experts and I for one appreciate their willingness to help me. Besides, none of them are as tough as my old Elmer. Now, let's put on our big boy pants and pay ATTENTION. Stop acting like children. Of course, this is just my opinion. Yall are free to do as you see fit. Enjoy the rest of the day God has given us.
73 yall, from K5HFG DON

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Yahoo! Groups Links

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42401. Re: [Bulk] Re: [TS-520_820_530_830] VTVM vs DMM

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-30 14:36:00 UTC
From: Bob Macklin
Topic: 42351 Message: 42401

I have a Heathkit IM-28 which is the wide "BENCH" VTVM with the large meter.

It sits in my closet because it is too large for my bench!

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Terry Wagoner
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, May 30, 2013 4:42 AM
Subject: [Bulk] Re: [TS-520_820_530_830] VTVM vs DMM

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> > VOM or VTVM are satisfactory..
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> What he said plus one other thing. A good VTVM generally will have a
> lesser loading effect on the circuit under test.
>
> This is a function of input REACTANCE (not just input resistance), I am
> pretty sure.
>
> If you check the same RF circuit with a VTVM and a DMM the VTVM will
> measure a higher voltage in every case I've done this comparison. Less
> load on the circuit equals greater -accuracy-.
>
> Knowing the difference between "precision" and "accuracy" is key.
>
> --
> Wes Will
> N9KDY
>
> [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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[Non-text portions of this message have been removed]

42402. Re: [TS-520_820_530_830] eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-30 14:41:13 UTC
From: Bob Macklin
Topic: 42339 Message: 42402

I did not notice the assembly manual was in a separate directory. I got if from ModsDK

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Mike
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, May 30, 2013 4:59 AM
Subject: Re: [TS-520_820_530_830] eico324!!

Good morning Bob and Jerry,

Bama does have the 324's construction manual at the following bama.edu link

http://bama.edebris.com/download/eico/324const/EICO%20324%20CONSTRUCTION%20MANUAL.pdf

Bama also has the 324's instruction manual at the following bama.edu link

http://bama.edebris.com/download/eico/324/RF%20Gen%20Mod%20324.pdf

Jerry, if you already have the two manuals, construction and
instruction, for the 324 then disregard this.

A check of the voltages would be my first suggestion, after a thorough
visual inspection and, where necessary, replacement of components such
as the filter caps C3A/B. Also check all grounds, especially those that
connect to the chassis through a terminal strip and/or ground lug to the
chassis with machine screw, washer, and nut. Loosen the nuts and clean
the area between the washer and the chassis either by moving the ground
lugs side to side or by giving that area a shot of cleaner and repeat
the movement. If the connection has a star washer, a simple movement
(side to side) will usually regain the connection once the nut is tightened.

You might consider changing the 2 prong AC power cable and plug with a 3
prong grounded power cable. If you do that, the new 3 prong power
cable's "Black" wire and fuse holder should be in series with the main
power switch, S2B, Black wire to one side of the fuse holder and main
power switch wafer S2B to the other side of the fuse holder. The "White"
wire is connected to the power transformer's other primary winding (see
the 324's schematic in the manual for details on power transformer's
primary wiring and switch S2B).

73
Mike W5RKL

On 5/29/2013 5:09 PM, Bob Macklin wrote:
>
> Jerry,
>
> The manuals on BAMA are really USER manuals. No assembly information.
>
> I have the assembly manual but I need your email address to send it to
> you.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Jerry Barr
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Wednesday, May 29, 2013 1:36 PM
> Subject: Re: [TS-520_820_530_830] eico324!!
>
> i do have the schematic/ and a tek 2236(100mhz) scope,fluke dvm and
> old simpson 260and a copy of the manual
>
> Jerry KJ6NTL
>
> From: Bob Macklin <macklinbob@... <mailto:macklinbob%40gmail.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Wednesday, May 29, 2013 1:07 PM
> Subject: Re: [TS-520_820_530_830] eico324!!
>
> Do you have the manual? What test equipment do you have?
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Jerry Barr
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Wednesday, May 29, 2013 12:55 PM
> Subject: Re: [TS-520_820_530_830] eico324!!
>
> well it puts out audio but no rf/and it does hav serius 60 cycles/
> everything looks originalcaps coils etc/wud it be wise to re cap it?
>
> Jerry KJ6NTL
>
> From: Mike <mailto:w5rkl%40yahoo.com>
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Wednesday, May 29, 2013 11:01 AM

> Subject: Re: [TS-520_820_530_830] eico324!!
>
> Jerry,
>
> You have an RF generator from ebay but what else are you trying to say?
>
> 73
> Mike W5RKL
>
> On 5/29/2013 12:17 PM, Jerry Barr wrote:
> >
> >
> >
> > hi all got a rf gen yest e=bay,contacts black how to clean and
> > lube/any ideasand no rf but audio wrks
> > Jerry KJ6NTL
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
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42403. Re: [TS-520_820_530_830]VTVM (Was FLAMED)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-30 14:43:33 UTC
From: John Davidson
Topic: 42351 Message: 42403

Can't you guys change the title of the thread when the topic is completely changed ? I usually delete anything with "FLAMED" or similar without reading them

---

From: Bob Lazarow <r_lazarow@verizon.net>
To: TS-520_820_530_830@yahoogroups.com
Cc: Bob Macklin <macklinbob@...>
Sent: Wednesday, May 29, 2013 3:02 PM
Subject: Re: [TS-520_820_530_830]Moving Forward (Was FLAMED)

Also, as I remember, a "real VTVM" came with, or has available probes
designed to handle AC,DC, and RF High Voltage,
On 5/29/2013 2:28 PM, Bob Macklin wrote:
>
> Yes a REAL VTVM does at least one thing better than a DMM.
>
>
> I have a Fluke 179 ,
> Terry and I have talked privately many times in the past.
> Heathkit test equipment.
>
> I have a Triplett and a Heathkit VOM.
> No virus found in this message.removed]

[Non-text portions of this message have been removed]

42404. Re: [TS-520_820_530_830] eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-30 15:04:36 UTC
From: Jerry Barr
Topic: 42339 Message: 42404

good morning all/ thas quite all right i have now both manuals.and much appreciation for all the help . i am going to recap the filterers change the rf out to bnc and change the power cord/ u didnt mention the green or ground wire/ or wud the hot chassis be from a missing ground connection/ also insted of 110 volts dc there is 154-160 volts on the plates/ but it now functions with rf out from cleaning the band switch i never did like working on hot chassis/ and really not sure if the freq is any where near right will double check the grounds today or clean them as suggested!
Jerry KJ6NTL

From: Bob Macklin <macklinbob@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, May 30, 2013 7:41 AM
Subject: Re: [TS-520_820_530_830] eico324!!

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Seattle, Wa.
"Real Radios Glow In The Dark"
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Jerry, if you already have the two manuals, construction and
instruction, for the 324 then disregard this.

A check of the voltages would be my first suggestion, after a thorough visual inspection and, where necessary, replacement of components such as the filter caps C3A/B. Also check all grounds, especially those that connect to the chassis through a terminal strip and/or ground lug to the chassis with machine screw, washer, and nut. Loosen the nuts and clean the area between the washer and the chassis either by moving the ground lugs side to side or by giving that area a shot of cleaner and repeat the movement. If the connection has a star washer, a simple movement

(side to side) will usually regain the connection once the nut is tightened.

You might consider changing the 2 prong AC power cable and plug with a 3 prong grounded power cable. If you do that, the new 3 prong power cable's "Black" wire and fuse holder should be in series with the main power switch, S2B, Black wire to one side of the fuse holder and main power switch wafer S2B to the other side of the fuse holder. The "White" wire is connected to the power transformer's other primary winding (see the 324's schematic in the manual for details on power transformer's primary wiring and switch S2B).

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Mike W5RKL

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> Jerry KJ6NTL
>
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> To: mailto:TS-520_820_530_830%40yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Wednesday, May 29, 2013 1:07 PM
> Subject: Re: [TS-520_820_530_830] eico324!!
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>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"

> ----- Original Message -----
> From: Jerry Barr
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Wednesday, May 29, 2013 12:55 PM
> Subject: Re: [TS-520_820_530_830] eico324!!
>
> well it puts out audio but no rf/and it does hav serius 60 cycles/
> everything looks originalcaps coils etc/wud it be wise to re cap it?
>
> Jerry KJ6NTL
>
> From: Mike <mailto:w5rkl%40yahoo.com>
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Wednesday, May 29, 2013 11:01 AM
> Subject: Re: [TS-520_820_530_830] eico324!!
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> Jerry,
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> You have an RF generator from ebay but what else are you trying to say?
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> 73
> Mike W5RKL
>
> On 5/29/2013 12:17 PM, Jerry Barr wrote:
> >
> >
> >
> > hi all got a rf gen yest e=bay,contacts black how to clean and
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> > Jerry KJ6NTL
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
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> > [Non-text portions of this message have been removed]
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42405. Re: [TS-520_820_530_830] eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-30 15:14:54 UTC
From: Jerry Barr
Topic: 42339 Message: 42405

actually i have always wanted to know how to use a grid dipper, i have a antenna anylyzer trhat has the capabilities / but not sure how to use it ,tried building some coils for it but not sure how good they are either hi hi/mfj259b/ and thanks for all the tips/especially the can for screws have a magnetic holder but it magnetizes the screws so they go into someting away from the tools hihi. anyway thanks for the help! i will order th deoxit and filter caps and bnc today if i can find it that is

Jerry KJ6NTL

From: Wes Will <wwill@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 29, 2013 2:14 PM
Subject: Re: [TS-520_820_530_830] eico324!!

On 05/29/2013 03:17 PM, Jerry Barr wrote:
> Sorry, but I was a little out of it when i wrote that. I'm a little sick today.
> I did use some De-Oxit spray contact cleaner while rotating switches etc.,
> but it didnt seem to help. And I do see some A/C on the audio out, and am getting
> some A/C between it and my scope ground. Any kind of lube to use, or no? Oh, and
> unplugged is good.

Just use more cleaning spray. Some light work with a medium-stiff brush
to remove any caked-on dirt/dust. CAREFULLY. De-Oxit 5 (if I remember
a-right) has a lubricant in it, so just use that. I DON'T RECOMMEND
petroleum jelly, it tends to get into places it oughtn't.

Any of the control-linkage sprays or lubes for electronics will loosen
the knobs, if the shafts aren't kinked or bent. No WD-40, either, by
the way. Just haven't had any good luck with that stuff for anything
electronic. Works fine of cabinet hinges, though...

If you can, search the internet (GOOGLE.COM or I use IXQUICK.COM) for

eico model 324 signal generator schematic manual

You should be able to turn up a PDF file manual somewhere. (I'm being
lazy, didn't search it myself.) You can copy and paste that line above
to the search engine page.

See what comes up, but DO NOT pay money for it on-line. Check here
FIRST, most of those "We'll sell you a manual," places add "SUCKER!"
when you hang up the phone.

This is BASIC cleaning of equipment. It more or less applies to
ANYTHING, old, new, or in-between:

Check the circuit boards for obvious damage. Burned spots on the
phenolic side, blackened components, burned or missing traces on the

copper side, if there are circuit boards and it's not all point-to-point. (I don't remember if I've ever been under the hood of a 324, so I don't have any idea of the construction methods.) Cracked or lifted traces on circuit boards. Cold solder joints. Cracking insulation on point-to-point wiring. Loose or corroded connectors.

Also look for popped or bulging capacitors, leaking electrolytic compound, any sort of crystallized powdery residue particularly on or underneath capacitors, and particularly electrolytic capacitors.

Excess flux on solder joints, that will leave a whitish or resiny coating on things. Clean it off with flux remover (best) or isopropyl (rubbing) alcohol (cheapest) and dry THOROUGHLY.

Check coils for mashed, displaced, or broken windings. You have to lift one end of a coil (and a resistor, and a diode, and about anything else, if it's a 2-lead device) and check it for simple continuity. Won't tell you if it's still the right electrical size, but will tell you if the windings are broken.

Anyone else here still use a grid dipper?? Or am I REALLY a dinosaur??

If you take ANYTHING apart (even the CASE if it's a tricky disassembly) TAKE NOTES, or a digital snapshot of the thing as it comes apart (BOTH NOTES AND PIX), so you know how it goes back together.

Keep the screws in something that you're not going to tip over every time you reach for a tool and spread ballistically all over the room.

If possible, and if they won't be in the way of getting the next bit out, PUT THE SCREWS BACK IN THE HOLES THEY CAME OUT OF after the sub-assembly or component has been taken off the chassis or whatever. That way, you know for sure where the screw came from.

Replace and repair as you find problems. Once the obvious stuff is taken care of, then you dive into the schematic and start tracing signals and verifying biases, and making sure that power supplies are supplying power, and that kind of stuff.

The Mark I Eyeball is your best diagnostic tool when you begin with an old piece of gear.

Good Luck.

--
Wes Will
N9KDY

[Non-text portions of this message have been removed]

42406. RE: [Bulk] [Bulk] Re: [TS-520_820_530_830] VTVM vs DMM

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-30 16:23:42 UTC
From: Brad Allen
Topic: 42351 Message: 42406

Well I acquired them through different means. Mainly it was at my job, there are 54 Central Offices and about 10 within the city lines at the local phone company. After we changed to the computer type switch we were all issued DVM Flukes to do voltage checks on the office batteries and rectifiers and such. We also had straight Triplett and Weston voltmeters with the mirror back. These were what was used by the older guys. Batteries had to be read weekly (pilot cell) and full battery reads monthly and cleaned and checked every 180 days. Most RCA meters were NEVER used and were like brand new except the battery was bad or leaky and the power cords dry and frayed. When we cleaned out old gear, I was allowed to take what I wanted of the collection. Some was for nostalgia purposes; others were for the RCA units. I grabbed 3 of them. The rest went to others and some were donated to my local high school. I am in the process now of getting one ready to replace the one on the bench. Have a good day. Brad KB2CHY

_____

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
Sent: Thursday, May 30, 2013 7:42 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [Bulk] [Bulk] Re: [TS-520_820_530_830] VTVM vs DMM

Brad: You were rich! I could never afford a Senior Voltohmyst.

A very nice meter. Same 12AU7 bridge circuit as all the others, but nicer package ,PC board instead of point to point wiring, and bigger meter. I like the low 0.50 vdc range that others dont have. Smart to have spares. Can keep going for a life time. Enjoy.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> , "Brad Allen" <kb2chy@...>
wrote:
>
> I do not use a DMM for troubleshooting in my shop. I learned on a RCA
senior
> voltohmist in high school tv shop and have one of these to this day with 3
> more in the closet for backup. There is a battery in them that needs to be
> changed and I rotate them each year after going thru them before replace
it
> back on the bench. These meters are large and I am so used to it I hardly
> ever need to "Look" at the meter, just glance and I know what it says. The
> DMM I use for on the road troubleshooting because the RCA is too big for
the

> toolbox. Brad KB2CHY
>
>
>
> _____
>
> From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> [mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Louis Wilen
> Sent: Wednesday, May 29, 2013 4:11 PM
> To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: [Bulk] Re: [TS-520_820_530_830] VTVM vs DMM
>
>
>
>
>
> Thanks for all the replies.
>
> I never considered that a DMM might have enough reactance to affect
> readings. My DMM (Fluke 179) is a "true RMS" meter, so I would expect that
> it has some circuitry that removes the reactive component from
measurements
> - but I'm not certain. Maybe others can comment on this.
>
> Louis
> W3LMW
>
> From: Wes Will
> Sent: Wednesday, May 29, 2013 2:33 PM
> To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: [TS-520_820_530_830] VTVM vs DMM
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> On 05/29/2013 01:28 PM, Bob Macklin wrote:
> > Yes a REAL VTVM does at least one thing better than a DMM.
> >
> > When you are trying to find a peak or trying to peak a circuit an analog
> > meter is better because it is easier to see the peak on the moving
needle.
> >
> > In most cases on these radios the accuracy of a DMM is not needed and a
> > VOM or VTVM are satisfactory..
>
> What he said plus one other thing. A good VTVM generally will have a
> lesser loading effect on the circuit under test.
>

> This is a function of input REACTANCE (not just input resistance), I am
> pretty sure.
>
> If you check the same RF circuit with a VTVM and a DMM the VTVM will
> measure a higher voltage in every case I've done this comparison. Less
> load on the circuit equals greater -accuracy-.
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> Knowing the difference between "precision" and "accuracy" is key.
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> Wes Will
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[Non-text portions of this message have been removed]

42407. Re: [TS-520_820_530_830] eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-30 16:25:49 UTC
From: Bob Macklin
Topic: 42339 Message: 42407

If you have a hot chassis disconnect the capacitors (C1 & C2) that are across the power line. I would expect them to be on a terminal strip where the power line cones into the unit.

They probably need replacing anyway. There are special capacitors for this application.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: Jerry Barr
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, May 30, 2013 8:04 AM
Subject: Re: [TS-520_820_530_830] eico324!!

good morning all/ thas quite all right i have now both manuals.and much appreciation for all the help . i am going to recap the filterers change the rf out to bnc and change the power cord/ u didnt mention the green or ground wire/ or wud the hot chassis be from a missing ground connection/ also insted of 110 volts dc there is 154-160 volts on the plates/ but it now functions with rf out from cleaning the band switch i never did like working on hot chassis/ and really not sure if the freq is any where near right will double check the grounds today or clean them as suggested!
Jerry KJ6NTL

From: Bob Macklin <macklinbob@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, May 30, 2013 7:41 AM
Subject: Re: [TS-520_820_530_830] eico324!!

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> To: mailto:TS-520_820_530_830%40yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Wednesday, May 29, 2013 1:07 PM
> Subject: Re: [TS-520_820_530_830] eico324!!
>
> Do you have the manual? What test equipment do you have?
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Jerry Barr
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Wednesday, May 29, 2013 12:55 PM
> Subject: Re: [TS-520_820_530_830] eico324!!
>
> well it puts out audio but no rf/and it does hav serius 60 cycles/
> everything looks originalcaps coils etc/wud it be wise to re cap it?
>
> Jerry KJ6NTL
>
> From: Mike <mailto:w5rkl%40yahoo.com>
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Wednesday, May 29, 2013 11:01 AM
> Subject: Re: [TS-520_820_530_830] eico324!!
>
> Jerry,
>
> You have an RF generator from ebay but what else are you trying to say?
>
> 73
> Mike W5RKL
>
> On 5/29/2013 12:17 PM, Jerry Barr wrote:
> >
> >
> >
> > hi all got a rf gen yest e=bay,contacts black how to clean and
> > lube/any ideasand no rf but audio wrks
> > Jerry KJ6NTL
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
> >

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42408. [Bulk] [Bulk] Re: [TS-520_820_530_830] VTVM vs DMM

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-30 17:16:21 UTC
From: Terry Wagoner
Topic: 42351 Message: 42408

Yes mirrored scale meters were nice to avoid parallax errors. Weston commonly had them. I have a really nice Simpson 2795 FET meter that has very low UA voltage and current ranges and a nice mirrored scale meter movement.

Station batteries bring back memories. There are numerous batteries used in Fossil and Nuke plants where I spent my working life. Most were 125 vdc and 250 vdc. All feed emergency pumps, valves, control circuits. If maintained can last many years. I have taken many pilot cell readings and float readings and equalizing readings. In Nuke power draw down testing is required by terms of your license and that is a big deal test with huge banks of resistor grids and sophisticated controllers. I got involved with developing single cell charging, but NRC didnt like it. Not sure if done anymore. Had to be very careful when you told the new electrician that you would be jumpering a cell out. What a bomb!

Most of our techs came off nuke subs and those boys understand batteries and know how to equalize a battery.

In very old days power plants use to have our own frame room with rotary Stepper relays. I once went to a class in Texas and the instructor was describing an adjustment to these relays and 2 good old boys next to me looked at each other and started laughing. Instructor asked them to share with class and they said now we can go home and take those rubber bands off!

I dont keep battery in any of my VTVMs anymore. I use DMM for resistance measurements. Dont have to worry about acid wrecking them.

Enjoy those RCAs
73s Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Brad Allen" <kb2chy@...> wrote:
>
> Well I acquired them through different means. Mainly it was at my job, there
> are 54 Central Offices and about 10 within the city lines at the local phone
> company. After we changed to the computer type switch we were all issued DVM
> Flukes to do voltage checks on the office batteries and rectifiers and such.
> We also had straight Triplett and Weston voltmeters with the mirror back.
> These were what was used by the older guys. Batteries had to be read weekly
> (pilot cell) and full battery reads monthly and cleaned and checked every
> 180 days. Most RCA meters were NEVER used and were like brand new except the
> battery was bad or leaky and the power cords dry and frayed. When we cleaned
> out old gear, I was allowed to take what I wanted of the collection. Some
> was for nostalgia purposes; others were for the RCA units. I grabbed 3 of
> them. The rest went to others and some were donated to my local high school.
> I am in the process now of getting one ready to replace the one on the
> bench. Have a good day. Brad KB2CHY
>
>

>
> _____
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
> Sent: Thursday, May 30, 2013 7:42 AM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [Bulk] [Bulk] Re: [TS-520_820_530_830] VTVM vs DMM
>
>
>
>
>
> Brad: You were rich! I could never afford a Senior Voltohmyst.
>
> A very nice meter. Same 12AU7 bridge circuit as all the others, but nicer
> package ,PC board instead of point to point wiring, and bigger meter. I like
> the low 0.50 vdc range that others dont have. Smart to have spares. Can keep
> going for a life time. Enjoy.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com> , "Brad Allen" <kb2chy@>
> wrote:
> >
> > I do not use a DMM for troubleshooting in my shop. I learned on a RCA
> senior
> > voltohmist in high school tv shop and have one of these to this day with 3
> > more in the closet for backup. There is a battery in them that needs to be
> > changed and I rotate them each year after going thru them before replace
> it
> > back on the bench. These meters are large and I am so used to it I hardly
> > ever need to "Look" at the meter, just glance and I know what it says. The
> > DMM I use for on the road troubleshooting because the RCA is too big for
> the
> > toolbox. Brad KB2CHY
> >
> >
> >
> > _____
> >
> > From: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > [mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Louis Wilen
> > Sent: Wednesday, May 29, 2013 4:11 PM
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Subject: [Bulk] Re: [TS-520_820_530_830] VTVM vs DMM

> >
> >
> >
> >
> >
> > Thanks for all the replies.
> >
> > I never considered that a DMM might have enough reactance to affect
> > readings. My DMM (Fluke 179) is a "true RMS" meter, so I would expect that
> > it has some circuitry that removes the reactive component from
> measurements
> > - but I'm not certain. Maybe others can comment on this.
> >
> > Louis
> > W3LMW
> >
> > From: Wes Will
> > Sent: Wednesday, May 29, 2013 2:33 PM
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Subject: [TS-520_820_530_830] VTVM vs DMM
> >
> > On 05/29/2013 01:28 PM, Bob Macklin wrote:
> > > Yes a REAL VTVM does at least one thing better than a DMM.
> > >
> > > When you are trying to find a peak or trying to peak a circuit an analog
> > > meter is better because it is easier to see the peak on the moving
> needle.
> > >
> > > In most cases on these radios the accuracy of a DMM is not needed and a
> > > VOM or VTVM are satisfactory..
> >
> > What he said plus one other thing. A good VTVM generally will have a
> > lesser loading effect on the circuit under test.
> >
> > This is a function of input REACTANCE (not just input resistance), I am
> > pretty sure.
> >
> > If you check the same RF circuit with a VTVM and a DMM the VTVM will
> > measure a higher voltage in every case I've done this comparison. Less
> > load on the circuit equals greater -accuracy-.
> >
> > Knowing the difference between "precision" and "accuracy" is key.
> >
> > --
> > Wes Will
> > N9KDY
> >
> > [Non-text portions of this message have been removed]

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42409. Re: eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-30 17:35:08 UTC
From: Terry Wagoner
Topic: 42339 Message: 42409

A GDO is not an instrument that many hams find useful these days. Almost indispensable in the old days for home brewing.

Today for Kenwood service not much demand so would not rush out to buy one.

Very good for checking the main plate choke. Most hams would just do a visual. Problem is that they do not know what the design parallel resonance is and where the series resonance holes should be. I have posted all the specs here several times. When I rewind a plate choke I do Dip it, but in practice as long as you use same gauge wire and get back on same number of design turns the series resonant holes should not have shifted. (One pretty close to 24mhz and next strong one at 33 mhz which is no concern).

Before digital LCR bridge became common and affordable for the bench would use GDO along with a standard capacitor and standard inductor to calculate unknown inductors and capacitors by placing then in parallel resonant config and finding the Dip and then plug that value into the Resonant Frequency formula and solving to find your unknown capacitor or inductor. Worked pretty well if you were winding your own choke coils or making your own capacitors

Also very good for dipping any antenna trap you have or want to make and for testing crystals.

Thats about the common uses I can think of.

There are some books on line you can read on how to use and several good old QST articles in ARRL archives. Important thing is use low level of grid current (maybe half scale) and very loose coupling and need a freq counter with sniffer loop near the GDO coil to read the frequency of the DIP. The dials are not very accurate.

I have the classic Millen 90651 and the Measurements 59. The Measurements is a better dipper, but harder to find a good one and the Millen is a fine GDO. Kenwood makes a nice looking unit that I suspect has FET oscillator. I have no experience with it. Stay away from the Heath Tunnel Dipper. It does not have enough "horsepower". As you say the MFJ-259 has GDO coils but again I have no experience with it in that mode.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Jerry Barr <kj6ntl@...> wrote:
>
> actually i have always wanted to know how to use a grid dipper, i have a antenna anylyzer trhat has the capabilities / but not sure how to use it ,tried building some coils for it but not sure how good they are either hi hi/mfj259b/ and thanks for all the tips/especially the can for screws have a magnetic holder but it magnetizes the screws so they go into someting away from the tools hihi. anyway thanks for the help! i will order th deoxit and filter caps and bnc today if i can find it that is
>
>

> Jerry KJ6NTL
>
> From: Wes Will <wwill@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, May 29, 2013 2:14 PM
> Subject: Re: [TS-520_820_530_830] eico324!!
>
> Â
> On 05/29/2013 03:17 PM, Jerry Barr wrote:
> > Sorry, but I was a little out of it when i wrote that. I'm a little sick today.
> > I did use some De-Oxit spray contact cleaner while rotating switches etc.,
> > but it didnt seem to help. And I do see some A/C on the audio out, and am getting
> > some A/C between it and my scope ground. Any kind of lube to use, or no? Oh, and
> > unplugged is good.
>
> Just use more cleaning spray. Some light work with a medium-stiff brush
> to remove any caked-on dirt/dust. CAREFULLY. De-Oxit 5 (if I remember
> a-right) has a lubricant in it, so just use that. I DON'T RECOMMEND
> petroleum jelly, it tends to get into places it oughtn't.
>
> Any of the control-linkage sprays or lubes for electronics will loosen
> the knobs, if the shafts aren't kinked or bent. No WD-40, either, by
> the way. Just haven't had any good luck with that stuff for anything
> electronic. Works fine of cabinet hinges, though...
>
> If you can, search the internet (GOOGLE.COM or I use IXQUICK.COM) for
>
> eico model 324 signal generator schematic manual
>
> You should be able to turn up a PDF file manual somewhere. (I'm being
> lazy, didn't search it myself.) You can copy and paste that line above
> to the search engine page.
>
> See what comes up, but DO NOT pay money for it on-line. Check here
> FIRST, most of those "We'll sell you a manual," places add "SUCKER!"
> when you hang up the phone.
>
> This is BASIC cleaning of equipment. It more or less applies to
> ANYTHING, old, new, or in-between:
>
> Check the circuit boards for obvious damage. Burned spots on the
> phenolic side, blackened components, burned or missing traces on the
> copper side, if there are circuit boards and it's not all
> point-to-point. (I don't remember if I've ever been under the hood of a
> 324, so I don't have any idea of the construction methods.) Cracked or
> lifted traces on circuit boards. Cold solder joints. Cracking
> insulation on point-to-point wiring. Loose or corroded connectors.
>
> Also look for popped or bulging capacitors, leaking electrolytic
> compound, any sort of crystallized powdery residue particularly on or

> underneath capacitors, and particularly electrolytic capacitors.
>
> Excess flux on solder joints, that will leave a whitish or resiny
> coating on things. Clean it off with flux remover (best) or isopropyl
> (rubbing) alcohol (cheapest) and dry THOROUGHLY.
>
> Check coils for mashed, displaced, or broken windings. You have to lift
> one end of a coil (and a resistor, and a diode, and about anything else,
> if it's a 2-lead device) and check it for simple continuity. Won't tell
> you if it's still the right electrical size, but will tell you if the
> windings are broken.
>
> Anyone else here still use a grid dipper?? Or am I REALLY a dinosaur??
>
> If you take ANYTHING apart (even the CASE if it's a tricky disassembly)
> TAKE NOTES, or a digital snapshot of the thing as it comes apart (BOTH
> NOTES AND PIX), so you know how it goes back together.
>
> Keep the screws in something that you're not going to tip over every
> time you reach for a tool and spread ballistically all over the room.
>
> If possible, and if they won't be in the way of getting the next bit
> out, PUT THE SCREWS BACK IN THE HOLES THEY CAME OUT OF after the
> sub-assembly or component has been taken off the chassis or whatever.
> That way, you know for sure where the screw came from.
>
> Replace and repair as you find problems. Once the obvious stuff is
> taken care of, then you dive into the schematic and start tracing
> signals and verifying biases, and making sure that power supplies are
> supplying power, and that kind of stuff.
>
> The Mark I Eyeball is your best diagnostic tool when you begin with an
> old piece of gear.
>
> Good Luck.
>
> --
> Wes Will
> N9KDY
>
>
>
>
> [Non-text portions of this message have been removed]
>

42410. Re: [TS-520_820_530_830] Re: eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-30 19:45:48 UTC
From: Jerry Barr
Topic: 42339 Message: 42410

thanks Terry/ i do have a counter i got cheap off e-bay but someone removed the osc from it /so either i build a 1 meghrtz osc or try to buy one somewhereit was a seven or nine pin in a can dont remember right now but wud like to get it going has the old nixie tubes and they all work good/ my scope has one two but not sure how to use it/ oh other then the the electrolytics what type caps shud i use for replacing in the 324 the wax paper film type /what cant find any mylar at mouser or digikey

Jerry KJ6NTL

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, May 30, 2013 10:35 AM
Subject: [TS-520_820_530_830] Re: eico324!!

A GDO is not an instrument that many hams find useful these days. Almost indispensable in the old days for home brewing.

Today for Kenwood service not much demand so would not rush out to buy one.

Very good for checking the main plate choke. Most hams would just do a visual. Problem is that they do not know what the design parallel resonance is and where the series resonance holes should be. I have posted all the specs here several times. When I rewind a plate choke I do Dip it, but in practice as long as you use same gauge wire and get back on same number of design turns the series resonant holes should not have shifted. (One pretty close to 24mhz and next strong one at 33 mhz which is no concern).

Before digital LCR bridge became common and affordable for the bench would use GDO along with a standard capacitor and standard inductor to calculate unknown inductors and capacitors by placing then in parallel resonant config and finding the Dip and then plug that value into the Resonant Frequency formula and solving to find your unknown capacitor or inductor. Worked pretty well if you were winding your own choke coils or making your own capacitors

Also very good for dipping any antenna trap you have or want to make and for testing crystals.

Thats about the common uses I can think of.

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has GDO coils but again I have no experience with it in that mode.

Terry K9TW

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>
> actually i have always wanted to know how to use a grid dipper, i have a antenna anylyzer trhat has the capabilities / but not sure how to use it ,tried building some coils for it but not sure how good they are either hi hi/mfj259b/ and thanks for all the tips/especially the can for screws have a magnetic holder but it magnetizes the screws so they go into someting away from the tools hihi. anyway thanks for the help! i will order th deoxit and filter caps and bnc today if i can find it that is
>
>
> Jerry KJ6NTL
>
> From: Wes Will <wwill@...>
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Wednesday, May 29, 2013 2:14 PM
> Subject: Re: [TS-520_820_530_830] eico324!!
>
> Â
> On 05/29/2013 03:17 PM, Jerry Barr wrote:
> > Sorry, but I was a little out of it when i wrote that. I'm a little sick today.
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> > but it didnt seem to help. And I do see some A/C on the audio out, and am getting
> > some A/C between it and my scope ground. Any kind of lube to use, or no? Oh, and
> > unplugged is good.
>
> Just use more cleaning spray. Some light work with a medium-stiff brush
> to remove any caked-on dirt/dust. CAREFULLY. De-Oxit 5 (if I remember
> a-right) has a lubricant in it, so just use that. I DON'T RECOMMEND
> petroleum jelly, it tends to get into places it oughtn't.
>
> Any of the control-linkage sprays or lubes for electronics will loosen
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> the way. Just haven't had any good luck with that stuff for anything
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> If you can, search the internet (GOOGLE.COM or I use IXQUICK.COM) for
>
> eico model 324 signal generator schematic manual
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> You should be able to turn up a PDF file manual somewhere. (I'm being
> lazy, didn't search it myself.) You can copy and paste that line above
> to the search engine page.
>
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> FIRST, most of those "We'll sell you a manual," places add "SUCKER!"
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>
> This is BASIC cleaning of equipment. It more or less applies to

> ANYTHING, old, new, or in-between:
>
> Check the circuit boards for obvious damage. Burned spots on the
> phenolic side, blackened components, burned or missing traces on the
> copper side, if there are circuit boards and it's not all
> point-to-point. (I don't remember if I've ever been under the hood of a
> 324, so I don't have any idea of the construction methods.) Cracked or
> lifted traces on circuit boards. Cold solder joints. Cracking
> insulation on point-to-point wiring. Loose or corroded connectors.
>
> Also look for popped or bulging capacitors, leaking electrolytic
> compound, any sort of crystallized powdery residue particularly on or
> underneath capacitors, and particularly electrolytic capacitors.
>
> Excess flux on solder joints, that will leave a whitish or resiny
> coating on things. Clean it off with flux remover (best) or isopropyl
> (rubbing) alcohol (cheapest) and dry THOROUGHLY.
>
> Check coils for mashed, displaced, or broken windings. You have to lift
> one end of a coil (and a resistor, and a diode, and about anything else,
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> windings are broken.
>
> Anyone else here still use a grid dipper?? Or am I REALLY a dinosaur??
>
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> TAKE NOTES, or a digital snapshot of the thing as it comes apart (BOTH
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>
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> time you reach for a tool and spread ballistically all over the room.
>
> If possible, and if they won't be in the way of getting the next bit
> out, PUT THE SCREWS BACK IN THE HOLES THEY CAME OUT OF after the
> sub-assembly or component has been taken off the chassis or whatever.
> That way, you know for sure where the screw came from.
>
> Replace and repair as you find problems. Once the obvious stuff is
> taken care of, then you dive into the schematic and start tracing
> signals and verifying biases, and making sure that power supplies are
> supplying power, and that kind of stuff.
>
> The Mark I Eyeball is your best diagnostic tool when you begin with an
> old piece of gear.
>
> Good Luck.
>
> --
> Wes Will

> N9KDY
>
>
>
>
> [Non-text portions of this message have been removed]
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[Non-text portions of this message have been removed]

42411. Re: [TS-520_820_530_830] eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-30 19:48:35 UTC
From: Jerry Barr
Topic: 42339 Message: 42411

trying to find some but what do i look for im shopping at mouser right now/still not sure about grounding the chassis tho

Jerry KJ6NTL

From: Bob Macklin <macklinbob@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, May 30, 2013 9:25 AM
Subject: Re: [TS-520_820_530_830] eico324!!

If you have a hot chassis disconnect the capacitors (C1 & C2) that are across the power line. I would expect them to be on a terminal strip where the power line cones into the unit.

They probably need replacing anyway. There are special capacitors for this application.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: Jerry Barr
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Thursday, May 30, 2013 8:04 AM
Subject: Re: [TS-520_820_530_830] eico324!!

good morning all/ thas quite all right i have now both manuals.and much appreciation for all the help . i am going to recap the filterers change the rf out to bnc and change the power cord/ u didnt mention the green or ground wire/ or wud the hot chassis be from a missing ground connection/ also insted of 110 volts dc there is 154-160 volts on the plates/ but it now functions with rf out from cleaning the band switch i never did like working on hot chassis/ and really not sure if the freq is any where near right will double check the grounds today or clean them as suggested!
Jerry KJ6NTL

From: Bob Macklin <mailto:macklinbob%40gmail.com>
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Thursday, May 30, 2013 7:41 AM
Subject: Re: [TS-520_820_530_830] eico324!!

I did not notice the assembly manual was in a separate directory. I got if from ModsDK

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: Mike
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Thursday, May 30, 2013 4:59 AM
Subject: Re: [TS-520_820_530_830] eico324!!

Good morning Bob and Jerry,

Bama does have the 324's construction manual at the following bama.edu link

http://bama.edebris.com/download/eico/324const/EICO%20324%20CONSTRUCTION%20MANUAL.pdf

Bama also has the 324's instruction manual at the following bama.edu link

http://bama.edebris.com/download/eico/324/RF%20Gen%20Mod%20324.pdf

Jerry, if you already have the two manuals, construction and
instruction, for the 324 then disregard this.

A check of the voltages would be my first suggestion, after a thorough
visual inspection and, where necessary, replacement of components such
as the filter caps C3A/B. Also check all grounds, especially those that
connect to the chassis through a terminal strip and/or ground lug to the
chassis with machine screw, washer, and nut. Loosen the nuts and clean
the area between the washer and the chassis either by moving the ground
lugs side to side or by giving that area a shot of cleaner and repeat
the movement. If the connection has a star washer, a simple movement
(side to side) will usually regain the connection once the nut is tightened.

You might consider changing the 2 prong AC power cable and plug with a 3
prong grounded power cable. If you do that, the new 3 prong power
cable's "Black" wire and fuse holder should be in series with the main
power switch, S2B, Black wire to one side of the fuse holder and main
power switch wafer S2B to the other side of the fuse holder. The "White"
wire is connected to the power transformer's other primary winding (see
the 324's schematic in the manual for details on power transformer's
primary wiring and switch S2B).

73
Mike W5RKL

On 5/29/2013 5:09 PM, Bob Macklin wrote:
>
> Jerry,
>
> The manuals on BAMA are really USER manuals. No assembly information.
>
> I have the assembly manual but I need your email address to send it to
> you.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.

> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Jerry Barr
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Wednesday, May 29, 2013 1:36 PM
> Subject: Re: [TS-520_820_530_830] eico324!!
>
> i do have the schematic/ and a tek 2236(100mhz) scope,fluke dvm and
> old simpson 260and a copy of the manual
>
> Jerry KJ6NTL
>
> From: Bob Macklin <mailto:macklinbob%40gmail.com <mailto:macklinbob%40gmail.com>>
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Wednesday, May 29, 2013 1:07 PM
> Subject: Re: [TS-520_820_530_830] eico324!!
>
> Do you have the manual? What test equipment do you have?
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Jerry Barr
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Wednesday, May 29, 2013 12:55 PM
> Subject: Re: [TS-520_820_530_830] eico324!!
>
> well it puts out audio but no rf/and it does hav serius 60 cycles/
> everything looks originalcaps coils etc/wud it be wise to re cap it?
>
> Jerry KJ6NTL
>
> From: Mike <mailto:w5rkl%40yahoo.com>
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Wednesday, May 29, 2013 11:01 AM
> Subject: Re: [TS-520_820_530_830] eico324!!
>
> Jerry,
>
> You have an RF generator from ebay but what else are you trying to say?
>
> 73
> Mike W5RKL
>
> On 5/29/2013 12:17 PM, Jerry Barr wrote:
> >

> >
> >
> > hi all got a rf gen yest e=bay,contacts black how to clean and
> > lube/any ideasand no rf but audio wrks
> > Jerry KJ6NTL
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
> >
> > [Non-text portions of this message have been removed]
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42412. Digital Interface for Kenwood

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-30 20:13:41 UTC
From: sceneryguru
Topic: 42412 Message: 42412

Good Afternoon Group:

Some of you may recall that I recently liquidated my entire TS-820S station. In doing a bit of house keeping I discovered my Digital Interface for Kenwood Transceivers. Details are as follows:

Our interface includes a 3 ft cable which will allow you to have your radio and computer up to 5.5 ft apart, which is probably far enough for most people. Donner's Digital Interface will interface the Kenwood Amateur (Ham) radios listed below that use a 4 pin microphone connector, to computers for working digital modes like PSK31, RTTY, SSTV, AMTOR, CW, and many others.

You won't have to set any jumpers or change anything on the interface. Just plug it into your radio and computer, download and setup your software and you are ready to get on the air.

This is a brand NEW interface, never used, only taken out of its packaging for inspection.

Kenwood Transceivers:

TS-120, TS-130, TS-180
TS-311, TS-510, TS-511
TS-520, TS-530,TS-600
TS-700, TS-770, TS-801
TS-820/S, TS-830, TS-900
TX-310, TR-1300, TR-2200
TR-2300, TR-5200, TR-7010
TR-7200, TR-7400, TR-7500
TR-8000, TR-8200, TR-8300

I'll take 35.00 shipped FREE via USPS Priority mail. I would prefer payment through PayPal. Any questions, please don't hesitate to contact me off list. - K3SSB at verizon.net

Thanks to the group for indulging me. - tnx es 73

42413. Re: [TS-520_820_530_830] eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-30 20:52:19 UTC
From: Wes Will
Topic: 42339 Message: 42413

On 05/30/2013 02:48 PM, Jerry Barr wrote:
> trying to find some but what do i look for im shopping at mouser right
> now/still not sure about grounding the chassis tho

Search for "film capacitor" then refine it to the size
(microfarads/picofarads and working voltage) you need

42414. Re: [TS-520_820_530_830] eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-30 21:36:17 UTC
From: Mike
Topic: 42339 Message: 42414

Changing to a 3 prong grounded power cable, look at the schematic, you will notice there are 2 wires from the AC plug. One goes to AC switch S2B switch and the other goes to the other power transformer primary winding.

The new 3 prong power cable has 3 wire, BLACK (AC HOT), WHITE (AC NEUTRAL) and GREEN (SAFETY GROUND).

The "BLACK" (AC HOT) wire connects to one side of a fuse holder. The other side of the fuse holder connects to AC switch S2B.

The "WHITE" (AC NEUTRAL) wire connects to the other power transformer lead.

The "GREEN" (SAFETY GROUND) wire connects to the chassis.

More than likely, as one response said, these connections are made at a terminal strip.

The Eico 324 generator's power rating is 15 watts at 117VAC (see the instruction manual, page 3, next to POWER REQUIREMENTS). Therefore, the fuse is 1/2 amp slow blow (15 / 117 = .128amps). If you don't have a 1/2 amp then a 3/4 amp fuse will also be okay. I wouldn't use a fuse higher than 3/4 amp.

C1 and C2 across the power transformer's primary windings are RF and noise bypass capacitors. It not uncommon for these capacitors, over time, to become leaky causing a tingle when touching the chassis. I have a Heathkit DX-40 transmitter that had those caps and I removed them. If you replace them, they are .01ufd at 400 volts according to the part lists but if you can't find them at 400 volts then 1500 volt caps will work. The higher voltage rating won't change the circuit just be capable of handing up to 1500 volts. I changed the 2 prong power cable in my DX-40 to a 3 prong power cable and inserted a fuse in series with the BLACK (AC HOT) lead plus removed the AC bypass caps and no longer have the tingle.

It's a good idea to change the screw on output connectors to BNC Female sockets. I did that with my Heathkit IG-102, both AF and RF sockets. You should also obtain a BNC "T" connector so you can connect a frequency counter and a probe to the circuit under test at the same time. The frequency counter will act as a "Digital Display" so you can adjust the generator to the desired frequency you want without "guessing" with the analog dial. More often than not those analog dials are no where near accurate so a frequency counter will eliminate the guessing.

Also, the generator has an built in audio generator. The audio generator can be used to apply an audio signal to an audio amp under test or it

can be used to modulate the generator's RF signal. This is okay for simple receiver detector testing in a receiver.

Here is a simple trick where a signal generator can help in troubleshooting. If you suspect an oscillator has failed, you can use a signal generator to "substitute" for the suspected failed oscillator. Inject the normal oscillator frequency into the mixer and if the receiver comes to life then you know where the problem is, the oscillator has failed. I used my IG-102 when troubleshooting a TS-120. I substituted the signal generator for the CAR Unit's 8Mhz oscillator and the TS-120 came to life which verified my suspicions the 8Mhz oscillator had failed. I had a similar problem in a Collins 75A2 receiver when the PTO failed. I injected a frequency within the range of the PTO to the PTO mixer and the receiver came to life. If you do this, make sure there is no DC voltage on the connection. Verify this using a DC volt meter. You can also keep a .01ufd 600VDC cap in series with the generator's probe to block any DC voltage less than 600VDC from being fed to the generator's output. This is where some jumpers come in handy, alligator clips on both ends of the jumper. Make all connections to the circuit with power OFF, check for shorts in the connections and only apply power when it's safe, no short and no DC voltage applied to the generator's output through the probe.

The Eico signal generator is a simple basic RF and AF signal generator, it's not top quality so don't expect it to be. It's okay for performing MF and HF alignments but I wouldn't use it to make critical adjustments.

73
Mike W5RKL

On 5/30/2013 2:48 PM, Jerry Barr wrote:
>
> trying to find some but what do i look for im shopping at mouser
> right now/still not sure about grounding the chassis tho
>
> Jerry KJ6NTL
>
> From: Bob Macklin <macklinbob@... <mailto:macklinbob%40gmail.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Thursday, May 30, 2013 9:25 AM
> Subject: Re: [TS-520_820_530_830] eico324!!
>
>
> If you have a hot chassis disconnect the capacitors (C1 & C2) that are
> across the power line. I would expect them to be on a terminal strip
> where the power line cones into the unit.
>
> They probably need replacing anyway. There are special capacitors for
> this application.
>

> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
>
> ----- Original Message -----
> From: Jerry Barr
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Thursday, May 30, 2013 8:04 AM
> Subject: Re: [TS-520_820_530_830] eico324!!
>
> good morning all/ thas quite all right i have now both manuals.and
> much appreciation for all the help . i am going to recap the filterers
> change the rf out to bnc and change the power cord/ u didnt mention
> the green or ground wire/ or wud the hot chassis be from a missing
> ground connection/ also insted of 110 volts dc there is 154-160 volts
> on the plates/ but it now functions with rf out from cleaning the band
> switch i never did like working on hot chassis/ and really not sure if
> the freq is any where near right will double check the grounds today
> or clean them as suggested!
> Jerry KJ6NTL
>
> From: Bob Macklin <mailto:macklinbob%40gmail.com>
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Thursday, May 30, 2013 7:41 AM
> Subject: Re: [TS-520_820_530_830] eico324!!
>
> I did not notice the assembly manual was in a separate directory. I
> got if from ModsDK
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Mike
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Thursday, May 30, 2013 4:59 AM
> Subject: Re: [TS-520_820_530_830] eico324!!
>
> Good morning Bob and Jerry,
>
> Bama does have the 324's construction manual at the following bama.edu
> link
>
> http://bama.edebris.com/download/eico/324const/EICO%20324%20CONSTRUCTION%20MANUAL.pdf
>
> Bama also has the 324's instruction manual at the following bama.edu link
>
> http://bama.edebris.com/download/eico/324/RF%20Gen%20Mod%20324.pdf

>
> Jerry, if you already have the two manuals, construction and
> instruction, for the 324 then disregard this.
>
> A check of the voltages would be my first suggestion, after a thorough
> visual inspection and, where necessary, replacement of components such
> as the filter caps C3A/B. Also check all grounds, especially those that
> connect to the chassis through a terminal strip and/or ground lug to the
> chassis with machine screw, washer, and nut. Loosen the nuts and clean
> the area between the washer and the chassis either by moving the ground
> lugs side to side or by giving that area a shot of cleaner and repeat
> the movement. If the connection has a star washer, a simple movement
> (side to side) will usually regain the connection once the nut is
> tightened.
>
> You might consider changing the 2 prong AC power cable and plug with a 3
> prong grounded power cable. If you do that, the new 3 prong power
> cable's "Black" wire and fuse holder should be in series with the main
> power switch, S2B, Black wire to one side of the fuse holder and main
> power switch wafer S2B to the other side of the fuse holder. The "White"
> wire is connected to the power transformer's other primary winding (see
> the 324's schematic in the manual for details on power transformer's
> primary wiring and switch S2B).
>
> 73
> Mike W5RKL
>
> On 5/29/2013 5:09 PM, Bob Macklin wrote:
> >
> > Jerry,
> >
> > The manuals on BAMA are really USER manuals. No assembly information.
> >
> > I have the assembly manual but I need your email address to send it to
> > you.
> >
> > Bob Macklin
> > K5MYJ
> > Seattle, Wa.
> > "Real Radios Glow In The Dark"
> > ----- Original Message -----
> > From: Jerry Barr
> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Wednesday, May 29, 2013 1:36 PM
> > Subject: Re: [TS-520_820_530_830] eico324!!
> >
> > i do have the schematic/ and a tek 2236(100mhz) scope,fluke dvm and
> > old simpson 260and a copy of the manual
> >

> > Jerry KJ6NTL
> >
> > From: Bob Macklin <mailto:macklinbob%40gmail.com
> <mailto:macklinbob%40gmail.com>>
> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Wednesday, May 29, 2013 1:07 PM
> > Subject: Re: [TS-520_820_530_830] eico324!!
> >
> > Do you have the manual? What test equipment do you have?
> >
> > Bob Macklin
> > K5MYJ
> > Seattle, Wa.
> > "Real Radios Glow In The Dark"
> > ----- Original Message -----
> > From: Jerry Barr
> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > Sent: Wednesday, May 29, 2013 12:55 PM
> > Subject: Re: [TS-520_820_530_830] eico324!!
> >
> > well it puts out audio but no rf/and it does hav serius 60 cycles/
> > everything looks originalcaps coils etc/wud it be wise to re cap it?
> >
> > Jerry KJ6NTL
> >
> > From: Mike <mailto:w5rkl%40yahoo.com>
> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > Sent: Wednesday, May 29, 2013 11:01 AM
> > Subject: Re: [TS-520_820_530_830] eico324!!
> >
> > Jerry,
> >
> > You have an RF generator from ebay but what else are you trying to say?
> >
> > 73
> > Mike W5RKL
> >
> > On 5/29/2013 12:17 PM, Jerry Barr wrote:
> > >
> > >
> > >
> > > hi all got a rf gen yest e=bay,contacts black how to clean and
> > > lube/any ideasand no rf but audio wrks
> > > Jerry KJ6NTL
> > >
> > > ------------------------------------
> > >
> > > Yahoo! Groups Links
> > >

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42415. Re: [TS-520_820_530_830] eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-30 21:39:25 UTC
From: Bob Macklin
Topic: 42339 Message: 42415

Jerry wrote"
"still not sure about grounding the chassis tho"

Disconnect C1 and C2 and measure the resistance between the transformer primary and the chassis .

There should be none. If there is any resistance between the transformer primary and the chassis with C1 and C2 disconnected you do have a problem.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: Wes Will
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, May 30, 2013 1:52 PM
Subject: Re: [TS-520_820_530_830] eico324!!

On 05/30/2013 02:48 PM, Jerry Barr wrote:
> trying to find some but what do i look for im shopping at mouser right
> now/still not sure about grounding the chassis tho

Search for "film capacitor" then refine it to the size
(microfarads/picofarads and working voltage) you need

[Non-text portions of this message have been removed]

42416. Thanks to Bob Mansker, KE5FTF, parts are here already.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-30 22:10:03 UTC
From: Wes Will
Topic: 42228 Message: 42416

The right part arrived, in a really short time, at a reasonable price. Can't ask for better. But got them. Thanks for the extras, too. "Case screws" come in handy all the time.

--
Wes Will
N9KDY

42417. Re: eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 00:04:58 UTC
From: Terry Wagoner
Topic: 42339 Message: 42417

Several folks have commented about your line filter caps. They are there to shunt rf on the 120VAC line to chassis ground. Sources of RF include portable appliances like mixers and blenders that have brushes and commutators that will arc and place a signal on the 60hz which would then be coupled into your Sig Gen. Three common ways to suppress this in old days. 1.Choke coils in series in the hot and grd leads to transformer primary. 2 A shunt capacitor across the hot and grd leads. and most commonly 3. Capacitors from each line to chassis ground on primary side of your transformer.

Your EICO has No. 3 configuration. If either of these two caps become leaky the chassis can come hot and be a shock hazard. These capacitors see the most severe duty in our radios and test gear because as long the line cord is plugged in to 120vac receptacle the capacitors are energized at all times. This is why new code requires safety capacitor to reduce shock and fire hazard from continuous duty cycle.

So today as Bob has stated you need to replace them with Safety Capacitors. Type X go across the line and Type Y from line to chassis. Easier to just use a universal safety capacitor designated as a type X1/Y2. Can buy these for 10 for $1.00 on Ebay. Check there before buying from Mouser unless you are making an order to Mouser. Capacitance value is not critical. Try to buy as close to values of the current caps. You can remove them and run without them and Sig gen will work just fine, but I would replace them with new Safety Caps.

As for replacing your wax tubular capacitors someone already mentioned using Film capacitors. That is correct but there are large variety of Film caps. Pretty much any of these will work. Plastic/polyester. Metalized polyester. Metalized polypropylene. Polystyrene and Mylar. Polypropylene and polystyrene are better for high frequency applications so I tend to buy and use them. The old wax paper are usually tubular in shape and may even have some "black beauties". Any rectangular brownish ones are likely Mica.

You should easily find Film capacitors at Mouser to replace any paper caps in your 324. Does not have to be Mylar. Mylar is just Dupont trade name.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Jerry Barr <kj6ntl@...> wrote:
>
> thanks Terry/ i do have a counter i got cheap off e-bay but someone removed the osc from it /so either i build a 1 meghrtz osc or try to buy one somewhereit was a seven or nine pin in a can dont remember right now but wud like to get it going has the old nixie tubes and they all work good/ my scope has one two but not sure how to use it/ ohÂ other then the the electrolytics what type caps shud i use for replacingÂ in the 324 the wax paper film type /what cant find any mylarÂ at mouser or digikey
>
>
> Jerry KJ6NTL
>
> From: Terry Wagoner <wagstw46@...>

> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, May 30, 2013 10:35 AM
> Subject: [TS-520_820_530_830] Re: eico324!!
>
> Â
> A GDO is not an instrument that many hams find useful these days. Almost indispensable in the old days for home brewing.
>
> Today for Kenwood service not much demand so would not rush out to buy one.
>
> Very good for checking the main plate choke. Most hams would just do a visual. Problem is that they do not know what the design parallel resonance is and where the series resonance holes should be. I have posted all the specs here several times. When I rewind a plate choke I do Dip it, but in practice as long as you use same gauge wire and get back on same number of design turns the series resonant holes should not have shifted. (One pretty close to 24mhz and next strong one at 33 mhz which is no concern).
>
> Before digital LCR bridge became common and affordable for the bench would use GDO along with a standard capacitor and standard inductor to calculate unknown inductors and capacitors by placing then in parallel resonant config and finding the Dip and then plug that value into the Resonant Frequency formula and solving to find your unknown capacitor or inductor. Worked pretty well if you were winding your own choke coils or making your own capacitors
>
> Also very good for dipping any antenna trap you have or want to make and for testing crystals.
>
> Thats about the common uses I can think of.
>
> There are some books on line you can read on how to use and several good old QST articles in ARRL archives. Important thing is use low level of grid current (maybe half scale) and very loose coupling and need a freq counter with sniffer loop near the GDO coil to read the frequency of the DIP. The dials are not very accurate.
>
> I have the classic Millen 90651 and the Measurements 59. The Measurements is a better dipper, but harder to find a good one and the Millen is a fine GDO. Kenwood makes a nice looking unit that I suspect has FET oscillator. I have no experience with it. Stay away from the Heath Tunnel Dipper. It does not have enough "horsepower". As you say the MFJ-259 has GDO coils but again I have no experience with it in that mode.
>
> Terry K9TW
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, Jerry Barr <kj6ntl@> wrote:
> >
> > actually i have always wanted to know how to use a grid dipper, i have a antenna anylyzer trhat has the capabilities / but not sure how to use it ,tried building some coils for it but not sure how good they are either hi hi/mfj259b/ and thanks for all the tips/espec ially the can for screws have a magnetic holder but it magnetizes the screws so they go into someting away from the tools hihi. anyway thanks for the help! i will order th deoxit and filter caps and bnc today if i can find it that is
> >
> >
> > Jerry KJ6NTL
> >
> > From: Wes Will <wwill@>

> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > Sent: Wednesday, May 29, 2013 2:14 PM
> > Subject: Re: [TS-520_820_530_830] eico324!!
> >
> > Ã□Â
> > On 05/29/2013 03:17 PM, Jerry Barr wrote:
> > > Sorry, but I was a little out of it when i wrote that. I'm a little sick today.
> > > I did use some De-Oxit spray contact cleaner while rotating switches etc.,
> > > but it didnt seem to help. And I do see some A/C on the audio out, and am getting
> > > some A/C between it and my scope ground. Any kind of lube to use, or no? Oh, and
> > > unplugged is good.
> >
> > Just use more cleaning spray. Some light work with a medium-stiff brush
> > to remove any caked-on dirt/dust. CAREFULLY. De-Oxit 5 (if I remember
> > a-right) has a lubricant in it, so just use that. I DON'T RECOMMEND
> > petroleum jelly, it tends to get into places it oughtn't.
> >
> > Any of the control-linkage sprays or lubes for electronics will loosen
> > the knobs, if the shafts aren't kinked or bent. No WD-40, either, by
> > the way. Just haven't had any good luck with that stuff for anything
> > electronic. Works fine of cabinet hinges, though...
> >
> > If you can, search the internet (GOOGLE.COM or I use IXQUICK.COM) for
> >
> > eico model 324 signal generator schematic manual
> >
> > You should be able to turn up a PDF file manual somewhere. (I'm being
> > lazy, didn't search it myself.) You can copy and paste that line above
> > to the search engine page.
> >
> > See what comes up, but DO NOT pay money for it on-line. Check here
> > FIRST, most of those "We'll sell you a manual," places add "SUCKER!"
> > when you hang up the phone.
> >
> > This is BASIC cleaning of equipment. It more or less applies to
> > ANYTHING, old, new, or in-between:
> >
> > Check the circuit boards for obvious damage. Burned spots on the
> > phenolic side, blackened components, burned or missing traces on the
> > copper side, if there are circuit boards and it's not all
> > point-to-point. (I don't remember if I've ever been under the hood of a
> > 324, so I don't have any idea of the construction methods.) Cracked or
> > lifted traces on circuit boards. Cold solder joints. Cracking
> > insulation on point-to-point wiring. Loose or corroded connectors.
> >
> > Also look for popped or bulging capacitors, leaking electrolytic
> > compound, any sort of crystallized powdery residue particularly on or
> > underneath capacitors, and particularly electrolytic capacitors.
> >

> > Excess flux on solder joints, that will leave a whitish or resiny
> > coating on things. Clean it off with flux remover (best) or isopropyl
> > (rubbing) alcohol (cheapest) and dry THOROUGHLY.
> >
> > Check coils for mashed, displaced, or broken windings. You have to lift
> > one end of a coil (and a resistor, and a diode, and about anything else,
> > if it's a 2-lead device) and check it for simple continuity. Won't tell
> > you if it's still the right electrical size, but will tell you if the
> > windings are broken.
> >
> > Anyone else here still use a grid dipper?? Or am I REALLY a dinosaur??
> >
> > If you take ANYTHING apart (even the CASE if it's a tricky disassembly)
> > TAKE NOTES, or a digital snapshot of the thing as it comes apart (BOTH
> > NOTES AND PIX), so you know how it goes back together.
> >
> > Keep the screws in something that you're not going to tip over every
> > time you reach for a tool and spread ballistically all over the room.
> >
> > If possible, and if they won't be in the way of getting the next bit
> > out, PUT THE SCREWS BACK IN THE HOLES THEY CAME OUT OF after the
> > sub-assembly or component has been taken off the chassis or whatever.
> > That way, you know for sure where the screw came from.
> >
> > Replace and repair as you find problems. Once the obvious stuff is
> > taken care of, then you dive into the schematic and start tracing
> > signals and verifying biases, and making sure that power supplies are
> > supplying power, and that kind of stuff.
> >
> > The Mark I Eyeball is your best diagnostic tool when you begin with an
> > old piece of gear.
> >
> > Good Luck.
> >
> > --
> > Wes Will
> > N9KDY
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
>
>
>
> [Non-text portions of this message have been removed]
>

42418. Re: eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 01:13:23 UTC
From: Terry Wagoner
Topic: 42339 Message: 42418

I forgot to ask did someone respond to your high anode voltage on 12AU7? If not it may be possible that someone has already replaced the selenium rectifier with a silicon diode as I suggested you do in earlier post, but they may not have added the necessary series dropping resistor. Must do that.

If you just replace the selenium you can end up with DC supply voltage 15 to 20 vdc higher. For example: 120 vac secondary will charge filter caps to the peak or 120 X 1.414 = 170 vdc. Output voltage at tubes plate will be somewhat less than this due to drop across the Pi filter (C-R-C).

So do you know what a selenium rectifier looks like? If not, it is a square cube that has stack of thin metal plates. Secondary lead of power transformer will run to terminal on it. If it has been replaced they should have added the series resistor from approx 100 to 200 ohms at 2-5 watts. Often have to play with the value to tweak it in.

If selenium is there strongly recommend you replace it with 1N4007 silicon rectifier diode (mouser or radio shack). If you do not you will not like the odor when it does fail. It is not a joke and can be a fire and the fumes are toxic.

I usually mount the silicon diode and series resistor on a phenolic terminal strip. Just dont connect to the ground lug!

Terry K9TW

>
>

42419. Re: My TS-820 got sick... :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 01:13:43 UTC
From: coyoteinventor@ymail.com
Topic: 42157 Message: 42419

Hello again Terry,

I think my problem might be a loose/cracked connection somewhere, and those are hard to track down. I'm saying this because as I was following your instructions and looking into other measurements following some schematics I have, I flipped the rig and it started working. I then flipped it again and it stopped working, and then tried to flip it one more time and did not work anymore. So I proceeded to make measurements on the transistors on the AF-AVR board, and then, I screwed in place the AF-AVR board again, and now the radio is working again (even after I put it right-side up again). So I'm guessing it's not a component failure but more of a connection failure, right?

In any case, here are the measurements I took when the rig was not working properly, and then after it started working properly:

On the IF board, Conn IF-3, using a 10Meg DMM, I got the following values:

1. With power off measure AGC bus resistance at Pin 11. Should be approx 1.7 meg ohm.
>>> I actually got 2.7 meg ohms between pins 11 and 17 (without removing any of the connectors).

2. With power on measure RF-1 at Pin 8. Should be approx 3.4vdc
>>> I measured 1.96V when not working, 2.9V when working.

3. With power on and RF gain pot full CW measure AGC at Pin 11. Should be approx 2.8vdc with a 11 meg VTVM and somewhat less with a 10 meg ohm DMM.
>>> When not working I measured 1.47V, and the schematics I have said it should be at 3V (same as you said). I also measured AGC at pin 7 on RF board (RF-1 Conn), and also got 1.47V. When working I measured 2.2V.

4. If RF-1 is OK and AGC is very low you can try applying 3vdc to Pin 11 and see if rig comes alive. If you do not have a bench supply then use a Radio Shack battery holder and series up couple of 1.5vdc C or D cells. Connect negative lead to chassis ground and touch positive 3vdc lead to Pin 11. Rig should come alive. Watch S meter and see if it comes off the peg.
>>> I did not attempt this as you mentioned to do this "if" RF-1 was OK, which in this case it does not look like it's OK.

5. I forgot also measure voltage at Pin 6 AGL should be same as what you read at Pin 11 AGC. AGL and AGC at IF board should be same point electrically as they are connected in receive mode thru the NC contact of the aux relay you just cleaned. But possible to have bad molex connections at Relay board and/or IF board.
>>> When not working I measured 1.47V, so it does look like AGL and AGC are connected. When working I measured 2.2V.

6. Also apply temporary 3vdc to Pin 6 and see if S meter comes off the peg.
>>> I again, I did not attempt this for the same reason as mentioned in item 4.

Like I said at the beginning, and following some troubleshooting suggestions from the Service Manual, I checked the Q1 and Q2 transistors on the AF-AVR board and their voltages on B/C/E were correct, and then, for Q3, I only checked pins 1, 3, 5 and 6, and they all gave me values as shown in the schematics. Those schematics are very handy!!! :-)

So, next time it fails, should I look into the RF board since the IF board did not have correct AGC or RF-1 voltages? Or do you suggest some other places I should make measurements to see if I can spot where the intermittent connection is?

Thanks again for your help Terry! I have a feeling I'm going to really get to know and love my new rig. ;-)

--Cesar-- K1TNT

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> I forgot also measure voltage at Pin 6 AGL should be same as what you read at Pin 11 AGC.
>
> Also apply temporary 3vdc to Pin 6 and see if S meter comes off the peg.
>
> AGL and AGC at IF board should be same point electrically as they are connected in receive mode thru the NC contact of the aux relay you just cleaned. But possible to have bad molex connections at Relay board and/or IF board.
>

42420. Re: My TS-820 got sick... :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 01:40:07 UTC
From: Terry Wagoner
Topic: 42157 Message: 42420

OK Cesar:

With rig not working I think you measured RF-1 at approx 1.9vdc. At that level you will have very low or no Receive because the AGC bus control voltage to the gain controlled devices (IF and RF amp mosfets) is too low.

I think you said when rig is working you measured approx 2.9vdc at RF-1. You can adjust that with trim pot VR-1 on the AVR board. You want nothing less than 3.3vdc. Receiver will work on 2.9vdc, but not optimum.

It sounds like you have a high resistance ground on the AVR board ground plane. This can account for the low RF-1 voltage. I would loosen all the hold down screws and re-tighten (snug) them. No need to install star lock washers. Just dont strip the screws out.

Your resistance on the AGC bus of approx 2.7 meg is good. Tells you no shorts on it (like failed meter FET) and no leaky timing caps to pull it down.

It is ok to try the temporary 3vdc on the AGC bus when it is at 1.9 or 2.9 vdc. You are simply paralleling dc power supplies like jumpering your car battery with another. It will not hurt anything. No reason to do it if you have consistent 3.3 vdc. I only suggest it when you have low AGC voltage on the bus.

Again: First suggest you loosen and tighten AVR board mounting screws and then adjust RF-1 voltage to 3.3vdc and see of receive now acts normal. As I recall there are couple of different AVR board revisions and the ground plane is not continuous around board perimeter so important that all hold down screws make good contact with chassis.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@..." <coyoteinventor@...> wrote:
>
> Hello again Terry,
>
> I think my problem might be a loose/cracked connection somewhere, and those are hard to track down. I'm saying this because as I was following your instructions and looking into other measurements following some schematics I have, I flipped the rig and it started working. I then flipped it again and it stopped working, and then tried to flip it one more time and did not work anymore. So I proceeded to make measurements on the transistors on the AF-AVR board, and then, I screwed in place the AF-AVR board again, and now the radio is working again (even after I put it right-side up again). So I'm guessing it's not a component failure but more of a connection failure, right?
>
> In any case, here are the measurements I took when the rig was not working properly, and then after it started working properly:
>
> On the IF board, Conn IF-3, using a 10Meg DMM, I got the following values:

>
> 1. With power off measure AGC bus resistance at Pin 11. Should be approx 1.7 meg
> ohm.
> >>> I actually got 2.7 meg ohms between pins 11 and 17 (without removing any of the connectors).
>
> 2. With power on measure RF-1 at Pin 8. Should be approx 3.4vdc
> >>> I measured 1.96V when not working, 2.9V when working.
>
> 3. With power on and RF gain pot full CW measure AGC at Pin 11. Should be approx
> 2.8vdc with a 11 meg VTVM and somewhat less with a 10 meg ohm DMM.
> >>> When not working I measured 1.47V, and the schematics I have said it should be at 3V (same as you said). I also measured AGC at pin 7 on RF board (RF-1 Conn), and also got 1.47V. When working I measured 2.2V.
>
> 4. If RF-1 is OK and AGC is very low you can try applying 3vdc to Pin 11 and see
> if rig comes alive. If you do not have a bench supply then use a Radio Shack
> battery holder and series up couple of 1.5vdc C or D cells. Connect negative
> lead to chassis ground and touch positive 3vdc lead to Pin 11. Rig should come
> alive. Watch S meter and see if it comes off the peg.
> >>> I did not attempt this as you mentioned to do this "if" RF-1 was OK, which in this case it does not look like it's OK.
>
> 5. I forgot also measure voltage at Pin 6 AGL should be same as what you read at Pin 11 AGC. AGL and AGC at IF board should be same point electrically as they are connected in receive mode thru the NC contact of the aux relay you just cleaned. But possible to have bad molex connections at Relay board and/or IF board.
> >>> When not working I measured 1.47V, so it does look like AGL and AGC are connected. When working I measured 2.2V.
>
> 6. Also apply temporary 3vdc to Pin 6 and see if S meter comes off the peg.
> >>> I again, I did not attempt this for the same reason as mentioned in item 4.
>
>
> Like I said at the beginning, and following some troubleshooting suggestions from the Service Manual, I checked the Q1 and Q2 transistors on the AF-AVR board and their voltages on B/C/E were correct, and then, for Q3, I only checked pins 1, 3, 5 and 6, and they all gave me values as shown in the schematics. Those schematics are very handy!!! :-)
>
> So, next time it fails, should I look into the RF board since the IF board did not have correct AGC or RF-1 voltages? Or do you suggest some other places I should make measurements to see if I can spot where the intermittent connection is?
>
> Thanks again for your help Terry! I have a feeling I'm going to really get to know and love my new rig. ;-)
>
> --Cesar-- K1TNT
>
>
>

>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > I forgot also measure voltage at Pin 6 AGL should be same as what you read at Pin 11 AGC.
> >
> > Also apply temporary 3vdc to Pin 6 and see if S meter comes off the peg.
> >
> > AGL and AGC at IF board should be same point electrically as they are connected in receive mode thru the NC contact of the aux relay you just cleaned. But possible to have bad molex connections at Relay board and/or IF board.
> >
>

42421. Re: My TS-820 got sick... :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 02:46:19 UTC
From: coyoteinventor@ymail.com
Topic: 42157 Message: 42421

Thanks again Terry!

I have a question and a comment based on your last feedback.

1) When you say that I can adjust RF-1 to be 3.3V, you are assuming I'm not using a DMM, right? I think you said with a DMM I would be seeing smaller values.

2) I took the AVR board out to make the measurements on the Q1-3 on the back side, and when I put it back in its place I made sure the screws were nice and tight, maybe that's why it's working now. I did notice one of the 4 screws was missing, so I'll make sure I find a forth one and put it in place.

Thanks again!

--Cesar-- K1TNT

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> OK Cesar:
>
> With rig not working I think you measured RF-1 at approx 1.9vdc. At that level you will have very low or no Receive because the AGC bus control voltage to the gain controlled devices (IF and RF amp mosfets) is too low.
>
> I think you said when rig is working you measured approx 2.9vdc at RF-1. You can adjust that with trim pot VR-1 on the AVR board. You want nothing less than 3.3vdc. Receiver will work on 2.9vdc, but not optimum.
>
> It sounds like you have a high resistance ground on the AVR board ground plane. This can account for the low RF-1 voltage. I would loosen all the hold down screws and re-tighten (snug) them. No need to install star lock washers. Just dont strip the screws out.
>
> Your resistance on the AGC bus of approx 2.7 meg is good. Tells you no shorts on it (like failed meter FET) and no leaky timing caps to pull it down.
>
> It is ok to try the temporary 3vdc on the AGC bus when it is at 1.9 or 2.9 vdc. You are simply paralleling dc power supplies like jumpering your car battery with another. It will not hurt anything. No reason to do it if you have consistent 3.3 vdc. I only suggest it when you have low AGC voltage on the bus.
>
> Again: First suggest you loosen and tighten AVR board mounting screws and then adjust RF-1 voltage to 3.3vdc and see of receive now acts normal. As I recall there are couple of different AVR board revisions and the ground plane is not continuous around board perimeter so important that all hold down screws make good contact with chassis.
>
> Terry K9TW

>
> --- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@" <coyoteinventor@> wrote:
> >
> > Hello again Terry,
> >
> > I think my problem might be a loose/cracked connection somewhere, and those are hard to track down. I'm saying this because as I was following your instructions and looking into other measurements following some schematics I have, I flipped the rig and it started working. I then flipped it again and it stopped working, and then tried to flip it one more time and did not work anymore. So I proceeded to make measurements on the transistors on the AF-AVR board, and then, I screwed in place the AF-AVR board again, and now the radio is working again (even after I put it right-side up again). So I'm guessing it's not a component failure but more of a connection failure, right?
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> > In any case, here are the measurements I took when the rig was not working properly, and then after it started working properly:
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> > ohm.
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> >
> > 2. With power on measure RF-1 at Pin 8. Should be approx 3.4vdc
> > >>> I measured 1.96V when not working, 2.9V when working.
> >
> > 3. With power on and RF gain pot full CW measure AGC at Pin 11. Should be approx
> > 2.8vdc with a 11 meg VTVM and somewhat less with a 10 meg ohm DMM.
> > >>> When not working I measured 1.47V, and the schematics I have said it should be at 3V (same as you said). I also measured AGC at pin 7 on RF board (RF-1 Conn), and also got 1.47V. When working I measured 2.2V.
> >
> > 4. If RF-1 is OK and AGC is very low you can try applying 3vdc to Pin 11 and see
> > if rig comes alive. If you do not have a bench supply then use a Radio Shack
> > battery holder and series up couple of 1.5vdc C or D cells. Connect negative
> > lead to chassis ground and touch positive 3vdc lead to Pin 11. Rig should come
> > alive. Watch S meter and see if it comes off the peg.
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> > >>> When not working I measured 1.47V, so it does look like AGL and AGC are connected. When working I measured 2.2V.
> >
> > 6. Also apply temporary 3vdc to Pin 6 and see if S meter comes off the peg.
> > >>> I again, I did not attempt this for the same reason as mentioned in item 4.

> >
> >
> > Like I said at the beginning, and following some troubleshooting suggestions from the Service Manual, I checked the Q1 and Q2 transistors on the AF-AVR board and their voltages on B/C/E were correct, and then, for Q3, I only checked pins 1, 3, 5 and 6, and they all gave me values as shown in the schematics. Those schematics are very handy!!! :-)
> >
> > So, next time it fails, should I look into the RF board since the IF board did not have correct AGC or RF-1 voltages? Or do you suggest some other places I should make measurements to see if I can spot where the intermittent connection is?
> >
> > Thanks again for your help Terry! I have a feeling I'm going to really get to know and love my new rig. ;-)
> >
> > --Cesar-- K1TNT
> >
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > >
> > > I forgot also measure voltage at Pin 6 AGL should be same as what you read at Pin 11 AGC.
> > >
> > > Also apply temporary 3vdc to Pin 6 and see if S meter comes off the peg.
> > >
> > > AGL and AGC at IF board should be same point electrically as they are connected in receive mode thru the NC contact of the aux relay you just cleaned. But possible to have bad molex connections at Relay board and/or IF board.
> > >
> >
>

42422. Re: [TS-520_820_530_830] Digital Interface for Kenwood

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 04:09:03 UTC
From: GEAgent21@...
Topic: 42412 Message: 42422

I will take it if you still have. Can do PayPal. Please let me know.
Thanks
Greg
KC9VVU

In a message dated 5/30/2013 4:36:39 P.M. Eastern Daylight Time,
k3ssb@... writes:

Good Afternoon Group:

Some of you may recall that I recently liquidated my entire TS-820S station. In doing a bit of house keeping I discovered my Digital Interface for Kenwood Transceivers. Details are as follows:

Our interface includes a 3 ft cable which will allow you to have your radio and computer up to 5.5 ft apart, which is probably far enough for most people. Donner's Digital Interface will interface the Kenwood Amateur (Ham) radios listed below that use a 4 pin microphone connector, to computers for working digital modes like PSK31, RTTY, SSTV, AMTOR, CW, and many others.

You won't have to set any jumpers or change anything on the interface. Just plug it into your radio and computer, download and setup your software and you are ready to get on the air.

This is a brand NEW interface, never used, only taken out of its packaging for inspection.

Kenwood Transceivers:

TS-120, TS-130, TS-180
TS-311, TS-510, TS-511
TS-520, TS-530,TS-600
TS-700, TS-770, TS-801
TS-820/S, TS-830, TS-900
TX-310, TR-1300, TR-2200
TR-2300, TR-5200, TR-7010
TR-7200, TR-7400, TR-7500
TR-8000, TR-8200, TR-8300

I'll take 35.00 shipped FREE via USPS Priority mail. I would prefer payment through PayPal. Any questions, please don't hesitate to contact me off list. - K3SSB at verizon.net

Thanks to the group for indulging me. - tnx es 73

[Non-text portions of this message have been removed]

42423. Re: [TS-520_820_530_830] Re: eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 02:59:29 UTC
From: Jerry Barr
Topic: 42339 Message: 42423

Terry u spend so much time explaininmg things and have such a grasp on electronic/ its amazing to me/and so willing to share that knowlage/ i really appreciate all the help i get here / the safety caps i ordered from mouser and elecrolitcs/ but got tired of going thru their system for the others so will find them elsewhere for some reason i never look for components on e-bay don't no why! guess never occurs to me. thanks for the help and that thanks is extended to everyone / i shud know some of this stuff but i dont

Jerry KJ6NTL

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, May 30, 2013 5:04 PM
Subject: [TS-520_820_530_830] Re: eico324!!

Several folks have commented about your line filter caps. They are there to shunt rf on the 120VAC line to chassis ground. Sources of RF include portable appliances like mixers and blenders that have brushes and commutators that will arc and place a signal on the 60hz which would then be coupled into your Sig Gen. Three common ways to suppress this in old days. 1.Choke coils in series in the hot and grd leads to transformer primary. 2 A shunt capacitor across the hot and grd leads. and most commonly 3. Capacitors from each line to chassis ground on primary side of your transformer.

Your EICO has No. 3 configuration. If either of these two caps become leaky the chassis can come hot and be a shock hazard. These capacitors see the most severe duty in our radios and test gear because as long the line cord is plugged in to 120vac receptacle the capacitors are energized at all times. This is why new code requires safety capacitor to reduce shock and fire hazard from continuous duty cycle.

So today as Bob has stated you need to replace them with Safety Capacitors. Type X go across the line and Type Y from line to chassis. Easier to just use a universal safety capacitor designated as a type X1/Y2. Can buy these for 10 for $1.00 on Ebay. Check there before buying from Mouser unless you are making an order to Mouser. Capacitance value is not critical. Try to buy as close to values of the current caps. You can remove them and run without them and Sig gen will work just fine, but I would replace them with new Safety Caps.

As for replacing your wax tubular capacitors someone already mentioned using Film capacitors. That is correct but there are large variety of Film caps. Pretty much any of these will work. Plastic/polyester. Metalized polyester. Metalized polypropylene. Polystyrene and Mylar. Polypropylene and polystyrene are better for high frequency applications so I tend to buy and use them. The old wax paper are usually tubular in shape and may even have some "black beauties". Any rectangular brownish ones are likely Mica.

You should easily find Film capacitors at Mouser to replace any paper caps in your 324. Does not have to be Mylar. Mylar is just Dupont trade name.

Terry K9TW

--- In mailto:TS-520_820_530_830%40yahoogroups.com, Jerry Barr <kj6ntl@...> wrote:
>
> thanks Terry/ i do have a counter i got cheap off e-bay but someone removed the osc from it /so either i build a 1 meghrtz osc or try to buy one somewhereit was a seven or nine pin in a can dont remember right now but wud like to get it going has the old nixie tubes and they all work good/ my scope has one two but not sure how to use it/ ohÂ other then the the electrolytics what type caps shud i use for replacingÂ in the 324 the wax paper film type /what cant find any mylarÂ at mouser or digikey
>
>
> Jerry KJ6NTL
>
> From: Terry Wagoner <wagstw46@...>
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Thursday, May 30, 2013 10:35 AM
> Subject: [TS-520_820_530_830] Re: eico324!!
>
> Â
> A GDO is not an instrument that many hams find useful these days. Almost indispensable in the old days for home brewing.
>
> Today for Kenwood service not much demand so would not rush out to buy one.
>
> Very good for checking the main plate choke. Most hams would just do a visual. Problem is that they do not know what the design parallel resonance is and where the series resonance holes should be. I have posted all the specs here several times. When I rewind a plate choke I do Dip it, but in practice as long as you use same gauge wire and get back on same number of design turns the series resonant holes should not have shifted. (One pretty close to 24mhz and next strong one at 33 mhz which is no concern).
>
> Before digital LCR bridge became common and affordable for the bench would use GDO along with a standard capacitor and standard inductor to calculate unknown inductors and capacitors by placing then in parallel resonant config and finding the Dip and then plug that value into the Resonant Frequency formula and solving to find your unknown capacitor or inductor. Worked pretty well if you were winding your own choke coils or making your own capacitors
>
> Also very good for dipping any antenna trap you have or want to make and for testing crystals.
>
> Thats about the common uses I can think of.
>
> There are some books on line you can read on how to use and several good old QST articles in ARRL archives. Important thing is use low level of grid current (maybe half scale) and very loose coupling and need a freq counter with sniffer loop near the GDO coil to read the frequency of the DIP. The dials are not very accurate.
>
> I have the classic Millen 90651 and the Measurements 59. The Measurements is a better dipper, but harder to find a good one and the Millen is a fine GDO. Kenwood makes a nice looking unit that I suspect has FET oscillator. I have no experience with it. Stay away from the Heath Tunnel Dipper. It does not have enough "horsepower". As you say the MFJ-259

has GDO coils but again I have no experience with it in that mode.
>
> Terry K9TW
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, Jerry Barr <kj6ntl@> wrote:
> >
> > actually i have always wanted to know how to use a grid dipper, i have a antenna anylyzer trhat has the capabilities / but not sure how to use it ,tried building some coils for it but not sure how good they are either hi hi/mfj259b/ and thanks for all the tips/espec ially the can for screws have a magnetic holder but it magnetizes the screws so they go into someting away from the tools hihi. anyway thanks for the help! i will order th deoxit and filter caps and bnc today if i can find it that is
> >
> >
> > Jerry KJ6NTL
> >
> > From: Wes Will <wwill@>
> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > Sent: Wednesday, May 29, 2013 2:14 PM
> > Subject: Re: [TS-520_820_530_830] eico324!!
> >
> > Ã‚Â
> > On 05/29/2013 03:17 PM, Jerry Barr wrote:
> > > Sorry, but I was a little out of it when i wrote that. I'm a little sick today.
> > > I did use some De-Oxit spray contact cleaner while rotating switches etc.,
> > > but it didnt seem to help. And I do see some A/C on the audio out, and am getting
> > > some A/C between it and my scope ground. Any kind of lube to use, or no? Oh, and
> > > unplugged is good.
> >
> > Just use more cleaning spray. Some light work with a medium-stiff brush
> > to remove any caked-on dirt/dust. CAREFULLY. De-Oxit 5 (if I remember
> > a-right) has a lubricant in it, so just use that. I DON'T RECOMMEND
> > petroleum jelly, it tends to get into places it oughtn't.
> >
> > Any of the control-linkage sprays or lubes for electronics will loosen
> > the knobs, if the shafts aren't kinked or bent. No WD-40, either, by
> > the way. Just haven't had any good luck with that stuff for anything
> > electronic. Works fine of cabinet hinges, though...
> >
> > If you can, search the internet (GOOGLE.COM or I use IXQUICK.COM) for
> >
> > eico model 324 signal generator schematic manual
> >
> > You should be able to turn up a PDF file manual somewhere. (I'm being
> > lazy, didn't search it myself.) You can copy and paste that line above
> > to the search engine page.
> >
> > See what comes up, but DO NOT pay money for it on-line. Check here
> > FIRST, most of those "We'll sell you a manual," places add "SUCKER!"
> > when you hang up the phone.
> >

> > This is BASIC cleaning of equipment. It more or less applies to
> > ANYTHING, old, new, or in-between:
> >
> > Check the circuit boards for obvious damage. Burned spots on the
> > phenolic side, blackened components, burned or missing traces on the
> > copper side, if there are circuit boards and it's not all
> > point-to-point. (I don't remember if I've ever been under the hood of a
> > 324, so I don't have any idea of the construction methods.) Cracked or
> > lifted traces on circuit boards. Cold solder joints. Cracking
> > insulation on point-to-point wiring. Loose or corroded connectors.
> >
> > Also look for popped or bulging capacitors, leaking electrolytic
> > compound, any sort of crystallized powdery residue particularly on or
> > underneath capacitors, and particularly electrolytic capacitors.
> >
> > Excess flux on solder joints, that will leave a whitish or resiny
> > coating on things. Clean it off with flux remover (best) or isopropyl
> > (rubbing) alcohol (cheapest) and dry THOROUGHLY.
> >
> > Check coils for mashed, displaced, or broken windings. You have to lift
> > one end of a coil (and a resistor, and a diode, and about anything else,
> > if it's a 2-lead device) and check it for simple continuity. Won't tell
> > you if it's still the right electrical size, but will tell you if the
> > windings are broken.
> >
> > Anyone else here still use a grid dipper?? Or am I REALLY a dinosaur??
> >
> > If you take ANYTHING apart (even the CASE if it's a tricky disassembly)
> > TAKE NOTES, or a digital snapshot of the thing as it comes apart (BOTH
> > NOTES AND PIX), so you know how it goes back together.
> >
> > Keep the screws in something that you're not going to tip over every
> > time you reach for a tool and spread ballistically all over the room.
> >
> > If possible, and if they won't be in the way of getting the next bit
> > out, PUT THE SCREWS BACK IN THE HOLES THEY CAME OUT OF after the
> > sub-assembly or component has been taken off the chassis or whatever.
> > That way, you know for sure where the screw came from.
> >
> > Replace and repair as you find problems. Once the obvious stuff is
> > taken care of, then you dive into the schematic and start tracing
> > signals and verifying biases, and making sure that power supplies are
> > supplying power, and that kind of stuff.
> >
> > The Mark I Eyeball is your best diagnostic tool when you begin with an
> > old piece of gear.
> >
> > Good Luck.
> >
> > --

> > Wes Will
> > N9KDY
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
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> [Non-text portions of this message have been removed]
>

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42424. Re: [TS-520_820_530_830] Re: eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 03:23:48 UTC
From: Jerry Barr
Topic: 42339 Message: 42424

weeeellll hmmmm, it is a rectangular black thing abt 1/2 x3/4,x3/4/ the tag on it has a sorta s on theAnode?and sorta regular straight line on the bottom of the arrow hihi/ so dont know if that s indicates selenium or not/ ive seen selenium diodes in battery chargers but bigger then this by far and never encased in epoxy or whatever
but that wud explain the hi voltage on plates for sure cause i dont see any resistors other then the schematics ones/ i might even have some 1n4007 laying on the bench awaiting to be used may even have the resistor salvaged from some tv or somethin/ agin thanks Terry / U can be my Mentor anytime/ it is really nice to have someone thats willing to spend time helping /maybe someday i can pass it forward thanks
Jerry KJ6NTL

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, May 30, 2013 6:13 PM
Subject: [TS-520_820_530_830] Re: eico324!!

I forgot to ask did someone respond to your high anode voltage on 12AU7? If not it may be possible that someone has already replaced the selenium rectifier with a silicon diode as I suggested you do in earlier post, but they may not have added the necessary series dropping resistor. Must do that.

If you just replace the selenium you can end up with DC supply voltage 15 to 20 vdc higher. For example: 120 vac secondary will charge filter caps to the peak or 120 X 1.414 = 170 vdc. Output voltage at tubes plate will be somewhat less than this due to drop across the Pi filter (C-R-C).

So do you know what a selenium rectifier looks like? If not, it is a square cube that has stack of thin metal plates. Secondary lead of power transformer will run to terminal on it. If it has been replaced they should have added the series resistor from approx 100 to 200 ohms at 2-5 watts. Often have to play with the value to tweak it in.

If selenium is there strongly recommend you replace it with 1N4007 silicon rectifier diode (mouser or radio shack). If you do not you will not like the odor when it does fail. It is not a joke and can be a fire and the fumes are toxic.

I usually mount the silicon diode and series resistor on a phenolic terminal strip. Just dont connect to the ground lug!

Terry K9TW

>
>

[Non-text portions of this message have been removed]

42425. TS-520 No receive No TX?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 05:09:25 UTC
From: rayosfostoria
Topic: 42425 Message: 42425

Hello all, new to the group!
I've been running kenwood rigs since I first got my novice ticket (now General class) 20+ year ago.

Last week I picked up a nice looking Kenwood 520. I was told by the PO it had died during a QSO on 20 meters, It quit both TX and receive.
Got it home and it is dead on all bands in receive. However when you'd push in the WWV button it will receive across that band just fine.
Also noticed at times when you'd push the button in the JJY position it would receive fine for about 2-5 seconds then die, just static.
Also from a cold start it would receive fine (sometimes) for about the same time. Now I cannot get it to receive at all in the JJY position! WWV still works fine. It has a jumper (solder blob) across the 8 and 9 pins on the vfo plug.

TX is a different story, I'm getting about 70 watts on 80M, 25 on 40M, 10-18 watts or so on 20-10M. Not real worried about the TX side yet, need to get the receive going.

I have cleaned the relays, Checked the WWV/JJY switch, not broken and has continuity in both positions. Loosened and retightened all screws, checked for dead end wires, Checked the voltages on the AVR board for 9 volts and 3.3 volts there ok. Not even sure where to really start looking? Just done a few basic's.

Now I am new to troubleshooting and repair, only armed with a Volt/Ohm meter, A Blown up schematic of the 520, Both the manual and service manual. Would really like to get this old gal working again!
Any help, guidance would sure be appreciated!!

42426. RE: [Bulk] [TS-520_820_530_830] TS-520 No receive No TX?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 05:35:13 UTC
From: Brad Allen
Topic: 42425 Message: 42426

It would probably help if you had a signal injector to find out what stage is causing the problem. You can start and see what the DC and AC voltages are on the tubes. Trouble shooting this or anything else you would start mid way and follow the voltages. Check all voltages from the AVR. Are there any common tubes that work in transmit and receive. Check the respective voltages. If all receive is bad but one band as you can get WWV band, see from the schematic anything common for all the other bands that may be missing. Seems to me you may have a bad switch somewhere that is not used for the WWV band. Brad KB2CHY

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of rayosfostoria
Sent: Friday, May 31, 2013 1:09 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [Bulk] [TS-520_820_530_830] TS-520 No receive No TX?

Hello all, new to the group!
I've been running kenwood rigs since I first got my novice ticket (now General class) 20+ year ago.

Last week I picked up a nice looking Kenwood 520. I was told by the PO it had died during a QSO on 20 meters, It quit both TX and receive.
Got it home and it is dead on all bands in receive. However when you'd push in the WWV button it will receive across that band just fine.
Also noticed at times when you'd push the button in the JJY position it would receive fine for about 2-5 seconds then die, just static.
Also from a cold start it would receive fine (sometimes) for about the same time. Now I cannot get it to receive at all in the JJY position! WWV still works fine. It has a jumper (solder blob) across the 8 and 9 pins on the vfo plug.

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I have cleaned the relays, Checked the WWV/JJY switch, not broken and has continuity in both positions. Loosened and retightened all screws, checked for dead end wires, Checked the voltages on the AVR board for 9 volts and 3.3 volts there ok. Not even sure where to really start looking? Just done a few basic's.

Now I am new to troubleshooting and repair, only armed with a Volt/Ohm meter, A Blown up schematic of the 520, Both the manual and service manual. Would really like to get this old gal working again!
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42427. RE: [Bulk] [TS-520_820_530_830] TS-520 No receive No TX?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 05:50:53 UTC
From: Brad Allen
Topic: 42425 Message: 42427

I found a service manual for a 520S and you have some voltages to check for. You should also read the service manual because getting WWV band is not a clue to anything other than if it is working well, you are missing voltages somewhere else in the radio. You should probably sit back and read the service manual for more info. Brad KB2CHY

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Brad Allen
Sent: Friday, May 31, 2013 1:35 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [Bulk] [TS-520_820_530_830] TS-520 No receive No TX?

It would probably help if you had a signal injector to find out what stage is causing the problem. You can start and see what the DC and AC voltages are on the tubes. Trouble shooting this or anything else you would start mid way and follow the voltages. Check all voltages from the AVR. Are there any common tubes that work in transmit and receive. Check the respective voltages. If all receive is bad but one band as you can get WWV band, see from the schematic anything common for all the other bands that may be missing. Seems to me you may have a bad switch somewhere that is not used for the WWV band. Brad KB2CHY

From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
[mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of rayosfostoria
Sent: Friday, May 31, 2013 1:09 AM
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Subject: [Bulk] [TS-520_820_530_830] TS-520 No receive No TX?

Hello all, new to the group!
I've been running kenwood rigs since I first got my novice ticket (now General class) 20+ year ago.

Last week I picked up a nice looking Kenwood 520. I was told by the PO it had died during a QSO on 20 meters, It quit both TX and receive.
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Also noticed at times when you'd push the button in the JJY position it would receive fine for about 2-5 seconds then die, just static.
Also from a cold start it would receive fine (sometimes) for about the same time. Now I cannot get it to receive at all in the JJY position! WWV still

works fine. It has a jumper (solder blob) across the 8 and 9 pins on the vfo plug.

TX is a different story, I'm getting about 70 watts on 80M, 25 on 40M, 10-18 watts or so on 20-10M. Not real worried about the TX side yet, need to get the receive going.

I have cleaned the relays, Checked the WWV/JJY switch, not broken and has continuity in both positions. Loosened and retightened all screws, checked for dead end wires, Checked the voltages on the AVR board for 9 volts and 3.3 volts there ok. Not even sure where to really start looking? Just done a few basic's.

Now I am new to troubleshooting and repair, only armed with a Volt/Ohm meter, A Blown up schematic of the 520, Both the manual and service manual. Would really like to get this old gal working again!
Any help, guidance would sure be appreciated!!

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42428. RE: [Bulk] [TS-520_820_530_830] TS-520 No receive No TX?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 06:05:53 UTC
From: Brad Allen
Topic: 42425 Message: 42428

http://www.eham.net/ehamforum/smf/index.php/topic,90240.0.html

This I believe is you as well on EHam. You have some answers here as well. They tend to say the same as myself, you have some voltages missing. I would check the VFO plug in the rear of the radio and be sure pins 8 and 9 have a good short. This delivers 9 volts to the VFO. Check your schematic, the one I have is pretty bad. I believe your receiver is fine. It seems to be the VFO with the issue. Brad KB2CHY

From: Brad Allen [mailto:kb2chy@...]
Sent: Friday, May 31, 2013 1:51 AM
To: 'TS-520_820_530_830@yahoogroups.com'
Subject: RE: [Bulk] [TS-520_820_530_830] TS-520 No receive No TX?

I found a service manual for a 520S and you have some voltages to check for. You should also read the service manual because getting WWV band is not a clue to anything other than if it is working well, you are missing voltages somewhere else in the radio. You should probably sit back and read the service manual for more info. Brad KB2CHY

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Brad Allen
Sent: Friday, May 31, 2013 1:35 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [Bulk] [TS-520_820_530_830] TS-520 No receive No TX?

It would probably help if you had a signal injector to find out what stage is causing the problem. You can start and see what the DC and AC voltages are on the tubes. Trouble shooting this or anything else you would start mid way and follow the voltages. Check all voltages from the AVR. Are there any common tubes that work in transmit and receive. Check the respective voltages. If all receive is bad but one band as you can get WWV band, see from the schematic anything common for all the other bands that may be missing. Seems to me you may have a bad switch somewhere that is not used for the WWV band. Brad KB2CHY

From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
[mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of rayosfostoria
Sent: Friday, May 31, 2013 1:09 AM

To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Subject: [Bulk] [TS-520_820_530_830] TS-520 No receive No TX?

Hello all, new to the group!
I've been running kenwood rigs since I first got my novice ticket (now General class) 20+ year ago.

Last week I picked up a nice looking Kenwood 520. I was told by the PO it had died during a QSO on 20 meters, It quit both TX and receive.
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Now I am new to troubleshooting and repair, only armed with a Volt/Ohm meter, A Blown up schematic of the 520, Both the manual and service manual.
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Any help, guidance would sure be appreciated!!

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42429. Re: [TS-520_820_530_830] TS-520 No receive No TX?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 10:13:13 UTC
From: Bob Lazarow
Topic: 42425 Message: 42429

One simple thing to check is that "solder blob" across the vfo connector...when there is no VFO, there is a plug-in shorting plug for those pins. If there is no shorting plug, the fix is to make a GOOD connection between those pins...if it is intermittent or high resistance .....anyway, I would remove the blob, replace with a nicely soldered wire connection ...can't hurt, one less thing to worry about..Good Luck ! You came to the right place..

Bob /WA2JAJ

On 5/31/2013 1:09 AM, rayosfostoria wrote:
>
> Hello all, new to the group!
> I've been running kenwood rigs since I first got my novice ticket (now
> General class) 20+ year ago.
>
> Last week I picked up a nice looking Kenwood 520. I was told by the PO
> it had died during a QSO on 20 meters, It quit both TX and receive.
> Got it home and it is dead on all bands in receive. However when you'd
> push in the WWV button it will receive across that band just fine.
> Also noticed at times when you'd push the button in the JJY position
> it would receive fine for about 2-5 seconds then die, just static.
> Also from a cold start it would receive fine (sometimes) for about the
> same time. Now I cannot get it to receive at all in the JJY position!
> WWV still works fine. It has a jumper (solder blob) across the 8 and 9
> pins on the vfo plug.
>
> TX is a different story, I'm getting about 70 watts on 80M, 25 on 40M,
> 10-18 watts or so on 20-10M. Not real worried about the TX side yet,
> need to get the receive going.
>
> I have cleaned the relays, Checked the WWV/JJY switch, not broken and
> has continuity in both positions. Loosened and retightened all screws,
> checked for dead end wires, Checked the voltages on the AVR board for
> 9 volts and 3.3 volts there ok. Not even sure where to really start
> looking? Just done a few basic's.
>
> Now I am new to troubleshooting and repair, only armed with a Volt/Ohm
> meter, A Blown up schematic of the 520, Both the manual and service
> manual. Would really like to get this old gal working again!
> Any help, guidance would sure be appreciated!!
>
>
>
> No virus found in this message.

> Checked by AVG - www.avg.com <http://www.avg.com>
> Version: 2013.0.3343 / Virus Database: 3184/6369 - Release Date: 05/30/13
>

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42430. Re: My TS-820 got sick... :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 10:24:44 UTC
From: Terry Wagoner
Topic: 42157 Message: 42430

It all depends on the input Z of your DMM. Some are very low (< 1 meg) and some have different values of input Z depending on the voltage range. The lower the input Z the lower the reading you will get. 99% of all DMMs are just fine for measuring most hybrid power supply voltages including RF-1.

If you measure and set RF-1 to 3.3vdc with your DMM it should be very close to the required 3.3vdc. 99% of your power supplies are low impedance sources so your DMM will not pull them down. A DMM is fine for all tube socket pin DC voltages and for all Transistor CBE voltages and all Mosfet DGS voltages.

RF-1 is a power supply voltage. It is derived from the regulated 9vdc on your AVR board. It serves or feeds only two loads (buss or rail) and that is AGC and ALC.

The only two high impedance voltage sources in your radio are the AGC bus and the ALC bus. These are both fed from RF-1 thru 2 meg ohm resistors by design. That means they cannot support any current draw and that a 10 meg DMM and a 11 meg VTVM will pull them down to some degree. You cannot accurately measure them with just about any meter. As long as you understand that you will understand what you are seeing when you try to measure it. You can tell how bad your meter affects the AGC bus by listening to the receiver noise and watching the S-meter when you touch meter probe to agc bus. If receiver noise drops and your S-meter moves up scale you know your meter is the culprit and not a problem with RF-1 or the AGC bus or any of the devices hanging off it.

Just set RF-1 to 3.3vdc using your DMM and definitely replace that missing board screw so that you ensure the entire AVR board ground plane is seeing the chassis ground.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@..." <coyoteinventor@...> wrote:
>
> Thanks again Terry!
>
> I have a question and a comment based on your last feedback.
>
> 1) When you say that I can adjust RF-1 to be 3.3V, you are assuming I'm not using a DMM, right? I think you said with a DMM I would be seeing smaller values.
>
> 2) I took the AVR board out to make the measurements on the Q1-3 on the back side, and when I put it back in its place I made sure the screws were nice and tight, maybe that's why it's working now. I did notice one of the 4 screws was missing, so I'll make sure I find a forth one and put it in place.
>
> Thanks again!
>
> --Cesar-- K1TNT

>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > OK Cesar:
> >
> > With rig not working I think you measured RF-1 at approx 1.9vdc. At that level you will have very low or no Receive because the AGC bus control voltage to the gain controlled devices (IF and RF amp mosfets) is too low.
> >
> > I think you said when rig is working you measured approx 2.9vdc at RF-1. You can adjust that with trim pot VR-1 on the AVR board. You want nothing less than 3.3vdc. Receiver will work on 2.9vdc, but not optimum.
> >
> > It sounds like you have a high resistance ground on the AVR board ground plane. This can account for the low RF-1 voltage. I would loosen all the hold down screws and re-tighten (snug) them. No need to install star lock washers. Just dont strip the screws out.
> >
> > Your resistance on the AGC bus of approx 2.7 meg is good. Tells you no shorts on it (like failed meter FET) and no leaky timing caps to pull it down.
> >
> > It is ok to try the temporary 3vdc on the AGC bus when it is at 1.9 or 2.9 vdc. You are simply paralleling dc power supplies like jumpering your car battery with another. It will not hurt anything. No reason to do it if you have consistent 3.3 vdc. I only suggest it when you have low AGC voltage on the bus.
> >
> > Again: First suggest you loosen and tighten AVR board mounting screws and then adjust RF-1 voltage to 3.3vdc and see of receive now acts normal. As I recall there are couple of different AVR board revisions and the ground plane is not continuous around board perimeter so important that all hold down screws make good contact with chassis.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@" <coyoteinventor@> wrote:
> > >
> > > Hello again Terry,
> > >
> > > I think my problem might be a loose/cracked connection somewhere, and those are hard to track down. I'm saying this because as I was following your instructions and looking into other measurements following some schematics I have, I flipped the rig and it started working. I then flipped it again and it stopped working, and then tried to flip it one more time and did not work anymore. So I proceeded to make measurements on the transistors on the AF-AVR board, and then, I screwed in place the AF-AVR board again, and now the radio is working again (even after I put it right-side up again). So I'm guessing it's not a component failure but more of a connection failure, right?
> > >
> > > In any case, here are the measurements I took when the rig was not working properly, and then after it started working properly:

> > >
> > > On the IF board, Conn IF-3, using a 10Meg DMM, I got the following values:
> > >
> > > 1. With power off measure AGC bus resistance at Pin 11. Should be approx 1.7 meg
> > > ohm.
> > > >>> I actually got 2.7 meg ohms between pins 11 and 17 (without removing any of the connectors).
> > >
> > > 2. With power on measure RF-1 at Pin 8. Should be approx 3.4vdc
> > > >>> I measured 1.96V when not working, 2.9V when working.
> > >
> > > 3. With power on and RF gain pot full CW measure AGC at Pin 11. Should be approx
> > > 2.8vdc with a 11 meg VTVM and somewhat less with a 10 meg ohm DMM.
> > > >>> When not working I measured 1.47V, and the schematics I have said it should be at 3V (same as you said). I also measured AGC at pin 7 on RF board (RF-1 Conn), and also got 1.47V. When working I measured 2.2V.
> > >
> > > 4. If RF-1 is OK and AGC is very low you can try applying 3vdc to Pin 11 and see
> > > if rig comes alive. If you do not have a bench supply then use a Radio Shack
> > > battery holder and series up couple of 1.5vdc C or D cells. Connect negative
> > > lead to chassis ground and touch positive 3vdc lead to Pin 11. Rig should come
> > > alive. Watch S meter and see if it comes off the peg.
> > > >>> I did not attempt this as you mentioned to do this "if" RF-1 was OK, which in this case it does not look like it's OK.
> > >
> > > 5. I forgot also measure voltage at Pin 6 AGL should be same as what you read at Pin 11 AGC. AGL and AGC at IF board should be same point electrically as they are connected in receive mode thru the NC contact of the aux relay you just cleaned. But possible to have bad molex connections at Relay board and/or IF board.
> > > >>> When not working I measured 1.47V, so it does look like AGL and AGC are connected. When working I measured 2.2V.
> > >
> > > 6. Also apply temporary 3vdc to Pin 6 and see if S meter comes off the peg.
> > > >>> I again, I did not attempt this for the same reason as mentioned in item 4.
> > >
> > >
> > > Like I said at the beginning, and following some troubleshooting suggestions from the Service Manual, I checked the Q1 and Q2 transistors on the AF-AVR board and their voltages on B/C/E were correct, and then, for Q3, I only checked pins 1, 3, 5 and 6, and they all gave me values as shown in the schematics. Those schematics are very handy!!! :-)
> > >
> > > So, next time it fails, should I look into the RF board since the IF board did not have correct AGC or RF-1 voltages? Or do you suggest some other places I should make measurements to see if I can spot where the intermittent connection is?
> > >
> > > Thanks again for your help Terry! I have a feeling I'm going to really get to know and love my new rig. ;-)
> > >
> > > --Cesar-- K1TNT
> > >

> > >
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > > >
> > > > I forgot also measure voltage at Pin 6 AGL should be same as what you read at Pin 11 AGC.
> > > >
> > > > Also apply temporary 3vdc to Pin 6 and see if S meter comes off the peg.
> > > >
> > > > AGL and AGC at IF board should be same point electrically as they are connected in receive mode thru the NC contact of the aux relay you just cleaned. But possible to have bad molex connections at Relay board and/or IF board.
> > > >
> > >
> >
>

42431. Re: eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 10:37:41 UTC
From: Terry Wagoner
Topic: 42339 Message: 42431

OK Jerry that is why I just dont give a yes no answer. I try to give an answer with a fundamental basis behind it. My hope is it will pique your interest and you will take the initiative to crack open a reference book like ARRL handbook or do Google search and read more on the subject. If it bores some folks that is OK. No black boxes for me.

RF engineering handbooks like ARRL and Bill Orr can be trusted, but have to be a little careful about Google sources. If you Google on subject like safety capacitors you can learn all about them.

I am still learning everyday about the how and why of these Kenwood hybrid circuits. Still have lots to learn. Not a day goes by that I dont hit the books or look at a schematic.

Suggest you take notes to refer back to.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Jerry Barr <kj6ntl@...> wrote:
>
> Terry u spend so much time explaininmg things and have such a grasp on electronic/ its amazing to me/and so willing to share that knowlage/ i really appreciate all the help i get here / the safety caps i ordered from mouser and elecrolitcs/ but got tired of going thru their system for the others so will find them elsewhere for some reason iÂ never look for components on e-bay don't no why! guess never occurs to me. thanks for the help and that thanks is extended to everyone / i shud know some of this stuffÂ but i dont
>
>
> Jerry KJ6NTL
>
> From: Terry Wagoner <wagstw46@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, May 30, 2013 5:04 PM
> Subject: [TS-520_820_530_830] Re: eico324!!
>
> Â
> Several folks have commented about your line filter caps. They are there to shunt rf on the 120VAC line to chassis ground. Sources of RF include portable appliances like mixers and blenders that have brushes and commutators that will arc and place a signal on the 60hz which would then be coupled into your Sig Gen. Three common ways to suppress this in old days. 1.Choke coils in series in the hot and grd leads to transformer primary. 2 A shunt capacitor across the hot and grd leads. and most commonly 3. Capacitors from each line to chassis ground on primary side of your transformer.
>
> Your EICO has No. 3 configuration. If either of these two caps become leaky the chassis can come hot and be a shock hazard. These capacitors see the most severe duty in our radios and test gear because as long the line cord is plugged in to 120vac receptacle the capacitors are energized at all times. This is why new code requires safety capacitor to reduce shock and fire hazard from continuous duty cycle.
>

> So today as Bob has stated you need to replace them with Safety Capacitors. Type X go across the line and Type Y from line to chassis. Easier to just use a universal safety capacitor designated as a type X1/Y2. Can buy these for 10 for $1.00 on Ebay. Check there before buying from Mouser unless you are making an order to Mouser. Capacitance value is not critical. Try to buy as close to values of the current caps. You can remove them and run without them and Sig gen will work just fine, but I would replace them with new Safety Caps.
>
> As for replacing your wax tubular capacitors someone already mentioned using Film capacitors. That is correct but there are large variety of Film caps. Pretty much any of these will work. Plastic/polyester. Metalized polyester. Metalized polypropylene. Polystyrene and Mylar. Polypropylene and polystyrene are better for high frequency applications so I tend to buy and use them. The old wax paper are usually tubular in shape and may even have some "black beauties". Any rectangular brownish ones are likely Mica.
>
> You should easily find Film capacitors at Mouser to replace any paper caps in your 324. Does not have to be Mylar. Mylar is just Dupont trade name.
>
> Terry K9TW
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, Jerry Barr <kj6ntl@> wrote:
> >
> > thanks Terry/ i do have a counter i got cheap off e-bay but someone removed the osc from it /so either i build a 1 meghrtz osc or try to buy one somewhereit was a seven or nine pin in a can dont remember right now but wud like to get it going has the old nixie tubes and they all work good/ my scope has one two but not sure how to use it/ ohÃ□Â other then the the electrolytics what type caps shud i use for replacingÃ□Â in the 324 the wax paper film type /what cant find any mylarÃ□Â at mouser or digikey
> >
> >
> > Jerry KJ6NTL
> >
> > From: Terry Wagoner <wagstw46@>
> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > Sent: Thursday, May 30, 2013 10:35 AM
> > Subject: [TS-520_820_530_830] Re: eico324!!
> >
> > Ã□Â
> > A GDO is not an instrument that many hams find useful these days. Almost indispensable in the old days for home brewing.
> >
> > Today for Kenwood service not much demand so would not rush out to buy one.
> >
> > Very good for checking the main plate choke. Most hams would just do a visual. Problem is that they do not know what the design parallel resonance is and where the series resonance holes should be. I have posted all the specs here several times. When I rewind a plate choke I do Dip it, but in practice as long as you use same gauge wire and get back on same number of design turns the series resonant holes should not have shifted. (One pretty close to 24mhz and next strong one at 33 mhz which is no concern).
> >
> > Before digital LCR bridge became common and affordable for the bench would use GDO along with a standard capacitor and standard inductor to calculate unknown inductors and capacitors by placing then in parallel resonant config and finding the Dip and then plug that value into the Resonant Frequency formula and solving to find your unknown capacitor or inductor. Worked pretty well if you were winding your own choke coils or making your own

capacitors
> >
> > Also very good for dipping any antenna trap you have or want to make and for testing crystals.
> >
> > Thats about the common uses I can think of.
> >
> > There are some books on line you can read on how to use and several good old QST articles in ARRL archives. Important thing is use low level of grid current (maybe half scale) and very loose coupling and need a freq counter with sniffer loop near the GDO coil to read the frequency of the DIP. The dials are not very accurate.
> >
> > I have the classic Millen 90651 and the Measurements 59. The Measurements is a better dipper, but harder to find a good one and the Millen is a fine GDO. Kenwood makes a nice looking unit that I suspect has FET oscillator. I have no experience with it. Stay away from the Heath Tunnel Dipper. It does not have enough "horsepower". As you say the MFJ-259 has GDO coils but again I have no experience with it in that mode.
> >
> > Terry K9TW
> >
> > --- In mailto:TS-520_820_530_830%40yahoogroups.com, Jerry Barr <kj6ntl@> wrote:
> > >
> > > actually i have always wanted to know how to use a grid dipper, i have a antenna anylyzer trhat has the capabilities / but not sure how to use it ,tried building some coils for it but not sure how good they are either hi hi/mfj259b/ and thanks for all the tips/espec ially the can for screws have a magnetic holder but it magnetizes the screws so they go into someting away from the tools hihi. anyway thanks for the help! i will order th deoxit and filter caps and bnc today if i can find it that is
> > >
> > >
> > > Jerry KJ6NTL
> > >
> > > From: Wes Will <wwill@>
> > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > Sent: Wednesday, May 29, 2013 2:14 PM
> > > Subject: Re: [TS-520_820_530_830] eico324!!
> > >
> > > Ã□â□□Ã□Â
> > > On 05/29/2013 03:17 PM, Jerry Barr wrote:
> > > > Sorry, but I was a little out of it when i wrote that. I'm a little sick today.
> > > > I did use some De-Oxit spray contact cleaner while rotating switches etc.,
> > > > but it didnt seem to help. And I do see some A/C on the audio out, and am getting
> > > > some A/C between it and my scope ground. Any kind of lube to use, or no? Oh, and
> > > > unplugged is good.
> > >
> > > Just use more cleaning spray. Some light work with a medium-stiff brush
> > > to remove any caked-on dirt/dust. CAREFULLY. De-Oxit 5 (if I remember
> > > a-right) has a lubricant in it, so just use that. I DON'T RECOMMEND
> > > petroleum jelly, it tends to get into places it oughtn't.
> > >
> > > Any of the control-linkage sprays or lubes for electronics will loosen
> > > the knobs, if the shafts aren't kinked or bent. No WD-40, either, by
> > > the way. Just haven't had any good luck with that stuff for anything
> > > electronic. Works fine of cabinet hinges, though...

> > >
> > > If you can, search the internet (GOOGLE.COM or I use IXQUICK.COM) for
> > >
> > > eico model 324 signal generator schematic manual
> > >
> > > You should be able to turn up a PDF file manual somewhere. (I'm being
> > > lazy, didn't search it myself.) You can copy and paste that line above
> > > to the search engine page.
> > >
> > > See what comes up, but DO NOT pay money for it on-line. Check here
> > > FIRST, most of those "We'll sell you a manual," places add "SUCKER!"
> > > when you hang up the phone.
> > >
> > > This is BASIC cleaning of equipment. It more or less applies to
> > > ANYTHING, old, new, or in-between:
> > >
> > > Check the circuit boards for obvious damage. Burned spots on the
> > > phenolic side, blackened components, burned or missing traces on the
> > > copper side, if there are circuit boards and it's not all
> > > point-to-point. (I don't remember if I've ever been under the hood of a
> > > 324, so I don't have any idea of the construction methods.) Cracked or
> > > lifted traces on circuit boards. Cold solder joints. Cracking
> > > insulation on point-to-point wiring. Loose or corroded connectors.
> > >
> > > Also look for popped or bulging capacitors, leaking electrolytic
> > > compound, any sort of crystallized powdery residue particularly on or
> > > underneath capacitors, and particularly electrolytic capacitors.
> > >
> > > Excess flux on solder joints, that will leave a whitish or resiny
> > > coating on things. Clean it off with flux remover (best) or isopropyl
> > > (rubbing) alcohol (cheapest) and dry THOROUGHLY.
> > >
> > > Check coils for mashed, displaced, or broken windings. You have to lift
> > > one end of a coil (and a resistor, and a diode, and about anything else,
> > > if it's a 2-lead device) and check it for simple continuity. Won't tell
> > > you if it's still the right electrical size, but will tell you if the
> > > windings are broken.
> > >
> > > Anyone else here still use a grid dipper?? Or am I REALLY a dinosaur??
> > >
> > > If you take ANYTHING apart (even the CASE if it's a tricky disassembly)
> > > TAKE NOTES, or a digital snapshot of the thing as it comes apart (BOTH
> > > NOTES AND PIX), so you know how it goes back together.
> > >
> > > Keep the screws in something that you're not going to tip over every
> > > time you reach for a tool and spread ballistically all over the room.
> > >
> > > If possible, and if they won't be in the way of getting the next bit
> > > out, PUT THE SCREWS BACK IN THE HOLES THEY CAME OUT OF after the

> > > sub-assembly or component has been taken off the chassis or whatever.
> > > That way, you know for sure where the screw came from.
> > >
> > > Replace and repair as you find problems. Once the obvious stuff is
> > > taken care of, then you dive into the schematic and start tracing
> > > signals and verifying biases, and making sure that power supplies are
> > > supplying power, and that kind of stuff.
> > >
> > > The Mark I Eyeball is your best diagnostic tool when you begin with an
> > > old piece of gear.
> > >
> > > Good Luck.
> > >
> > > --
> > > Wes Will
> > > N9KDY
> > >
> > >
> > >
> > >
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42432. Re: eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 11:00:12 UTC
From: Terry Wagoner
Topic: 42339 Message: 42432

Yes will be a miniature version of the bigger ones in the older style battery chargers. Sounds like selenium is still there so only other reason I can think of for high B+ is higher line voltage we have today?

There should not be a series dropping resistor if the Selenium is still there. So not likely it is source of your high plate voltage. I would still get it out of there.

As I noted earlier the selenium is followed by a pi filter so that is the only resistor you should see close to selenium unless someone has modded this unit.

I used 120 vac as an example in previous response. Looking at the 324 schematic I see it shows the transformer secondary is 110vac so you should measure that voltage. With todays line voltage it may be a little higher. 110 x 1.414 = 155 vdc. 155 - 125 (shown at input of Pi filter) = 30 vdc. That is the drop across the selenium and is a little high if my memory serves right. Havent seen a selenium in a long time.

I dont see what line voltage they are using. Typically in old days would use 117vac. So we cannot tell what the transformer turns ratio is. Maybe it is 1:1 which means if your line voltage at your house is 122 vac you could have 122 x 1.414 = 173 vdc. 173-30 = 143vdc. So you could have 140 to 150 vdc at 1st filter cap.

So measure across the transformer secondary and and then measure at positive terminal of first filter cap.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Jerry Barr <kj6ntl@...> wrote:
>
> weeeellll hmmmm, it is a rectangular blackÂ thing abt 1/2 x3/4,x3/4/ the tag on it has a sorta s on theAnode?and sorta regular straight line on the bottom of the arrowÂ Â hihi/ so dont know if that s indicates selenium or not/ ive seen selenium diodes in battery chargers but bigger then this by far and never encased in epoxy or whatever
> but that wud explain the hi voltage on plates for sure cause i dont see any resistors other then the schematics ones/ i might even have some 1n4007 laying on the bench awaiting to be used may even have the resistor salvaged from someÂ tv or somethin/ agin thanks Terry / U can be my Mentor anytime/ it is really nice to have someoneÂ thats willing to spend time helping /maybe someday i can pass it forward thanksÂ Â
> Jerry KJ6NTL
>
> From: Terry Wagoner <wagstw46@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, May 30, 2013 6:13 PM
> Subject: [TS-520_820_530_830] Re: eico324!!
>
> Â
> I forgot to ask did someone respond to your high anode voltage on 12AU7? If not it may be possible that someone has already replaced the selenium rectifier with a silicon diode as I

suggested you do in earlier post, but they may not have added the necessary series dropping resistor. Must do that.
>
> If you just replace the selenium you can end up with DC supply voltage 15 to 20 vdc higher. For example: 120 vac secondary will charge filter caps to the peak or 120 X 1.414 = 170 vdc. Output voltage at tubes plate will be somewhat less than this due to drop across the Pi filter (C-R-C).
>
> So do you know what a selenium rectifier looks like? If not, it is a square cube that has stack of thin metal plates. Secondary lead of power transformer will run to terminal on it. If it has been replaced they should have added the series resistor from approx 100 to 200 ohms at 2-5 watts. Often have to play with the value to tweak it in.
>
> If selenium is there strongly recommend you replace it with 1N4007 silicon rectifier diode (mouser or radio shack). If you do not you will not like the odor when it does fail. It is not a joke and can be a fire and the fumes are toxic.
>
> I usually mount the silicon diode and series resistor on a phenolic terminal strip. Just dont connect to the ground lug!
>
> Terry K9TW
>
> >
> >
>
>
>
>
> [Non-text portions of this message have been removed]
>

42433. Re: TS-520 No receive No TX?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 11:20:29 UTC
From: Terry Wagoner
Topic: 42425 Message: 42433

It sounds to me like you had or have a dirty WWV push button switch. This is a very common problem. By exercising it you got it to work.

The normal position is OFF or OUT. In that position you should have normal ham band receiver coverage. When you push it in you should be able to hear WWV at 10 mhz (zero on the VFO dial). Across the rest of the VFO range may hear some RTTY or CW depending on propagation. It is just provided so you have 10.0 mhz reception to calibrate your Marker with no other coverage intended.

If your 520 is receiving like this then it is OK.

I agree get rid of the solder glob. If you dont plan on using remote VFO just install a small jumper wire on rear of socket with proper soldering.

Try to get some Deoxit and canned air to the WWV/JJY switch and exercise it if you can.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "rayosfostoria" <smokin4477@...> wrote:
>
> Hello all, new to the group!
> I've been running kenwood rigs since I first got my novice ticket (now General class) 20+ year ago.
>
> Last week I picked up a nice looking Kenwood 520. I was told by the PO it had died during a QSO on 20 meters, It quit both TX and receive.
> Got it home and it is dead on all bands in receive. However when you'd push in the WWV button it will receive across that band just fine.
> Also noticed at times when you'd push the button in the JJY position it would receive fine for about 2-5 seconds then die, just static.
> Also from a cold start it would receive fine (sometimes) for about the same time. Now I cannot get it to receive at all in the JJY position! WWV still works fine. It has a jumper (solder blob) across the 8 and 9 pins on the vfo plug.
>
> TX is a different story, I'm getting about 70 watts on 80M, 25 on 40M, 10-18 watts or so on 20-10M. Not real worried about the TX side yet, need to get the receive going.
>
> I have cleaned the relays, Checked the WWV/JJY switch, not broken and has continuity in both positions. Loosened and retightened all screws, checked for dead end wires, Checked the voltages on the AVR board for 9 volts and 3.3 volts there ok. Not even sure where to really start looking? Just done a few basic's.
>
> Now I am new to troubleshooting and repair, only armed with a Volt/Ohm meter, A Blown up schematic of the 520, Both the manual and service manual. Would really like to get this old gal working again!
> Any help, guidance would sure be appreciated!!

>

42434. Re: TS-520 No receive No TX?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 11:51:46 UTC
From: Terry Wagoner
Topic: 42425 Message: 42434

I may have mis-read you post? I also forgot to mention if you have good TX mode then the IF board has to be seeing the VFO signal. VFO signal is applied there and used for both TX and RX mixing. If bad 8/9 solder connection you should have no TIF signal being generated from IF board and no TX.

Also the WWV switch also prevents transmitting on the 10 mhz band. When you push it in to receive 10 mhz it disables the 14vdc supply to the Transmit Mixer on RF board. If you place it in the Out or Normal position and contacts dont make well you could experience loss of normal RX, normal TX, or both.

If you are saying you have good consistent 10.0 mhz reception with WWV button pushed in and no ham band reception with it in the Out or Normal position and you have good TX mode then I would be concerned about your antenna step up transformer L1 on RF board.

Someone mentioned signal injection/signal tracing and that may well be where you are at now.

If fixing 8/9 jumper and cleaning and exercising WWV switch doesnt restore full RX and TX mode I agree you need to reach for RF sig gen.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "rayosfostoria" <smokin4477@...> wrote:
>
> Hello all, new to the group!
> I've been running kenwood rigs since I first got my novice ticket (now General class) 20+ year ago.
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> Also noticed at times when you'd push the button in the JJY position it would receive fine for about 2-5 seconds then die, just static.
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> Any help, guidance would sure be appreciated!!
>

42435. Re: [TS-520_820_530_830] Re: eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 13:23:36 UTC
From: Bob Macklin
Topic: 42339 Message: 42435

Terry,

The description I read sounds like a possible diode bridge rectifier.

Does it have 4 terminals on it? How many terminals have wires on them?

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Terry Wagoner
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 4:00 AM
Subject: [TS-520_820_530_830] Re: eico324!!

Yes will be a miniature version of the bigger ones in the older style battery chargers. Sounds like selenium is still there so only other reason I can think of for high B+ is higher line voltage we have today?

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I used 120 vac as an example in previous response. Looking at the 324 schematic I see it shows the transformer secondary is 110vac so you should measure that voltage. With todays line voltage it may be a little higher. 110 x 1.414 = 155 vdc. 155 - 125 (shown at input of Pi filter) = 30 vdc. That is the drop across the selenium and is a little high if my memory serves right. Havent seen a selenium in a long time.

I dont see what line voltage they are using. Typically in old days would use 117vac. So we cannot tell what the transformer turns ratio is. Maybe it is 1:1 which means if your line voltage at your house is 122 vac you could have 122 x 1.414 = 173 vdc. 173-30 = 143vdc. So you could have 140 to 150 vdc at 1st filter cap.

So measure across the transformer secondary and and then measure at positive terminal of first filter cap.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Jerry Barr <kj6ntl@...> wrote:
>
> weeeellll hmmmm, it is a rectangular blackÂ thing abt 1/2 x3/4,x3/4/ the tag on it has a sorta s on theAnode?and sorta regular straight line on the bottom of the arrowÂ Â hihi/ so dont know if that s indicates selenium or not/ ive seen selenium diodes in battery chargers but bigger then this by far and never encased in epoxy or whatever

> but that wud explain the hi voltage on plates for sure cause i dont see any resistors other then the schematics ones/ i might even have some 1n4007 laying on the bench awaiting to be used may even have the resistor salvaged from someÂ tv or somethin/ agin thanks Terry / U can be my Mentor anytime/ it is really nice to have someoneÂ thats willing to spend time helping /maybe someday i can pass it forward thanksÂ Â
> Jerry KJ6NTL
>
> From: Terry Wagoner <wagstw46@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, May 30, 2013 6:13 PM
> Subject: [TS-520_820_530_830] Re: eico324!!
>
> Â
> I forgot to ask did someone respond to your high anode voltage on 12AU7? If not it may be possible that someone has already replaced the selenium rectifier with a silicon diode as I suggested you do in earlier post, but they may not have added the necessary series dropping resistor. Must do that.
>
> If you just replace the selenium you can end up with DC supply voltage 15 to 20 vdc higher. For example: 120 vac secondary will charge filter caps to the peak or 120 X 1.414 = 170 vdc. Output voltage at tubes plate will be somewhat less than this due to drop across the Pi filter (C-R-C).
>
> So do you know what a selenium rectifier looks like? If not, it is a square cube that has stack of thin metal plates. Secondary lead of power transformer will run to terminal on it. If it has been replaced they should have added the series resistor from approx 100 to 200 ohms at 2-5 watts. Often have to play with the value to tweak it in.
>
> If selenium is there strongly recommend you replace it with 1N4007 silicon rectifier diode (mouser or radio shack). If you do not you will not like the odor when it does fail. It is not a joke and can be a fire and the fumes are toxic.
>
> I usually mount the silicon diode and series resistor on a phenolic terminal strip. Just dont connect to the ground lug!
>
> Terry K9TW
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42436. Re: eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 13:50:12 UTC
From: Terry Wagoner
Topic: 42339 Message: 42436

Bob:

You may be correct with the arrow symbol on it. When he said like old battery charger I thought of selenium. If it is a bridge rectifier ok to leave it and not install the 1N4007.

Of course if it is a bridge will have less ripple to filter but will still have same 1.4 x xfmr secondary RMS if they didnt include series dropping resistor.

Would sure be nice if we had a real time Skype like feature to help us. What is that they say about a picture!

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@...> wrote:
>
> Terry,
>
> The description I read sounds like a possible diode bridge rectifier.
>
> Does it have 4 terminals on it? How many terminals have wires on them?
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Terry Wagoner
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Friday, May 31, 2013 4:00 AM
> Subject: [TS-520_820_530_830] Re: eico324!!
>
>
>
> Yes will be a miniature version of the bigger ones in the older style battery chargers. Sounds like selenium is still there so only other reason I can think of for high B+ is higher line voltage we have today?
>
> There should not be a series dropping resistor if the Selenium is still there. So not likely it is source of your high plate voltage. I would still get it out of there.
>
> As I noted earlier the selenium is followed by a pi filter so that is the only resistor you should see close to selenium unless someone has modded this unit.
>
> I used 120 vac as an example in previous response. Looking at the 324 schematic I see it shows the transformer secondary is 110vac so you should measure that voltage. With todays line voltage it may be a little higher. 110 x 1.414 = 155 vdc. 155 - 125 (shown at input of

Pi filter) = 30 vdc. That is the drop across the selenium and is a little high if my memory serves right. Havent seen a selenium in a long time.
>
> I dont see what line voltage they are using. Typically in old days would use 117vac. So we cannot tell what the transformer turns ratio is. Maybe it is 1:1 which means if your line voltage at your house is 122 vac you could have 122 x 1.414 = 173 vdc. 173-30 = 143vdc. So you could have 140 to 150 vdc at 1st filter cap.
>
> So measure across the transformer secondary and and then measure at positive terminal of first filter cap.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, Jerry Barr <kj6ntl@> wrote:
> >
> > weeeellll hmmmm, it is a rectangular blackÂ thing abt 1/2 x3/4,x3/4/ the tag on it has a sorta s on theAnode?and sorta regular straight line on the bottom of the arrowÂ Â hihi/ so dont know if that s indicates selenium or not/ ive seen selenium diodes in battery chargers but bigger then this by far and never encased in epoxy or whatever
> > but that wud explain the hi voltage on plates for sure cause i dont see any resistors other then the schematics ones/ i might even have some 1n4007 laying on the bench awaiting to be used may even have the resistor salvaged from someÂ tv or somethin/ agin thanks Terry / U can be my Mentor anytime/ it is really nice to have someoneÂ thats willing to spend time helping /maybe someday i can pass it forward thanksÂ Â
> > Jerry KJ6NTL
> >
> > From: Terry Wagoner <wagstw46@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Thursday, May 30, 2013 6:13 PM
> > Subject: [TS-520_820_530_830] Re: eico324!!
> >
> > Â
> > I forgot to ask did someone respond to your high anode voltage on 12AU7? If not it may be possible that someone has already replaced the selenium rectifier with a silicon diode as I suggested you do in earlier post, but they may not have added the necessary series dropping resistor. Must do that.
> >
> > If you just replace the selenium you can end up with DC supply voltage 15 to 20 vdc higher. For example: 120 vac secondary will charge filter caps to the peak or 120 X 1.414 = 170 vdc. Output voltage at tubes plate will be somewhat less than this due to drop across the Pi filter (C-R-C).
> >
> > So do you know what a selenium rectifier looks like? If not, it is a square cube that has stack of thin metal plates. Secondary lead of power transformer will run to terminal on it. If it has been replaced they should have added the series resistor from approx 100 to 200 ohms at 2-5 watts. Often have to play with the value to tweak it in.
> >
> > If selenium is there strongly recommend you replace it with 1N4007 silicon rectifier diode (mouser or radio shack). If you do not you will not like the odor when it does fail. It is not a joke and can be a fire and the fumes are toxic.
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> > I usually mount the silicon diode and series resistor on a phenolic terminal strip. Just dont connect to the ground lug!
> >
> > Terry K9TW
> >
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> > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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42437. Re: [TS-520_820_530_830] Re: eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 14:02:10 UTC
From: Bob Lazarow
Topic: 42339 Message: 42437

Terry - reading about what you and the others try to do to help us - in today's world, it shouldn't be too hard for people to take a PICTURE or Picture(s) and e-mail to you. Perhaps you should incorporate that request, when appropriate, to the list of manuals and tools you and the other fellows request.

I certainly think it would have saved a lot of time in this case!

In the early days of PCs, before easy pictures and screen captures, I once wasted several hours because an end-user kept typing in "c\;" and insisting we was typing C slash COLON ! Pictures ARE worth a thousand words...or more!

Bob / WA2JAJ

On 5/31/2013 9:50 AM, Terry Wagoner wrote:
>
> Bob:
>
> You may be correct with the arrow symbol on it. When he said like old
> battery charger I thought of selenium. If it is a bridge rectifier ok
> to leave it and not install the 1N4007.
>
> Of course if it is a bridge will have less ripple to filter but will
> still have same 1.4 x xfmr secondary RMS if they didnt include series
> dropping resistor.
>
> Would sure be nice if we had a real time Skype like feature to help
> us. What is that they say about a picture!
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Bob Macklin"
> <macklinbob@...> wrote:
> >
> > Terry,
> >
> > The description I read sounds like a possible diode bridge rectifier.
> >
> > Does it have 4 terminals on it? How many terminals have wires on them?
> >
> > Bob Macklin
> > K5MYJ
> > Seattle, Wa.
> > "Real Radios Glow In The Dark"

> > ----- Original Message -----
> > From: Terry Wagoner
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Friday, May 31, 2013 4:00 AM
> > Subject: [TS-520_820_530_830] Re: eico324!!
> >
> >
> >
> > Yes will be a miniature version of the bigger ones in the older
> style battery chargers. Sounds like selenium is still there so only
> other reason I can think of for high B+ is higher line voltage we have
> today?
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> > There should not be a series dropping resistor if the Selenium is
> still there. So not likely it is source of your high plate voltage. I
> would still get it out of there.
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> > As I noted earlier the selenium is followed by a pi filter so that
> is the only resistor you should see close to selenium unless someone
> has modded this unit.
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> > I used 120 vac as an example in previous response. Looking at the
> 324 schematic I see it shows the transformer secondary is 110vac so
> you should measure that voltage. With todays line voltage it may be a
> little higher. 110 x 1.414 = 155 vdc. 155 - 125 (shown at input of Pi
> filter) = 30 vdc. That is the drop across the selenium and is a little
> high if my memory serves right. Havent seen a selenium in a long time.
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> > I dont see what line voltage they are using. Typically in old days
> would use 117vac. So we cannot tell what the transformer turns ratio
> is. Maybe it is 1:1 which means if your line voltage at your house is
> 122 vac you could have 122 x 1.414 = 173 vdc. 173-30 = 143vdc. So you
> could have 140 to 150 vdc at 1st filter cap.
> >
> > So measure across the transformer secondary and and then measure at
> positive terminal of first filter cap.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Jerry Barr <kj6ntl@> wrote:
> > >
> > > weeeellll hmmmm, it is a rectangular blackÂ thing abt 1/2
> x3/4,x3/4/ the tag on it has a sorta s on theAnode?and sorta regular
> straight line on the bottom of the arrowÂ Â hihi/ so dont know if that
> s indicates selenium or not/ ive seen selenium diodes in battery
> chargers but bigger then this by far and never encased in epoxy or
> whatever
> > > but that wud explain the hi voltage on plates for sure cause i

> dont see any resistors other then the schematics ones/ i might even
> have some 1n4007 laying on the bench awaiting to be used may even have
> the resistor salvaged from someÂ tv or somethin/ agin thanks Terry / U
> can be my Mentor anytime/ it is really nice to have someoneÂ thats
> willing to spend time helping /maybe someday i can pass it forward
> thanksÂ Â
> > > Jerry KJ6NTL
> > >
> > > From: Terry Wagoner <wagstw46@>
> > > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Thursday, May 30, 2013 6:13 PM
> > > Subject: [TS-520_820_530_830] Re: eico324!!
> > >
> > > Â
> > > I forgot to ask did someone respond to your high anode voltage on
> 12AU7? If not it may be possible that someone has already replaced the
> selenium rectifier with a silicon diode as I suggested you do in
> earlier post, but they may not have added the necessary series
> dropping resistor. Must do that.
> > >
> > > If you just replace the selenium you can end up with DC supply
> voltage 15 to 20 vdc higher. For example: 120 vac secondary will
> charge filter caps to the peak or 120 X 1.414 = 170 vdc. Output
> voltage at tubes plate will be somewhat less than this due to drop
> across the Pi filter (C-R-C).
> > >
> > > So do you know what a selenium rectifier looks like? If not, it is
> a square cube that has stack of thin metal plates. Secondary lead of
> power transformer will run to terminal on it. If it has been replaced
> they should have added the series resistor from approx 100 to 200 ohms
> at 2-5 watts. Often have to play with the value to tweak it in.
> > >
> > > If selenium is there strongly recommend you replace it with 1N4007
> silicon rectifier diode (mouser or radio shack). If you do not you
> will not like the odor when it does fail. It is not a joke and can be
> a fire and the fumes are toxic.
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> > > I usually mount the silicon diode and series resistor on a
> phenolic terminal strip. Just dont connect to the ground lug!
> > >
> > > Terry K9TW
> > >
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> > > [Non-text portions of this message have been removed]

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> > [Non-text portions of this message have been removed]
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> No virus found in this message.
> Checked by AVG - www.avg.com <http://www.avg.com>
> Version: 2013.0.3343 / Virus Database: 3184/6371 - Release Date: 05/31/13
>

[Non-text portions of this message have been removed]

42438. Re: [TS-520_820_530_830] Re: eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 14:07:12 UTC
From: Ken Winterling
Topic: 42339 Message: 42438

Jerry,

The following link shows examples of selenium rectifiers. The "s" symbol
on the terminals represents a sine wave and is where the transformer
secondary would be connected. Does your device resemble any of these?

http://4sale.sbszoo.com/diodes.htm

Ken
WA2LBI

On Fri, May 31, 2013 at 9:50 AM, Terry Wagoner <wagstw46@...> wrote:

> **
>
>
> Bob:
>
> You may be correct with the arrow symbol on it. When he said like old
> battery charger I thought of selenium. If it is a bridge rectifier ok to
> leave it and not install the 1N4007.
>
> Of course if it is a bridge will have less ripple to filter but will still
> have same 1.4 x xfmr secondary RMS if they didnt include series dropping
> resistor.
>
> Would sure be nice if we had a real time Skype like feature to help us.
> What is that they say about a picture!
>
> Terry K9TW
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@...>
> wrote:
> >
> > Terry,
> >
> > The description I read sounds like a possible diode bridge rectifier.
> >
> > Does it have 4 terminals on it? How many terminals have wires on them?
> >
> > Bob Macklin
> > K5MYJ
> > Seattle, Wa.
> > "Real Radios Glow In The Dark"
> > ----- Original Message -----

> > From: Terry Wagoner
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Friday, May 31, 2013 4:00 AM
> > Subject: [TS-520_820_530_830] Re: eico324!!
> >
> >
> >
> > Yes will be a miniature version of the bigger ones in the older style
> battery chargers. Sounds like selenium is still there so only other reason
> I can think of for high B+ is higher line voltage we have today?
> >
> > There should not be a series dropping resistor if the Selenium is still
> there. So not likely it is source of your high plate voltage. I would still
> get it out of there.
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> the only resistor you should see close to selenium unless someone has
> modded this unit.
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> measure that voltage. With todays line voltage it may be a little higher.
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> > I dont see what line voltage they are using. Typically in old days would
> use 117vac. So we cannot tell what the transformer turns ratio is. Maybe it
> is 1:1 which means if your line voltage at your house is 122 vac you could
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> > So measure across the transformer secondary and and then measure at
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> > > Jerry KJ6NTL
> > >
> > > From: Terry Wagoner <wagstw46@>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Thursday, May 30, 2013 6:13 PM
> > > Subject: [TS-520_820_530_830] Re: eico324!!
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> > > Â
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> > > [Non-text portions of this message have been removed]
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[Non-text portions of this message have been removed]

42439. Re: eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 15:16:05 UTC
From: Terry Wagoner
Topic: 42339 Message: 42439

You are correct working on assumptions and misunderstandings and having to ask multiple clarifying questions is certainly not very efficient. A clear close up picture would help in many cases.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Bob Lazarow <r_lazarow@...> wrote:
>
> Terry - reading about what you and the others try to do to help us - in
> today's world, it shouldn't be too hard for people to take a PICTURE or
> Picture(s) and e-mail to you. Perhaps you should incorporate that
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> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Bob Macklin"

> > <macklinbob@> wrote:
> > >
> > > Terry,
> > >
> > > The description I read sounds like a possible diode bridge rectifier.
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> > > Does it have 4 terminals on it? How many terminals have wires on them?
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> > > Bob Macklin
> > > K5MYJ
> > > Seattle, Wa.
> > > "Real Radios Glow In The Dark"
> > > ----- Original Message -----
> > > From: Terry Wagoner
> > > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Friday, May 31, 2013 4:00 AM
> > > Subject: [TS-520_820_530_830] Re: eico324!!
> > >
> > >
> > >
> > > Yes will be a miniature version of the bigger ones in the older
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> > > Terry K9TW
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> > > --- In TS-520_820_530_830@...m
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Jerry Barr <kj6ntl@> wrote:
> > > >
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> > > > Jerry KJ6NTL
> > > >
> > > > From: Terry Wagoner <wagstw46@>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > Sent: Thursday, May 30, 2013 6:13 PM
> > > > Subject: [TS-520_820_530_830] Re: eico324!!
> > > > >
> > > > Â
> > > > I forgot to ask did someone respond to your high anode voltage on
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> > > [Non-text portions of this message have been removed]
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> >
> > No virus found in this message.
> > Checked by AVG - www.avg.com <http://www.avg.com>
> > Version: 2013.0.3343 / Virus Database: 3184/6371 - Release Date: 05/31/13
> >
>
>
>
> [Non-text portions of this message have been removed]
>

42440. Re: eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 15:17:35 UTC
From: Terry Wagoner
Topic: 42339 Message: 42440

Ken: This is perfect! Thanks Terry

--- In TS-520_820_530_830@yahoogroups.com, Ken Winterling <wa2lbi@...> wrote:
>
> Jerry,
>
> The following link shows examples of selenium rectifiers. The "s" symbol
> on the terminals represents a sine wave and is where the transformer
> secondary would be connected. Does your device resemble any of these?
>
> http://4sale.sbszoo.com/diodes.htm
>
> Ken
> WA2LBI
>
>
> On Fri, May 31, 2013 at 9:50 AM, Terry Wagoner <wagstw46@...> wrote:
>
> > **
> >
> >
> > Bob:
> >
> > You may be correct with the arrow symbol on it. When he said like old
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> > Of course if it is a bridge will have less ripple to filter but will still
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> > Would sure be nice if we had a real time Skype like feature to help us.
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> > Terry K9TW
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@>
> > wrote:
> > >
> > > Terry,
> > >
> > > The description I read sounds like a possible diode bridge rectifier.
> > >

> > > Does it have 4 terminals on it? How many terminals have wires on them?
> > >
> > > Bob Macklin
> > > K5MYJ
> > > Seattle, Wa.
> > > "Real Radios Glow In The Dark"
> > > ----- Original Message -----
> > > From: Terry Wagoner
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Friday, May 31, 2013 4:00 AM
> > > Subject: [TS-520_820_530_830] Re: eico324!!
> > >
> > >
> > >
> > > Yes will be a miniature version of the bigger ones in the older style
> > battery chargers. Sounds like selenium is still there so only other reason
> > I can think of for high B+ is higher line voltage we have today?
> > >
> > > There should not be a series dropping resistor if the Selenium is still
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> > >
> > > As I noted earlier the selenium is followed by a pi filter so that is
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> > modded this unit.
> > >
> > > I used 120 vac as an example in previous response. Looking at the 324
> > schematic I see it shows the transformer secondary is 110vac so you should
> > measure that voltage. With todays line voltage it may be a little higher.
> > 110 x 1.414 = 155 vdc. 155 - 125 (shown at input of Pi filter) = 30 vdc.
> > That is the drop across the selenium and is a little high if my memory
> > serves right. Havent seen a selenium in a long time.
> > >
> > > I dont see what line voltage they are using. Typically in old days would
> > use 117vac. So we cannot tell what the transformer turns ratio is. Maybe it
> > is 1:1 which means if your line voltage at your house is 122 vac you could
> > have 122 x 1.414 = 173 vdc. 173-30 = 143vdc. So you could have 140 to 150
> > vdc at 1st filter cap.
> > >
> > > So measure across the transformer secondary and and then measure at
> > positive terminal of first filter cap.
> > >
> > > Terry K9TW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, Jerry Barr <kj6ntl@> wrote:
> > > >
> > > > weeeellll hmmmm, it is a rectangular blackÃ thing abt 1/2 x3/4,x3/4/
> > the tag on it has a sorta s on theAnode?and sorta regular straight line on
> > the bottom of the arrowÃ Ã hihi/ so dont know if that s indicates selenium

> > or not/ ive seen selenium diodes in battery chargers but bigger then this
> > by far and never encased in epoxy or whatever
> > > > but that wud explain the hi voltage on plates for sure cause i dont
> > see any resistors other then the schematics ones/ i might even have some
> > 1n4007 laying on the bench awaiting to be used may even have the resistor
> > salvaged from someÃ☐ tv or somethin/ agin thanks Terry / U can be my Mentor
> > anytime/ it is really nice to have someoneÃ☐ thats willing to spend time
> > helping /maybe someday i can pass it forward thanksÃ☐ Ã☐
> > > > Jerry KJ6NTL
> > > >
> > > > From: Terry Wagoner <wagstw46@>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Thursday, May 30, 2013 6:13 PM
> > > > Subject: [TS-520_820_530_830] Re: eico324!!
> > > >
> > > > Ã☐
> > > > I forgot to ask did someone respond to your high anode voltage on
> > 12AU7? If not it may be possible that someone has already replaced the
> > selenium rectifier with a silicon diode as I suggested you do in earlier
> > post, but they may not have added the necessary series dropping resistor.
> > Must do that.
> > > > >
> > > > > If you just replace the selenium you can end up with DC supply voltage
> > 15 to 20 vdc higher. For example: 120 vac secondary will charge filter caps
> > to the peak or 120 X 1.414 = 170 vdc. Output voltage at tubes plate will be
> > somewhat less than this due to drop across the Pi filter (C-R-C).
> > > > >
> > > > > So do you know what a selenium rectifier looks like? If not, it is a
> > square cube that has stack of thin metal plates. Secondary lead of power
> > transformer will run to terminal on it. If it has been replaced they should
> > have added the series resistor from approx 100 to 200 ohms at 2-5 watts.
> > Often have to play with the value to tweak it in.
> > > > >
> > > > > If selenium is there strongly recommend you replace it with 1N4007
> > silicon rectifier diode (mouser or radio shack). If you do not you will not
> > like the odor when it does fail. It is not a joke and can be a fire and the
> > fumes are toxic.
> > > > >
> > > > > I usually mount the silicon diode and series resistor on a phenolic
> > terminal strip. Just dont connect to the ground lug!
> > > > >
> > > > > Terry K9TW
> > > > >
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> [Non-text portions of this message have been removed]
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42441. Assuming I get my 520 up, what accessories would you consider most needed?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 06:25:32 UTC
From: Wes Will
Topic: 42425 Message: 42441

I have the digital readout, with cables. It works, I powered it up separately and checked it with a signal generator. It isn't perfect, perhaps, but it's quite close. (And perhaps it was the signal generator that was off, and the freq. counter was dead on....)

Would the external VFO be of most utility? If so, how much is the going rate on one, and are there any caveats to be aware of, other than the usual ones of not buying a pig in a poke and so on?

(Slightly off-topic for this list, but not so far as to be a rules violation, I think, since it is about a related piece of Ham gear. If I read that part of the list charter incorrectly, I apologize in advance, just say so and it's dropped.)

Using that grid dipper to make a multi-band trapped HF antenna from co-ax cable (a la this article: http://degood.org/coaxtrap/) is proving to be rather a pain in the tuccus. I'm wasting more co-ax than I can afford, and I'd like to end up with an antenna when I'm done.

I've never had a chance to use one of the low-cost (comparatively) "antenna analyzers" that have appeared in the last few years, but they look really --awesome-- and exactly what I need to tune this thing to the right bands. (Instead of where I am at the moment, where it looks like one or more of the traps will likely radiate a lot better in a harmonic for which I am NOT licensed, than in the band for which it is supposedly cut....)

Are the analyzers all they're advertised to be? From the hype, even the MFJ model will do everything imaginable, and walk the dog twice a day, too.

What is the collected wisdom of the group regarding them, which is the best way to go (Buy one on e-Pay and take my chances, build one from a kit, something else entirely?), and does anyone RENT the suckers for a day or two? I don't know that I'd use one that often to make it worth buying, but I'd LOVE to try one on this antenna, to be sure to get it in the middle of the bands.

Inquiring minds want to know! (And don't want to get noticed by Frank and either of the two Charlies.)

TIA.

--
Wes Will
N9KDY

42442. Crystals/Filter and general questions about Kenwood TS820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 06:48:18 UTC
From: <andrew@...>
Topic: 42442 Message: 42442

RE TS820s

Anyone have suggestions on ....

Where to buy a CW filter?

Where to buy crystals for the fixed frequencies?

Anyone actively using this radio that I may contact directly with some questions?

Andrew Schneider N7EBG
andrew@...

42443. Re: TS-520 No receive No TX?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 13:12:47 UTC
From: rayosfostoria
Topic: 42425 Message: 42443

Some good points.
I'll remove the solder blob on 8,9 pins and replace it with a good wire jumper, the blob does look milky greyish.
I did clean the wwv switch and checked it with the ohm meter for continuity in both positions, seems it's doing what it should be doing.
Yes very good reception on 10mhz. What little TX output I could get was with the wwv switch in the out position.
One thing I did not do was check the wwv switch for voltages, you mentioned it shuts off the 14 vdc to the rf board. Now if I have power to the switch but nothing through it, could/should I jump the switch and see if anything changes? At least that would eliminate one more thing.

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> I may have mis-read you post? I also forgot to mention if you have good TX mode then the IF board has to be seeing the VFO signal. VFO signal is applied there and used for both TX and RX mixing. If bad 8/9 solder connection you should have no TIF signal being generated from IF board and no TX.
>
> Also the WWV switch also prevents transmitting on the 10 mhz band. When you push it in to receive 10 mhz it disables the 14vdc supply to the Transmit Mixer on RF board. If you place it in the Out or Normal position and contacts dont make well you could experience loss of normal RX, normal TX, or both.
>
> If you are saying you have good consistent 10.0 mhz reception with WWV button pushed in and no ham band reception with it in the Out or Normal position and you have good TX mode then I would be concerned about your antenna step up transformer L1 on RF board.
>
> Someone mentioned signal injection/signal tracing and that may well be where you are at now.
>
> If fixing 8/9 jumper and cleaning and exercising WWV switch doesnt restore full RX and TX mode I agree you need to reach for RF sig gen.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "rayosfostoria" <smokin4477@> wrote:
> >
> > Hello all, new to the group!
> > I've been running kenwood rigs since I first got my novice ticket (now General class) 20+ year ago.
> >
> > Last week I picked up a nice looking Kenwood 520. I was told by the PO it had died during a QSO on 20 meters, It quit both TX and receive.
> > Got it home and it is dead on all bands in receive. However when you'd push in the WWV

button it will receive across that band just fine.
> > Also noticed at times when you'd push the button in the JJY position it would receive fine for about 2-5 seconds then die, just static.
> > Also from a cold start it would receive fine (sometimes) for about the same time. Now I cannot get it to receive at all in the JJY position! WWV still works fine. It has a jumper (solder blob) across the 8 and 9 pins on the vfo plug.
> >
> > TX is a different story, I'm getting about 70 watts on 80M, 25 on 40M, 10-18 watts or so on 20-10M. Not real worried about the TX side yet, need to get the receive going.
> >
> > I have cleaned the relays, Checked the WWV/JJY switch, not broken and has continuity in both positions. Loosened and retightened all screws, checked for dead end wires, Checked the voltages on the AVR board for 9 volts and 3.3 volts there ok. Not even sure where to really start looking? Just done a few basic's.
> >
> > Now I am new to troubleshooting and repair, only armed with a Volt/Ohm meter, A Blown up schematic of the 520, Both the manual and service manual. Would really like to get this old gal working again!
> > Any help, guidance would sure be appreciated!!
> >
>

42444. Re: [TS-520_820_530_830] Re: eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 14:54:29 UTC
From: Jerry Barr
Topic: 42339 Message: 42444

ok guys unless they encapsulated selenium/ then its not and not a bridge/ tho it has a bolt holding it to chassis/model 50 is the number on it

here is the pics
Jerry KJ6NTL

From: Ken Winterling <wa2lbi@gmail.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 7:07 AM
Subject: Re: [TS-520_820_530_830] Re: eico324!!

Jerry,

The following link shows examples of selenium rectifiers. The "s" symbol
on the terminals represents a sine wave and is where the transformer
secondary would be connected. Does your device resemble any of these?

http://4sale.sbszoo.com/diodes.htm

Ken
WA2LBI

On Fri, May 31, 2013 at 9:50 AM, Terry Wagoner <mailto:wagstw46%40yahoo.com> wrote:

> **
>
>
> Bob:
>
> You may be correct with the arrow symbol on it. When he said like old
> battery charger I thought of selenium. If it is a bridge rectifier ok to
> leave it and not install the 1N4007.
>
> Of course if it is a bridge will have less ripple to filter but will still
> have same 1.4 x xfmr secondary RMS if they didnt include series dropping
> resistor.
>
> Would sure be nice if we had a real time Skype like feature to help us.
> What is that they say about a picture!
>
> Terry K9TW
>
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Bob Macklin" <macklinbob@...>
> wrote:
> >
> > Terry,

> >
> > The description I read sounds like a possible diode bridge rectifier.
> >
> > Does it have 4 terminals on it? How many terminals have wires on them?
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> > Bob Macklin
> > K5MYJ
> > Seattle, Wa.
> > "Real Radios Glow In The Dark"
> > ----- Original Message -----
> > From: Terry Wagoner
> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > Sent: Friday, May 31, 2013 4:00 AM
> > Subject: [TS-520_820_530_830] Re: eico324!!
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> >
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> serves right. Havent seen a selenium in a long time.
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> use 117vac. So we cannot tell what the transformer turns ratio is. Maybe it
> is 1:1 which means if your line voltage at your house is 122 vac you could
> have 122 x 1.414 = 173 vdc. 173-30 = 143vdc. So you could have 140 to 150
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> > So measure across the transformer secondary and and then measure at
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> the tag on it has a sorta s on theAnode?and sorta regular straight line on
> the bottom of the arrowÂ Â hihi/ so dont know if that s indicates selenium
> or not/ ive seen selenium diodes in battery chargers but bigger then this
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> > > but that wud explain the hi voltage on plates for sure cause i dont
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> 1n4007 laying on the bench awaiting to be used may even have the resistor
> salvaged from someÂ tv or somethin/ agin thanks Terry / U can be my Mentor
> anytime/ it is really nice to have someoneÂ thats willing to spend time
> helping /maybe someday i can pass it forward thanksÂ Â
> > > Jerry KJ6NTL
> > >
> > > From: Terry Wagoner <wagstw46@>
> > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > Sent: Thursday, May 30, 2013 6:13 PM
> > > Subject: [TS-520_820_530_830] Re: eico324!!
> > >
> > > Â
> > > I forgot to ask did someone respond to your high anode voltage on
> 12AU7? If not it may be possible that someone has already replaced the
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> post, but they may not have added the necessary series dropping resistor.
> Must do that.
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> somewhat less than this due to drop across the Pi filter (C-R-C).
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> Often have to play with the value to tweak it in.
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> > > If selenium is there strongly recommend you replace it with 1N4007
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> > > I usually mount the silicon diode and series resistor on a phenolic
> terminal strip. Just dont connect to the ground lug!
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42445. Re: [TS-520_820_530_830] Crystals/Filter and general questions about Kenwood TS820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 15:53:25 UTC
From: Joseph Stiles
Topic: 42442 Message: 42445

Andrew,

  CW filters for the 820(s) are hard to find. Some show up on.....arrrgg EBAY from time to time.
  INRAD/FOX TANGO have them...but tend to be $$.
  Bob Macklin...ke5ftf may have one (he's on this board)
  Crystals for "fixed" operation can be had from International Crystals in Oklahoma City, OK
    they are top notch and really know their stuff!

   I am currently off of HF as I lost my antennas during a recent wind storm...and being partly handicapped
    it's real hard to get on the roof...when the WX sucks...friends don't let friends get on steep roof when wet/windy.
   I have had an 820(s) since about 1984 or so....it's still here

  I'll send you my off-list email addy in a few.

73 Joe
WB7UQU

From: "andrew@..." <andrew@tklcorp.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, May 30, 2013 11:48 PM
Subject: [TS-520_820_530_830] Crystals/Filter and general questions about Kenwood TS820s

RE TS820s

Anyone have suggestions on ....

Where to buy a CW filter?

Where to buy crystals for the fixed frequencies?

Anyone actively using this radio that I may contact directly with some
questions?

Andrew Schneider N7EBG
andrew@...

[Non-text portions of this message have been removed]

42446. Re: [TS-520_820_530_830] Crystals/Filter and general questions about Kenwood TS820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 15:57:37 UTC
From: W LEWIS
Topic: 42442 Message: 42446

Just a slight correction. KE5FTF is Bob Mansker.

--- On Fri, 5/31/13, Joseph Stiles <stilesjoseph@...> wrote:

From: Joseph Stiles <stilesjoseph@...>
Subject: Re: [TS-520_820_530_830] Crystals/Filter and general questions about Kenwood TS820s
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Date: Friday, May 31, 2013, 10:53 AM

Andrew,

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WB7UQU

_____
From: "andrew@..." <andrew@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, May 30, 2013 11:48 PM
Subject: [TS-520_820_530_830] Crystals/Filter and general questions about Kenwood TS820s

RE TS820s

Anyone have suggestions on ....

Where to buy a CW filter?

Where to buy crystals for the fixed frequencies?

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Andrew Schneider N7EBG
andrew@...

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[Non-text portions of this message have been removed]

42447. Re: [TS-520_820_530_830] Crystals/Filter and general questions about Kenwood TS820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 16:21:05 UTC
From: Bob Macklin
Topic: 42442 Message: 42447

I do have a 520 CW filter I plan to install some day. The problem is that Kenwood did not design the 520 to switch between the filters. You have to cut a connection on the mode switch and add a wire between the mode switch and the filter board.

I don't know how the 820 is wired.

Your best bet is watching eBay.

Are you a contest operator? If not do you really need a CW filter. Where I live the only time a CW filter is needed is on contest days. And I have a SB-301 and a Drake R-4 that solve that problem.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Joseph Stiles
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 8:53 AM
Subject: Re: [TS-520_820_530_830] Crystals/Filter and general questions about Kenwood TS820s

Andrew,

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I have had an 820(s) since about 1984 or so....it's still here

I'll send you my off-list email addy in a few.

73 Joe
WB7UQU

From: "andrew@..." <andrew@tklcorp.com>
To: TS-520_820_530_830@yahoogroups.com

Sent: Thursday, May 30, 2013 11:48 PM
Subject: [TS-520_820_530_830] Crystals/Filter and general questions about Kenwood TS820s

RE TS820s

Anyone have suggestions on ....

Where to buy a CW filter?

Where to buy crystals for the fixed frequencies?

Anyone actively using this radio that I may contact directly with some
questions?

Andrew Schneider N7EBG
andrew@tklcorp.com

[Non-text portions of this message have been removed]

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42448. Re: [TS-520_820_530_830] Crystals/Filter and general questions about Kenwood TS820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 16:59:29 UTC
From: Mike
Topic: 42442 Message: 42448

Bob,

I'm sure you are aware of the TS-520/520S/520SE CW filter installation steps that require moving the CW filter select wire on the IF board from the SSB to CW.

You are correct, the TS-520 and TS-520S do not have a CW NARROW/WIDE filter select switch but the TS-520SE does. As you say, the MODE switch does all the filter selections in SSB and CW in the 520 and 520S after the IF board CW filter select wire has been moved from SSB to CW as outlined in the 520 and 520S operator's manual.

There is a wiring changes found on the web that use a toggle switch mounted on the rear panel to control the CW WIDE/NARROW filter selection. I seem to recall there also is a mod that uses the Heater switch, labeled H. SWITCH on the TS-520 and TS-520S models, to act as a CW WIDE/NARROW filter select. Both of these wiring changes/mods for CW WIDE/NARROW filter select will require changes in the MODE switch wiring.

73
Mike W5RKL

On 5/31/2013 11:21 AM, Bob Macklin wrote:
>
> I do have a 520 CW filter I plan to install some day. The problem is
> that Kenwood did not design the 520 to switch between the filters. You
> have to cut a connection on the mode switch and add a wire between the
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> Are you a contest operator? If not do you really need a CW filter.
> Where I live the only time a CW filter is needed is on contest days.
> And I have a SB-301 and a Drake R-4 that solve that problem.
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> Bob Macklin
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> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Joseph Stiles
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>

> Sent: Friday, May 31, 2013 8:53 AM
> Subject: Re: [TS-520_820_530_830] Crystals/Filter and general
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>
> Andrew,
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> I am currently off of HF as I lost my antennas during a recent wind
> storm...and being partly handicapped
> it's real hard to get on the roof...when the WX sucks...friends don't
> let friends get on steep roof when wet/windy.
> I have had an 820(s) since about 1984 or so....it's still here
>
> I'll send you my off-list email addy in a few.
>
> 73 Joe
> WB7UQU
>
> _____
> From: "andrew@... <mailto:andrew%40tklcorp.com>"
> <andrew@... <mailto:andrew%40tklcorp.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Thursday, May 30, 2013 11:48 PM
> Subject: [TS-520_820_530_830] Crystals/Filter and general questions
> about Kenwood TS820s
>
> RE TS820s
>
> Anyone have suggestions on ....
>
> Where to buy a CW filter?
>
> Where to buy crystals for the fixed frequencies?
>
> Anyone actively using this radio that I may contact directly with some
> questions?
>
> Andrew Schneider N7EBG
> andrew@... <mailto:andrew%40tklcorp.com>
>
> [Non-text portions of this message have been removed]
>

> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

42449. Re: [TS-520_820_530_830] Assuming I get my 520 up, what accessories would you consider most needed?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 16:40:49 UTC
From: Jerry Barr
Topic: 42425 Message: 42449

my first response is add an antenna tuner to your radioand the anylyzer is the best 250 i ever spent / i build yagis and such a lot and the mfj 259 lets me tune it on the bench so to speak without putting it high upin the air just sit the reflector on the ground anttenna pointed up and tune awayand i may just try some traps with the dipper portion/make an adaptor with a pl259 and a phono plug and u can plug in different coils for different freqs
Jerry KJ6NTL

From: Wes Will <wwill@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, May 30, 2013 11:25 PM
Subject: [TS-520_820_530_830] Assuming I get my 520 up, what accessories would you consider most needed?

I have the digital readout, with cables. It works, I powered it up separately and checked it with a signal generator. It isn't perfect, perhaps, but it's quite close. (And perhaps it was the signal generator that was off, and the freq. counter was dead on....)

Would the external VFO be of most utility? If so, how much is the going rate on one, and are there any caveats to be aware of, other than the usual ones of not buying a pig in a poke and so on?

(Slightly off-topic for this list, but not so far as to be a rules violation, I think, since it is about a related piece of Ham gear. If I read that part of the list charter incorrectly, I apologize in advance, just say so and it's dropped.)

Using that grid dipper to make a multi-band trapped HF antenna from co-ax cable (a la this article: http://degood.org/coaxtrap/) is proving to be rather a pain in the tuccus. I'm wasting more co-ax than I can afford, and I'd like to end up with an antenna when I'm done.

I've never had a chance to use one of the low-cost (comparatively) "antenna analyzers" that have appeared in the last few years, but they look really --awesome-- and exactly what I need to tune this thing to the right bands. (Instead of where I am at the moment, where it looks like one or more of the traps will likely radiate a lot better in a harmonic for which I am NOT licensed, than in the band for which it is supposedly cut....)

Are the analyzers all they're advertised to be? From the hype, even the MFJ model will do everything imaginable, and walk the dog twice a day, too.

What is the collected wisdom of the group regarding them, which is the best way to go (Buy one on e-Pay and take my chances, build one from a kit, something else entirely?), and does anyone RENT the suckers for a day or two? I don't know that I'd use one that often to make it worth buying, but I'd LOVE to try one on this antenna, to be sure to get it in the middle of the bands.

Inquiring minds want to know! (And don't want to get noticed by Frank and either of the two Charlies.)

TIA.

--
Wes Will
N9KDY

[Non-text portions of this message have been removed]

42450. RE: [TS-520_820_530_830] Cr ystals/Filter and general questions about Kenwood T S820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 17:04:25 UTC
From: <andrew@...>
Topic: 42450 Message: 42450

Bob
Thank you for the reply

So is the purpose of the CW filter to narrow the signal as to reject
other near by signals?

Andy

Andrew Schneider N7EBG
C 801-529-3033
andrew@...

-------- Original Message --------
Subject: Re: [TS-520_820_530_830] Crystals/Filter and general questions
about Kenwood TS820s
From: "Bob Macklin" <macklinbob@...>
Date: Fri, May 31, 2013 10:21 am
To: <TS-520_820_530_830@yahoogroups.com>

I do have a 520 CW filter I plan to install some day. The problem
is that Kenwood did not design the 520 to switch between the filters.
You have to cut a connection on the mode switch and add a wire between
the mode switch and the filter board.

I don't know how the 820 is wired.

Your best bet is watching eBay.

Are you a contest operator? If not do you really need a CW filter.
Where I live the only time a CW filter is needed is on contest days. And
I have a SB-301 and a Drake R-4 that solve that problem.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Joseph Stiles
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 8:53 AM
Subject: Re: [TS-520_820_530_830] Crystals/Filter and general questions
about Kenwood TS820s

Andrew,

CW filters for the 820(s) are hard to find. Some show up on.....arrrgg
EBAY from time to time.
INRAD/FOX TANGO have them...but tend to be $$.
Bob Macklin...ke5ftf may have one (he's on this board)
Crystals for "fixed" operation can be had from International Crystals
in Oklahoma City, OK
they are top notch and really know their stuff!

I am currently off of HF as I lost my antennas during a recent wind
storm...and being partly handicapped
it's real hard to get on the roof...when the WX sucks...friends don't
let friends get on steep roof when wet/windy.
I have had an 820(s) since about 1984 or so....it's still here

I'll send you my off-list email addy in a few.

73 Joe
WB7UQU

From: "andrew@..." <andrew@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, May 30, 2013 11:48 PM
Subject: [TS-520_820_530_830] Crystals/Filter and general questions
about Kenwood TS820s

RE TS820s

Anyone have suggestions on ....

Where to buy a CW filter?

Where to buy crystals for the fixed frequencies?

Anyone actively using this radio that I may contact directly with some
questions?

Andrew Schneider N7EBG
andrew@...

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[Non-text portions of this message have been removed]

42451. Re: [TS-520_820_530_830] Re: eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 17:09:17 UTC
From: Ken Winterling
Topic: 42339 Message: 42451

Jerry,

I didn't get any pics with your last message since the reflector strips them from messages and I didn't find any at the group site. Try putting the personal e-mail address of a few of those individuals helping you into the "cc" field. That will deliver your message directly to them rather than through the reflector and the attachments should arrive intact.

As for encapsulating selenium rectifiers, I know that the one Collins used in the 516-F was encapsulated but that was a single rectifier (two terminals). Aside from that case, all the others I have encountered have been of the exposed "stack of plates" variety.

Ken
WA2LBI

On Fri, May 31, 2013 at 10:54 AM, Jerry Barr <kj6ntl@...> wrote:

> **
>
>
> ok guys unless they encapsulated selenium/ then its not and not a bridge/
> tho it has a bolt holding it to chassis/model 50 is the number on it
>
> here is the pics
> Jerry KJ6NTL
>
> From: Ken Winterling <wa2lbi@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Friday, May 31, 2013 7:07 AM
> Subject: Re: [TS-520_820_530_830] Re: eico324!!
>
>
>
>
> Jerry,
>
> The following link shows examples of selenium rectifiers. The "s" symbol
> on the terminals represents a sine wave and is where the transformer
> secondary would be connected. Does your device resemble any of these?
>
> http://4sale.sbszoo.com/diodes.htm
>
> Ken
> WA2LBI
>
> On Fri, May 31, 2013 at 9:50 AM, Terry Wagoner <mailto:

> wagstw46%40yahoo.com> wrote:
>
> > **
>
> >
> >
> > Bob:
> >
> > You may be correct with the arrow symbol on it. When he said like old
> > battery charger I thought of selenium. If it is a bridge rectifier ok to
> > leave it and not install the 1N4007.
> >
> > Of course if it is a bridge will have less ripple to filter but will
> still
> > have same 1.4 x xfmr secondary RMS if they didnt include series dropping
> > resistor.
> >
> > Would sure be nice if we had a real time Skype like feature to help us.
> > What is that they say about a picture!
> >
> > Terry K9TW
> >
> >
> > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Bob Macklin"
> <macklinbob@...>
>
> > wrote:
> > >
> > > Terry,
> > >
> > > The description I read sounds like a possible diode bridge rectifier.
> > >
> > > Does it have 4 terminals on it? How many terminals have wires on them?
> > >
> > > Bob Macklin
> > > K5MYJ
> > > Seattle, Wa.
> > > "Real Radios Glow In The Dark"
> > > ----- Original Message -----
> > > From: Terry Wagoner
> > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > Sent: Friday, May 31, 2013 4:00 AM
> > > Subject: [TS-520_820_530_830] Re: eico324!!
> > >
> > >
> > >
> > > Yes will be a miniature version of the bigger ones in the older style
> > > battery chargers. Sounds like selenium is still there so only other
> reason
> > > I can think of for high B+ is higher line voltage we have today?

> > >
> > > There should not be a series dropping resistor if the Selenium is still
> > there. So not likely it is source of your high plate voltage. I would
> still
> > get it out of there.
> > >
> > > As I noted earlier the selenium is followed by a pi filter so that is
> > the only resistor you should see close to selenium unless someone has
> > modded this unit.
> > >
> > > I used 120 vac as an example in previous response. Looking at the 324
> > schematic I see it shows the transformer secondary is 110vac so you
> should
> > measure that voltage. With todays line voltage it may be a little higher.
> > 110 x 1.414 = 155 vdc. 155 - 125 (shown at input of Pi filter) = 30 vdc.
> > That is the drop across the selenium and is a little high if my memory
> > serves right. Havent seen a selenium in a long time.
> > >
> > > I dont see what line voltage they are using. Typically in old days
> would
> > use 117vac. So we cannot tell what the transformer turns ratio is. Maybe
> it
> > is 1:1 which means if your line voltage at your house is 122 vac you
> could
> > have 122 x 1.414 = 173 vdc. 173-30 = 143vdc. So you could have 140 to 150
> > vdc at 1st filter cap.
> > >
> > > So measure across the transformer secondary and and then measure at
> > positive terminal of first filter cap.
> > >
> > > Terry K9TW
> > >
> > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, Jerry Barr
> <kj6ntl@> wrote:
> > > >
> > > > weeeellll hmmmm, it is a rectangular blackÂ thing abt 1/2 x3/4,x3/4/
> > the tag on it has a sorta s on theAnode?and sorta regular straight line
> on
> > the bottom of the arrowÂ Â hihi/ so dont know if that s indicates
> selenium
> > or not/ ive seen selenium diodes in battery chargers but bigger then this
> > by far and never encased in epoxy or whatever
> > > > but that wud explain the hi voltage on plates for sure cause i dont
> > see any resistors other then the schematics ones/ i might even have some
> > 1n4007 laying on the bench awaiting to be used may even have the resistor
> > salvaged from someÂ tv or somethin/ agin thanks Terry / U can be my
> Mentor
> > anytime/ it is really nice to have someoneÂ thats willing to spend time
> > helping /maybe someday i can pass it forward thanksÂ Â
> > > > Jerry KJ6NTL

> > > >
> > > > From: Terry Wagoner <wagstw46@>
> > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
>
> > > > Sent: Thursday, May 30, 2013 6:13 PM
> > > > Subject: [TS-520_820_530_830] Re: eico324!!
> > > > >
> > > > > Â
> > > > > I forgot to ask did someone respond to your high anode voltage on
> > 12AU7? If not it may be possible that someone has already replaced the
> > selenium rectifier with a silicon diode as I suggested you do in earlier
> > post, but they may not have added the necessary series dropping resistor.
> > Must do that.
> > > > >
> > > > > If you just replace the selenium you can end up with DC supply
> voltage
> > 15 to 20 vdc higher. For example: 120 vac secondary will charge filter
> caps
> > to the peak or 120 X 1.414 = 170 vdc. Output voltage at tubes plate will
> be
> > somewhat less than this due to drop across the Pi filter (C-R-C).
> > > > >
> > > > > So do you know what a selenium rectifier looks like? If not, it is a
> > square cube that has stack of thin metal plates. Secondary lead of power
> > transformer will run to terminal on it. If it has been replaced they
> should
> > have added the series resistor from approx 100 to 200 ohms at 2-5 watts.
> > Often have to play with the value to tweak it in.
> > > > >
> > > > > If selenium is there strongly recommend you replace it with 1N4007
> > silicon rectifier diode (mouser or radio shack). If you do not you will
> not
> > like the odor when it does fail. It is not a joke and can be a fire and
> the
> > fumes are toxic.
> > > > >
> > > > > I usually mount the silicon diode and series resistor on a phenolic
> > terminal strip. Just dont connect to the ground lug!
> > > > >
> > > > > Terry K9TW
> > > > >
> > > > > > >
> > > > > > >
> > > > > >
> > > > > >
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42452. Re: [TS-520_820_530_830] Cr ystals/Filter and general questions about Kenwood T S820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 17:12:08 UTC
From: Louis Wilen
Topic: 42450 Message: 42452

I’m going to go ahead and chime in here on the filter discussion. I have TS-530S with both the 270 Hz filter (for CW) and the 1.8Khz filter (for SSB). I’ve found that the 270 Hz filter is very valuable for CW, even under only moderately crowded band conditions. There are many CW QSOs that would have been nearly impossible without the filter.

The 1.8 Khz filter is of only marginal value. Using the IF shift is often more effective than using the filter in crowded SSB conditions.

Louis
W3LMW

From: andrew@...
Sent: Friday, May 31, 2013 1:04 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] Cr ystals/Filter and general questions about Kenwood T S820s

Bob
Thank you for the reply

So is the purpose of the CW filter to narrow the signal as to reject
other near by signals?

Andy

Andrew Schneider N7EBG
C 801-529-3033
mailto:andrew%40wmsinc.org

-------- Original Message --------
Subject: Re: [TS-520_820_530_830] Crystals/Filter and general questions
about Kenwood TS820s
From: "Bob Macklin" <mailto:macklinbob%40gmail.com>
Date: Fri, May 31, 2013 10:21 am
To: <mailto:TS-520_820_530_830%40yahoogroups.com>

I do have a 520 CW filter I plan to install some day. The problem
is that Kenwood did not design the 520 to switch between the filters.
You have to cut a connection on the mode switch and add a wire between
the mode switch and the filter board.

I don't know how the 820 is wired.

Your best bet is watching eBay.

Are you a contest operator? If not do you really need a CW filter.
Where I live the only time a CW filter is needed is on contest days. And
I have a SB-301 and a Drake R-4 that solve that problem.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Joseph Stiles
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Friday, May 31, 2013 8:53 AM
Subject: Re: [TS-520_820_530_830] Crystals/Filter and general questions
about Kenwood TS820s

Andrew,

CW filters for the 820(s) are hard to find. Some show up on.....arrrgg
EBAY from time to time.
INRAD/FOX TANGO have them...but tend to be $$.
Bob Macklin...ke5ftf may have one (he's on this board)
Crystals for "fixed" operation can be had from International Crystals
in Oklahoma City, OK
they are top notch and really know their stuff!

I am currently off of HF as I lost my antennas during a recent wind
storm...and being partly handicapped
it's real hard to get on the roof...when the WX sucks...friends don't
let friends get on steep roof when wet/windy.
I have had an 820(s) since about 1984 or so....it's still here

I'll send you my off-list email addy in a few.

73 Joe
WB7UQU

_____
From: "mailto:andrew%40tklcorp.com" <mailto:andrew%40tklcorp.com>
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Thursday, May 30, 2013 11:48 PM
Subject: [TS-520_820_530_830] Crystals/Filter and general questions
about Kenwood TS820s

RE TS820s

Anyone have suggestions on ....

Where to buy a CW filter?

Where to buy crystals for the fixed frequencies?

Anyone actively using this radio that I may contact directly with some
questions?

Andrew Schneider N7EBG
mailto:andrew%40tklcorp.com

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[Non-text portions of this message have been removed]

42453. Re: [TS-520_820_530_830] Crystals/Filter and general questions about Kenwood TS820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 17:19:56 UTC
From: Bob Macklin
Topic: 42442 Message: 42453

Mike,

If I install my CW filter in my 520 I will rewire the mode switch the way it should be. If I cannot do that I just won't install the CW filter in my 520.

I'll use my SB-301 or Drake R-4 if I need a sharp CW receiver.

I have never even opened my 520! So I have no idea how bad the problem will be.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Mike
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 9:59 AM
Subject: Re: [TS-520_820_530_830] Crystals/Filter and general questions about Kenwood TS820s

Bob,

I'm sure you are aware of the TS-520/520S/520SE CW filter installation steps that require moving the CW filter select wire on the IF board from the SSB to CW.

You are correct, the TS-520 and TS-520S do not have a CW NARROW/WIDE filter select switch but the TS-520SE does. As you say, the MODE switch does all the filter selections in SSB and CW in the 520 and 520S after the IF board CW filter select wire has been moved from SSB to CW as outlined in the 520 and 520S operator's manual.

There is a wiring changes found on the web that use a toggle switch mounted on the rear panel to control the CW WIDE/NARROW filter selection. I seem to recall there also is a mod that uses the Heater switch, labeled H. SWITCH on the TS-520 and TS-520S models, to act as a CW WIDE/NARROW filter select. Both of these wiring changes/mods for CW WIDE/NARROW filter select will require changes in the MODE switch wiring.

73
Mike W5RKL

On 5/31/2013 11:21 AM, Bob Macklin wrote:
>
> I do have a 520 CW filter I plan to install some day. The problem is
> that Kenwood did not design the 520 to switch between the filters. You

> have to cut a connection on the mode switch and add a wire between the
> mode switch and the filter board.
>
> I don't know how the 820 is wired.
>
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>
> Are you a contest operator? If not do you really need a CW filter.
> Where I live the only time a CW filter is needed is on contest days.
> And I have a SB-301 and a Drake R-4 that solve that problem.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Joseph Stiles
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Friday, May 31, 2013 8:53 AM
> Subject: Re: [TS-520_820_530_830] Crystals/Filter and general
> questions about Kenwood TS820s
>
> Andrew,
>
> CW filters for the 820(s) are hard to find. Some show up on.....arrrgg
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> Bob Macklin...ke5ftf may have one (he's on this board)
> Crystals for "fixed" operation can be had from International Crystals
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> 73 Joe
> WB7UQU
>
> _____
> From: "andrew@... <mailto:andrew%40tklcorp.com>"
> <andrew@tklcorp.com <mailto:andrew%40tklcorp.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Thursday, May 30, 2013 11:48 PM

> Subject: [TS-520_820_530_830] Crystals/Filter and general questions
> about Kenwood TS820s
>
> RE TS820s
>
> Anyone have suggestions on ....
>
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> Andrew Schneider N7EBG
> andrew@... <mailto:andrew%40tklcorp.com>
>
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42454. Re: [TS-520_820_530_830] Cr ystals/Filter and general questions about Kenwood T S820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 17:22:01 UTC
From: Bob Macklin
Topic: 42450 Message: 42454

That is the only purpose of the CW filter. If you are not a contest operator you probably don't need it.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: andrew@...m
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 10:04 AM
Subject: RE: [TS-520_820_530_830] Cr ystals/Filter and general questions about Kenwood T S820s

Bob
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So is the purpose of the CW filter to narrow the signal as to reject
other near by signals?

Andy

Andrew Schneider N7EBG
C 801-529-3033
andrew@...

-------- Original Message --------
Subject: Re: [TS-520_820_530_830] Crystals/Filter and general questions
about Kenwood TS820s
From: "Bob Macklin" <macklinbob@...>
Date: Fri, May 31, 2013 10:21 am
To: <TS-520_820_530_830@yahoogroups.com>

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Your best bet is watching eBay.

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Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Joseph Stiles
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 8:53 AM
Subject: Re: [TS-520_820_530_830] Crystals/Filter and general questions about Kenwood TS820s

Andrew,

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Bob Macklin...ke5ftf may have one (he's on this board)
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WB7UQU

From: "andrew@..." <andrew@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, May 30, 2013 11:48 PM
Subject: [TS-520_820_530_830] Crystals/Filter and general questions about Kenwood TS820s

RE TS820s

Anyone have suggestions on ....

Where to buy a CW filter?

Where to buy crystals for the fixed frequencies?

Anyone actively using this radio that I may contact directly with some questions?

Andrew Schneider N7EBG
andrew@...

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

42455. Re: [TS-520_820_530_830] Cr ystals/Filter and general questions about Kenwood T S820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 17:22:15 UTC
From: Mike
Topic: 42450 Message: 42455

I miss read the subject, I read the subject as being a discussion about the TS-520 CW filter but it seems the discussion is for the 820 CW filter, sorry, my mistake.

73
Mike W5RKL

On 5/31/2013 12:12 PM, Louis Wilen wrote:
>
> I'm going to go ahead and chime in here on the filter discussion. I
> have TS-530S with both the 270 Hz filter (for CW) and the 1.8Khz
> filter (for SSB). I've found that the 270 Hz filter is very valuable
> for CW, even under only moderately crowded band conditions. There are
> many CW QSOs that would have been nearly impossible without the filter.
>
> The 1.8 Khz filter is of only marginal value. Using the IF shift is
> often more effective than using the filter in crowded SSB conditions.
>
> Louis
> W3LMW
>
> From: andrew@... <mailto:andrew%40tklcorp.com>
> Sent: Friday, May 31, 2013 1:04 PM
> To: TS-520_820_530_830@...m
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: RE: [TS-520_820_530_830] Cr ystals/Filter and general
> questions about Kenwood T S820s
>
> Bob
> Thank you for the reply
>
> So is the purpose of the CW filter to narrow the signal as to reject
> other near by signals?
>
> Andy
>
> Andrew Schneider N7EBG
> C 801-529-3033
> mailto:andrew%40wmsinc.org
>
> -------- Original Message --------
> Subject: Re: [TS-520_820_530_830] Crystals/Filter and general questions
> about Kenwood TS820s
> From: "Bob Macklin" <mailto:macklinbob%40gmail.com>

> Date: Fri, May 31, 2013 10:21 am
> To: <mailto:TS-520_820_530_830%40yahoogroups.com>
>
> I do have a 520 CW filter I plan to install some day. The problem
> is that Kenwood did not design the 520 to switch between the filters.
> You have to cut a connection on the mode switch and add a wire between
> the mode switch and the filter board.
>
> I don't know how the 820 is wired.
>
> Your best bet is watching eBay.
>
> Are you a contest operator? If not do you really need a CW filter.
> Where I live the only time a CW filter is needed is on contest days. And
> I have a SB-301 and a Drake R-4 that solve that problem.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Joseph Stiles
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Friday, May 31, 2013 8:53 AM
> Subject: Re: [TS-520_820_530_830] Crystals/Filter and general questions
> about Kenwood TS820s
>
> Andrew,
>
> CW filters for the 820(s) are hard to find. Some show up on.....arrrgg
> EBAY from time to time.
> INRAD/FOX TANGO have them...but tend to be $$.
> Bob Macklin...ke5ftf may have one (he's on this board)
> Crystals for "fixed" operation can be had from International Crystals
> in Oklahoma City, OK
> they are top notch and really know their stuff!
>
> I am currently off of HF as I lost my antennas during a recent wind
> storm...and being partly handicapped
> it's real hard to get on the roof...when the WX sucks...friends don't
> let friends get on steep roof when wet/windy.
> I have had an 820(s) since about 1984 or so....it's still here
>
> I'll send you my off-list email addy in a few.
>
> 73 Joe
> WB7UQU
>
> _____
> From: "mailto:andrew%40tklcorp.com" <mailto:andrew%40tklcorp.com>

> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Thursday, May 30, 2013 11:48 PM
> Subject: [TS-520_820_530_830] Crystals/Filter and general questions
> about Kenwood TS820s
>
> RE TS820s
>
> Anyone have suggestions on ....
>
> Where to buy a CW filter?
>
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>
> Anyone actively using this radio that I may contact directly with some
> questions?
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> Andrew Schneider N7EBG
> mailto:andrew%40tklcorp.com
>
> [Non-text portions of this message have been removed]
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[Non-text portions of this message have been removed]

42456. Re: TS-520 No receive No TX?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 17:23:44 UTC
From: Terry Wagoner
Topic: 42425 Message: 42456

Should be no TX capability on 10 mhz. You want no 14 vdc from WWV switch to the RF board N14 terminal with the switch pushed in. With switch pushed in should not be able to tune and load the rig. Should only be able to receive 10 mhz at zero on VFO dial.

With the push button switch in the out position you should have 14 vdc to RF board at the N14 terminal and the antenna coax will now be routed to the NAT terminal instead of the JAT terminal on the RF board for normal ham band receiver coverage.

With push button in the Out or Normal position you should have both RX and TX on the ham bands. If you have neither then suspect lost VFO input to the IF board as others have suggested. If you have either one of the modes then you have VFO signal at IF board and 8/9 is not the problem.

Always get RX going first and then worry about TX. I think that is what you said you were doing.

I may be the only one confused at this point. I believe that you are telling me that with Push button pressed in you have good 10.0 mhz WWV copy and with Push Button out you have no ham band receive?

I think I need to back out and let Brad and others help you. I am mudding the water.

Terry K9TW
--- In TS-520_820_530_830@yahoogroups.com, "rayosfostoria" <smokin4477@...> wrote:
>
> Some good points.
> I'll remove the solder blob on 8,9 pins and replace it with a good wire jumper, the blob does look milky greyish.
> I did clean the wwv switch and checked it with the ohm meter for continuity in both positions, seems it's doing what it should be doing.
> Yes very good reception on 10mhz. What little TX output I could get was with the wwv switch in the out position.
> One thing I did not do was check the wwv switch for voltages, you mentioned it shuts off the 14 vdc to the rf board. Now if I have power to the switch but nothing through it, could/should I jump the switch and see if anything changes? At least that would eliminate one more thing.
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > I may have mis-read you post? I also forgot to mention if you have good TX mode then the IF board has to be seeing the VFO signal. VFO signal is applied there and used for both TX and RX mixing. If bad 8/9 solder connection you should have no TIF signal being generated from IF board and no TX.
> >
> > Also the WWV switch also prevents transmitting on the 10 mhz band. When you push it in to receive 10 mhz it disables the 14vdc supply to the Transmit Mixer on RF board. If you

place it in the Out or Normal position and contacts dont make well you could experience loss of normal RX, normal TX, or both.
> >
> > If you are saying you have good consistent 10.0 mhz reception with WWV button pushed in and no ham band reception with it in the Out or Normal position and you have good TX mode then I would be concerned about your antenna step up transformer L1 on RF board.
> >
> > Someone mentioned signal injection/signal tracing and that may well be where you are at now.
> >
> > If fixing 8/9 jumper and cleaning and exercising WWV switch doesnt restore full RX and TX mode I agree you need to reach for RF sig gen.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "rayosfostoria" <smokin4477@> wrote:
> > >
> > > Hello all, new to the group!
> > > I've been running kenwood rigs since I first got my novice ticket (now General class) 20+ year ago.
> > >
> > > Last week I picked up a nice looking Kenwood 520. I was told by the PO it had died during a QSO on 20 meters, It quit both TX and receive.
> > > Got it home and it is dead on all bands in receive. However when you'd push in the WWV button it will receive across that band just fine.
> > > Also noticed at times when you'd push the button in the JJY position it would receive fine for about 2-5 seconds then die, just static.
> > > Also from a cold start it would receive fine (sometimes) for about the same time. Now I cannot get it to receive at all in the JJY position! WWV still works fine. It has a jumper (solder blob) across the 8 and 9 pins on the vfo plug.
> > >
> > > TX is a different story, I'm getting about 70 watts on 80M, 25 on 40M, 10-18 watts or so on 20-10M. Not real worried about the TX side yet, need to get the receive going.
> > >
> > > I have cleaned the relays, Checked the WWV/JJY switch, not broken and has continuity in both positions. Loosened and retightened all screws, checked for dead end wires, Checked the voltages on the AVR board for 9 volts and 3.3 volts there ok. Not even sure where to really start looking? Just done a few basic's.
> > >
> > > Now I am new to troubleshooting and repair, only armed with a Volt/Ohm meter, A Blown up schematic of the 520, Both the manual and service manual. Would really like to get this old gal working again!
> > > Any help, guidance would sure be appreciated!!
> > >
> >
>

42457. Re: [TS-520_820_530_830] Cr ystals/Filter and general questions about Kenwood T S820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 17:26:09 UTC
From: Bob Macklin
Topic: 42450 Message: 42457

It depends on how serious a CW operator you are as to whether or not you really need a CW filter.

The only time I ever see crowded CW segments is on contest days and I don't work contests.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: Louis Wilen
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 10:12 AM
Subject: Re: [TS-520_820_530_830] Cr ystals/Filter and general questions about Kenwood T S820s

I’m going to go ahead and chime in here on the filter discussion. I have TS-530S with both the 270 Hz filter (for CW) and the 1.8Khz filter (for SSB). I’ve found that the 270 Hz filter is very valuable for CW, even under only moderately crowded band conditions. There are many CW QSOs that would have been nearly impossible without the filter.

The 1.8 Khz filter is of only marginal value. Using the IF shift is often more effective than using the filter in crowded SSB conditions.

Louis
W3LMW

From: andrew@...
Sent: Friday, May 31, 2013 1:04 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] Cr ystals/Filter and general questions about Kenwood T S820s

Bob
Thank you for the reply

So is the purpose of the CW filter to narrow the signal as to reject
other near by signals?

Andy

Andrew Schneider N7EBG
C 801-529-3033
mailto:andrew%40wmsinc.org

-------- Original Message --------
Subject: Re: [TS-520_820_530_830] Crystals/Filter and general questions about Kenwood TS820s
From: "Bob Macklin" <mailto:macklinbob%40gmail.com>
Date: Fri, May 31, 2013 10:21 am
To: <mailto:TS-520_820_530_830%40yahoogroups.com>

I do have a 520 CW filter I plan to install some day. The problem is that Kenwood did not design the 520 to switch between the filters. You have to cut a connection on the mode switch and add a wire between the mode switch and the filter board.

I don't know how the 820 is wired.

Your best bet is watching eBay.

Are you a contest operator? If not do you really need a CW filter. Where I live the only time a CW filter is needed is on contest days. And I have a SB-301 and a Drake R-4 that solve that problem.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Joseph Stiles
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Friday, May 31, 2013 8:53 AM
Subject: Re: [TS-520_820_530_830] Crystals/Filter and general questions about Kenwood TS820s

Andrew,

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INRAD/FOX TANGO have them...but tend to be $$.
Bob Macklin...ke5ftf may have one (he's on this board)
Crystals for "fixed" operation can be had from International Crystals in Oklahoma City, OK
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I am currently off of HF as I lost my antennas during a recent wind storm...and being partly handicapped
it's real hard to get on the roof...when the WX sucks...friends don't let friends get on steep roof when wet/windy.
I have had an 820(s) since about 1984 or so....it's still here

I'll send you my off-list email addy in a few.

73 Joe
WB7UQU

_____
From: "mailto:andrew%40tklcorp.com" <mailto:andrew%40tklcorp.com>

To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Thursday, May 30, 2013 11:48 PM
Subject: [TS-520_820_530_830] Crystals/Filter and general questions about Kenwood TS820s

RE TS820s

Anyone have suggestions on ....

Where to buy a CW filter?

Where to buy crystals for the fixed frequencies?

Anyone actively using this radio that I may contact directly with some questions?

Andrew Schneider N7EBG
mailto:andrew%40tklcorp.com

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42458. Re: eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 17:30:05 UTC
From: Terry Wagoner
Topic: 42339 Message: 42458

OK the Sarkes/Tarzian No. 50 (for 50 ma) was potted. ST was a big supplier of these units. I forgot about that. It is a selenium that has been potted. Not sure why your B+ is so high unless just line voltage to the primary of your transformer.

If it was my 324 (I have owned and built them) it would be history and 1N4007 would be in its place along with series dropping resistor.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Jerry Barr <kj6ntl@...> wrote:
>
> ok guys unless they encapsulated selenium/ thenÂ its not and not a bridge/ tho it has a bolt holding it to chassis/model 50Â is the number on it
>
> here is the picsÂ
> Jerry KJ6NTL
>
> From: Ken Winterling <wa2lbi@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Friday, May 31, 2013 7:07 AM
> Subject: Re: [TS-520_820_530_830] Re: eico324!!
>
> Â
> Jerry,
>
> The following link shows examples of selenium rectifiers. The "s" symbol
> on the terminals represents a sine wave and is where the transformer
> secondary would be connected. Does your device resemble any of these?
>
> http://4sale.sbszoo.com/diodes.htm
>
> Ken
> WA2LBI
>
> On Fri, May 31, 2013 at 9:50 AM, Terry Wagoner <mailto:wagstw46%40yahoo.com> wrote:
>
> > **
> >
> >
> > Bob:
> >
> > You may be correct with the arrow symbol on it. When he said like old
> > battery charger I thought of selenium. If it is a bridge rectifier ok to
> > leave it and not install the 1N4007.
> >

> > Of course if it is a bridge will have less ripple to filter but will still
> > have same 1.4 x xfmr secondary RMS if they didnt include series dropping
> > resistor.
> >
> > Would sure be nice if we had a real time Skype like feature to help us.
> > What is that they say about a picture!
> >
> > Terry K9TW
> >
> >
> > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Bob Macklin" <macklinbob@>
> > wrote:
> > >
> > > Terry,
> > >
> > > The description I read sounds like a possible diode bridge rectifier.
> > >
> > > Does it have 4 terminals on it? How many terminals have wires on them?
> > >
> > > Bob Macklin
> > > K5MYJ
> > > Seattle, Wa.
> > > "Real Radios Glow In The Dark"
> > > ----- Original Message -----
> > > From: Terry Wagoner
> > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > Sent: Friday, May 31, 2013 4:00 AM
> > > Subject: [TS-520_820_530_830] Re: eico324!!
> > >
> > >
> > >
> > > Yes will be a miniature version of the bigger ones in the older style
> > battery chargers. Sounds like selenium is still there so only other reason
> > I can think of for high B+ is higher line voltage we have today?
> > >
> > > There should not be a series dropping resistor if the Selenium is still
> > there. So not likely it is source of your high plate voltage. I would still
> > get it out of there.
> > >
> > > As I noted earlier the selenium is followed by a pi filter so that is
> > the only resistor you should see close to selenium unless someone has
> > modded this unit.
> > >
> > > I used 120 vac as an example in previous response. Looking at the 324
> > schematic I see it shows the transformer secondary is 110vac so you should
> > measure that voltage. With todays line voltage it may be a little higher.
> > 110 x 1.414 = 155 vdc. 155 - 125 (shown at input of Pi filter) = 30 vdc.
> > That is the drop across the selenium and is a little high if my memory
> > serves right. Havent seen a selenium in a long time.

> > >
> > > I dont see what line voltage they are using. Typically in old days would
> > use 117vac. So we cannot tell what the transformer turns ratio is. Maybe it
> > is 1:1 which means if your line voltage at your house is 122 vac you could
> > have 122 x 1.414 = 173 vdc. 173-30 = 143vdc. So you could have 140 to 150
> > vdc at 1st filter cap.
> > >
> > > So measure across the transformer secondary and and then measure at
> > positive terminal of first filter cap.
> > >
> > > Terry K9TW
> > >
> > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, Jerry Barr <kj6ntl@> wrote:
> > > >
> > > > weeeellll hmmmm, it is a rectangular blackÃ☐ thing abt 1/2 x3/4,x3/4/
> > the tag on it has a sorta s on theAnode?and sorta regular straight line on
> > the bottom of the arrowÃ☐ Ã☐ hihi/ so dont know if that s indicates selenium
> > or not/ ive seen selenium diodes in battery chargers but bigger then this
> > by far and never encased in epoxy or whatever
> > > > but that wud explain the hi voltage on plates for sure cause i dont
> > see any resistors other then the schematics ones/ i might even have some
> > 1n4007 laying on the bench awaiting to be used may even have the resistor
> > salvaged from someÃ☐ tv or somethin/ agin thanks Terry / U can be my Mentor
> > anytime/ it is really nice to have someoneÃ☐ thats willing to spend time
> > helping /maybe someday i can pass it forward thanksÃ☐ Ã☐
> > > > Jerry KJ6NTL
> > > >
> > > > From: Terry Wagoner <wagstw46@>
> > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > > Sent: Thursday, May 30, 2013 6:13 PM
> > > > Subject: [TS-520_820_530_830] Re: eico324!!
> > > >
> > > > Ã☐
> > > > I forgot to ask did someone respond to your high anode voltage on
> > 12AU7? If not it may be possible that someone has already replaced the
> > selenium rectifier with a silicon diode as I suggested you do in earlier
> > post, but they may not have added the necessary series dropping resistor.
> > Must do that.
> > > >
> > > > If you just replace the selenium you can end up with DC supply voltage
> > 15 to 20 vdc higher. For example: 120 vac secondary will charge filter caps
> > to the peak or 120 X 1.414 = 170 vdc. Output voltage at tubes plate will be
> > somewhat less than this due to drop across the Pi filter (C-R-C).
> > > >
> > > > So do you know what a selenium rectifier looks like? If not, it is a
> > square cube that has stack of thin metal plates. Secondary lead of power
> > transformer will run to terminal on it. If it has been replaced they should
> > have added the series resistor from approx 100 to 200 ohms at 2-5 watts.
> > Often have to play with the value to tweak it in.

> > > >
> > > > If selenium is there strongly recommend you replace it with 1N4007
> > silicon rectifier diode (mouser or radio shack). If you do not you will not
> > like the odor when it does fail. It is not a joke and can be a fire and the
> > fumes are toxic.
> > > > >
> > > > > I usually mount the silicon diode and series resistor on a phenolic
> > terminal strip. Just dont connect to the ground lug!
> > > > >
> > > > > Terry K9TW
> > > > >
> > > > > > >
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42459. Re: [TS-520_820_530_830] Crystals/Filter and general questions about Kenwood TS820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 17:32:25 UTC
From: Mike
Topic: 42442 Message: 42459

Bob,

I tend to agree with you. My Drake R4C has 4 INRAD filters, 2 for CW (500/250Hz), one for AM (6KHZ), and one for SSB (1.8Khz). I find I don't use the CW filters very much but if I do, it's only when a station is close to my operating frequency. The R4C has a NOTCH adjustment along with a PASSBAND TUNING, similar to Kenwood's IF SHIFT tuning, that helps quite a bit without having to select either of the CW filters.

If I owned a TS-520 or TS-520S and I were going to install a CW filter, I would leave the filter select circuit as it came from the factory and not modify the wiring other than move the CW filter select wire on the IF board as shown in the operator's manual. I don't like modifying a transceiver or any other ham gear for that matter just for "convenience" sake, but that's me.

73
Mike W5RKL

On 5/31/2013 12:19 PM, Bob Macklin wrote:
>
> Mike,
>
> If I install my CW filter in my 520 I will rewire the mode switch the
> way it should be. If I cannot do that I just won't install the CW
> filter in my 520.
>
> I'll use my SB-301 or Drake R-4 if I need a sharp CW receiver.
>
> I have never even opened my 520! So I have no idea how bad the problem
> will be.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Mike
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Friday, May 31, 2013 9:59 AM
> Subject: Re: [TS-520_820_530_830] Crystals/Filter and general
> questions about Kenwood TS820s
>
> Bob,

>
> I'm sure you are aware of the TS-520/520S/520SE CW filter installation
> steps that require moving the CW filter select wire on the IF board from
> the SSB to CW.
>
> You are correct, the TS-520 and TS-520S do not have a CW NARROW/WIDE
> filter select switch but the TS-520SE does. As you say, the MODE switch
> does all the filter selections in SSB and CW in the 520 and 520S after
> the IF board CW filter select wire has been moved from SSB to CW as
> outlined in the 520 and 520S operator's manual.
>
> There is a wiring changes found on the web that use a toggle switch
> mounted on the rear panel to control the CW WIDE/NARROW filter
> selection. I seem to recall there also is a mod that uses the Heater
> switch, labeled H. SWITCH on the TS-520 and TS-520S models, to act as a
> CW WIDE/NARROW filter select. Both of these wiring changes/mods for CW
> WIDE/NARROW filter select will require changes in the MODE switch wiring.
>
> 73
> Mike W5RKL
>
> On 5/31/2013 11:21 AM, Bob Macklin wrote:
> >
> > I do have a 520 CW filter I plan to install some day. The problem is
> > that Kenwood did not design the 520 to switch between the filters. You
> > have to cut a connection on the mode switch and add a wire between the
> > mode switch and the filter board.
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> > I don't know how the 820 is wired.
> >
> > Your best bet is watching eBay.
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> > Are you a contest operator? If not do you really need a CW filter.
> > Where I live the only time a CW filter is needed is on contest days.
> > And I have a SB-301 and a Drake R-4 that solve that problem.
> >
> > Bob Macklin
> > K5MYJ
> > Seattle, Wa.
> > "Real Radios Glow In The Dark"
> > ----- Original Message -----
> > From: Joseph Stiles
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Friday, May 31, 2013 8:53 AM
> > Subject: Re: [TS-520_820_530_830] Crystals/Filter and general
> > questions about Kenwood TS820s
> >
> > Andrew,

> >
> > CW filters for the 820(s) are hard to find. Some show up on.....arrrgg
> > EBAY from time to time.
> > INRAD/FOX TANGO have them...but tend to be $$.
> > Bob Macklin...ke5ftf may have one (he's on this board)
> > Crystals for "fixed" operation can be had from International Crystals
> > in Oklahoma City, OK
> > they are top notch and really know their stuff!
> >
> > I am currently off of HF as I lost my antennas during a recent wind
> > storm...and being partly handicapped
> > it's real hard to get on the roof...when the WX sucks...friends don't
> > let friends get on steep roof when wet/windy.
> > I have had an 820(s) since about 1984 or so....it's still here
> >
> > I'll send you my off-list email addy in a few.
> >
> > 73 Joe
> > WB7UQU
> >
> > _____
> > From: "andrew@... <mailto:andrew%40tklcorp.com>
> <mailto:andrew%40tklcorp.com>"
> > <andrew@... <mailto:andrew%40tklcorp.com>
> <mailto:andrew%40tklcorp.com>>
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Thursday, May 30, 2013 11:48 PM
> > Subject: [TS-520_820_530_830] Crystals/Filter and general questions
> > about Kenwood TS820s
> >
> > RE TS820s
> >
> > Anyone have suggestions on ....
> >
> > Where to buy a CW filter?
> >
> > Where to buy crystals for the fixed frequencies?
> >
> > Anyone actively using this radio that I may contact directly with some
> > questions?
> >
> > Andrew Schneider N7EBG
> > andrew@tklcorp.com <mailto:andrew%40tklcorp.com>
> <mailto:andrew%40tklcorp.com>
> >
> > [Non-text portions of this message have been removed]
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> > [Non-text portions of this message have been removed]

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> [Non-text portions of this message have been removed]
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42460. Re: [TS-520_820_530_830] Crystals/Filter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 17:46:55 UTC
From: John Davidson
Topic: 42442 Message: 42460

When I got my New TS520 some other owners suggested I hook that wire to the fixed channel switch position 2 and unhook the wires to the Xtal board so the fixed channel switch could switch the CW filter out and the Wide filter in if you wanted it.
 I decided there was no need for a wide filter on the CW position.
My big old Hallicraftrers SX101a had a narrower filter you could use on CW and I liked it !

From: Bob Macklin <macklinbob@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 12:21 PM
Subject: Re: [TS-520_820_530_830] Crystals/Filter and general questions about Kenwood TS820s

I do have a 520 CW filter I plan to install some day. The problem is that Kenwood did not design the 520 to switch between the filters. You have to cut a connection on the mode switch and add a wire between the mode switch and the filter board.

RE TS820s

[Non-text portions of this message have been removed]

42461. Re: [TS-520_820_530_830] Crystals/Filter and general questions about Kenwood TS820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 17:53:06 UTC
From: Bob Macklin
Topic: 42442 Message: 42461

Mike,

The problem with installing the CW filter in a 520 Kenwood's way is it then makes the 520 a CW only unit.

I don't want that.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Mike
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 10:32 AM
Subject: Re: [TS-520_820_530_830] Crystals/Filter and general questions about Kenwood TS820s

Bob,

I tend to agree with you. My Drake R4C has 4 INRAD filters, 2 for CW (500/250Hz), one for AM (6KHZ), and one for SSB (1.8Khz). I find I don't use the CW filters very much but if I do, it's only when a station is close to my operating frequency. The R4C has a NOTCH adjustment along with a PASSBAND TUNING, similar to Kenwood's IF SHIFT tuning, that helps quite a bit without having to select either of the CW filters.

If I owned a TS-520 or TS-520S and I were going to install a CW filter, I would leave the filter select circuit as it came from the factory and not modify the wiring other than move the CW filter select wire on the IF board as shown in the operator's manual. I don't like modifying a transceiver or any other ham gear for that matter just for "convenience" sake, but that's me.

73
Mike W5RKL

On 5/31/2013 12:19 PM, Bob Macklin wrote:
>
> Mike,
>
> If I install my CW filter in my 520 I will rewire the mode switch the
> way it should be. If I cannot do that I just won't install the CW
> filter in my 520.
>

> I'll use my SB-301 or Drake R-4 if I need a sharp CW receiver.
>
> I have never even opened my 520! So I have no idea how bad the problem
> will be.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Mike
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Friday, May 31, 2013 9:59 AM
> Subject: Re: [TS-520_820_530_830] Crystals/Filter and general
> questions about Kenwood TS820s
>
> Bob,
>
> I'm sure you are aware of the TS-520/520S/520SE CW filter installation
> steps that require moving the CW filter select wire on the IF board from
> the SSB to CW.
>
> You are correct, the TS-520 and TS-520S do not have a CW NARROW/WIDE
> filter select switch but the TS-520SE does. As you say, the MODE switch
> does all the filter selections in SSB and CW in the 520 and 520S after
> the IF board CW filter select wire has been moved from SSB to CW as
> outlined in the 520 and 520S operator's manual.
>
> There is a wiring changes found on the web that use a toggle switch
> mounted on the rear panel to control the CW WIDE/NARROW filter
> selection. I seem to recall there also is a mod that uses the Heater
> switch, labeled H. SWITCH on the TS-520 and TS-520S models, to act as a
> CW WIDE/NARROW filter select. Both of these wiring changes/mods for CW
> WIDE/NARROW filter select will require changes in the MODE switch wiring.
>
> 73
> Mike W5RKL
>
> On 5/31/2013 11:21 AM, Bob Macklin wrote:
> >
> > I do have a 520 CW filter I plan to install some day. The problem is
> > that Kenwood did not design the 520 to switch between the filters. You
> > have to cut a connection on the mode switch and add a wire between the
> > mode switch and the filter board.
> >
> > I don't know how the 820 is wired.
> >
> > Your best bet is watching eBay.
> >

> > Are you a contest operator? If not do you really need a CW filter.
> > Where I live the only time a CW filter is needed is on contest days.
> > And I have a SB-301 and a Drake R-4 that solve that problem.
> >
> > Bob Macklin
> > K5MYJ
> > Seattle, Wa.
> > "Real Radios Glow In The Dark"
> > ----- Original Message -----
> > From: Joseph Stiles
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Friday, May 31, 2013 8:53 AM
> > Subject: Re: [TS-520_820_530_830] Crystals/Filter and general
> > questions about Kenwood TS820s
> >
> > Andrew,
> >
> > CW filters for the 820(s) are hard to find. Some show up on.....arrrgg
> > EBAY from time to time.
> > INRAD/FOX TANGO have them...but tend to be $$.
> > Bob Macklin...ke5ftf may have one (he's on this board)
> > Crystals for "fixed" operation can be had from International Crystals
> > in Oklahoma City, OK
> > they are top notch and really know their stuff!
> >
> > I am currently off of HF as I lost my antennas during a recent wind
> > storm...and being partly handicapped
> > it's real hard to get on the roof...when the WX sucks...friends don't
> > let friends get on steep roof when wet/windy.
> > I have had an 820(s) since about 1984 or so....it's still here
> >
> > I'll send you my off-list email addy in a few.
> >
> > 73 Joe
> > WB7UQU
> >
> > _____
> > From: "andrew@tklcorp.com <mailto:andrew%40tklcorp.com>
> <mailto:andrew%40tklcorp.com>"
> > <andrew@... <mailto:andrew%40tklcorp.com>
> <mailto:andrew%40tklcorp.com>>
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Thursday, May 30, 2013 11:48 PM
> > Subject: [TS-520_820_530_830] Crystals/Filter and general questions
> > about Kenwood TS820s
> >

> > RE TS820s
> >
> > Anyone have suggestions on ....
> >
> > Where to buy a CW filter?
> >
> > Where to buy crystals for the fixed frequencies?
> >
> > Anyone actively using this radio that I may contact directly with some
> > questions?
> >
> > Andrew Schneider N7EBG
> > andrew@... <mailto:andrew%40tklcorp.com>
> <mailto:andrew%40tklcorp.com>
> >
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42462. Re: [TS-520_820_530_830] Cr ystals/Filter and general questions about Kenwood T S820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 18:03:25 UTC
From: John Davidson
Topic: 42450 Message: 42462

Somewhere in the tangled thread is a guy who has a filter for his TS520.

I would strongly advise him to go ahead and install it.
It's a simple job and the 520 is a wide open radio to work on compared to the multiple sandwitched boards in a newer radio.
The 80 and 40M CW bands can get crowded in the evenings and not even on contest weekends !
QRM from stations 1 or 2 kHz away can discourage a new to average CW operator !
I grew up with barndoor wide receivers and even I love the narrow filters on CW.
I used a TS520 for nearly 40 years and the first thing I did to it was get the 400 Hz CW filter and install it !!!
 It took about half hour of work, mostly taking out and replacing the cabinet screws !

_____
From: Mike <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com

I miss read the subject, I read the subject as being a discussion about
the TS-520 CW filter but it seems the discussion is for the 820 CW
filter, sorry, my mistake.
IT SEEMS TO BE A MIXED THREAD WITH SIDE TOPICS.

73
> So is the purpose of the CW filter to narrow the signal as to reject
> other near by signals?
YES THAT'S WHAT IT DOES !
>
> I do have a 520 CW filter I plan to install some day. The problem
> is that Kenwood did not design the 520 to switch between the filters.
> You have to cut a connection on the mode switch and add a wire between
> the mode switch and the filter board.

YOU ONLY NEED TO CHANGE ONE WIRE AND SOLDER IN ANOTHER !
>

> Are you a contest operator? If not do you really need a CW filter.
> Where I live the only time a CW filter is needed is on contest days. And
> I have a SB-301 and a Drake R-4 that solve that problem.
CONTESTERS USUALLY HAVE A BETTER RADIO THAN A TS520
>
> Anyone actively using this radio that I may contact directly with some
> questions?

>YES, ME

[Non-text portions of this message have been removed]

42463. Re: Assuming I get my 520 up, what accessories would you consider most needed?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 18:08:37 UTC
From: Terry Wagoner
Topic: 42425 Message: 42463

You dont need an antenna analyzer to tune your traps. As you have found a little tempermental. In old days would use B&W air dux and central lab RF caps. Could then tap down on the inductor or add gimmick capacitor.

With coax traps couple of things you may be fighting. 1. The shunt capacitance per unit foot of the cable may not be as advertised. 2. You need to use a little longer former and add some length to your calculated length. Dont coat the coax turns until you tune the trap. If form is a little long it allows you to spread the turns to tune the trap to resonance.

You should be able to tune them just fine with your GDO if it is paired up with an accurate freq counter.

You can also use a stable RF sig gen and place your trap in series with it and then connect your RF probe and VTVM or DMM at output. A O-scope or RF millivolt meter of course also works great. Use as short a test leads as you can.

Set your RF Sig Gen near your calculated resonant frequency and set the RF output to approx +10dBm or 0.70 millivolts. You need the high level for your rf probe to be able to detect it and drive your meter.

Some fellows use their rig on low power (under 5 watts) and use it as their sig gen.

Now swing your Sig gen frequency up and down frequency looking for lowest voltage dip on your VTVM or DMM or Scope. This is the resonant frequency of your trap. If it is off then spread turns and re-sweep it. Once turns are spread where you want them you will need to secure them in that position. Various ways to pot them.

I would never discourage anyone about building and trying a trap dipole. It is one of the ways to get multiband operation without a tuner. I have had several including a 40 thru 10 using Unadilla/Reyco traps. However, trapped dipoles are not easy to tune, do represent a compromise and do have relatively high wind loading. Of course you are not done after tuning the individual traps. Now you have to understand what the inductance of the trap does to your wire lead lengths on each side of the trap and the end affect. Can be fun!

Only place I want to see them now is in the metal elements of a beam or vertical. Just pointing these things out.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Wes Will <wwill@...> wrote:
>
> I have the digital readout, with cables. It works, I powered it up
> separately and checked it with a signal generator. It isn't perfect,
> perhaps, but it's quite close. (And perhaps it was the signal generator
> that was off, and the freq. counter was dead on....)

>
> Would the external VFO be of most utility? If so, how much is the going
> rate on one, and are there any caveats to be aware of, other than the
> usual ones of not buying a pig in a poke and so on?
>
> (Slightly off-topic for this list, but not so far as to be a rules
> violation, I think, since it is about a related piece of Ham gear. If I
> read that part of the list charter incorrectly, I apologize in advance,
> just say so and it's dropped.)
>
> Using that grid dipper to make a multi-band trapped HF antenna from
> co-ax cable (a la this article: http://degood.org/coaxtrap/) is proving
> to be rather a pain in the tuccus. I'm wasting more co-ax than I can
> afford, and I'd like to end up with an antenna when I'm done.
>
> I've never had a chance to use one of the low-cost (comparatively)
> "antenna analyzers" that have appeared in the last few years, but they
> look really --awesome-- and exactly what I need to tune this thing to
> the right bands. (Instead of where I am at the moment, where it looks
> like one or more of the traps will likely radiate a lot better in a
> harmonic for which I am NOT licensed, than in the band for which it is
> supposedly cut....)
>
> Are the analyzers all they're advertised to be? From the hype, even the
> MFJ model will do everything imaginable, and walk the dog twice a day, too.
>
> What is the collected wisdom of the group regarding them, which is the
> best way to go (Buy one on e-Pay and take my chances, build one from a
> kit, something else entirely?), and does anyone RENT the suckers for a
> day or two? I don't know that I'd use one that often to make it worth
> buying, but I'd LOVE to try one on this antenna, to be sure to get it in
> the middle of the bands.
>
> Inquiring minds want to know! (And don't want to get noticed by Frank
> and either of the two Charlies.)
>
> TIA.
>
> --
> Wes Will
> N9KDY
>

42464. Re: [TS-520_820_530_830] Crystals/Filter and general questions about Kenwood TS820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 18:08:53 UTC
From: John Davidson
Topic: 42442 Message: 42464

This is nonsense Bob, the (unmodified) TS520 only selects the CW filter when the mode switch is in the CW position.

_____
From: Bob Macklin <macklinbob@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 1:53 PM
Subject: Re: [TS-520_820_530_830] Crystals/Filter and general questions about Kenwood TS820s

Mike,

The problem with installing the CW filter in a 520 Kenwood's way is it then makes the 520 a CW only unit.

I don't want that.

Bob Macklin
K5MYJ>"
> > <andre

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[Non-text portions of this message have been removed]

42465. Re: [TS-520_820_530_830] Crystals/Filter for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 18:26:44 UTC
From: Bob Macklin
Topic: 42465 Message: 42465

I don't see it that way.

The Kenwood instructions show moving the selection wire from the SSB filter to the CW filter.

That wire is connected to one pole of the MODE switch. That pole has Tune, CW, LSB, and SSB all jumpered together.

So with out rewiring the Mode switch or adding another switch, there is no way to switch between the filters.

This is an original TS-520.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: John Davidson
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 11:08 AM
Subject: Re: [TS-520_820_530_830] Crystals/Filter and general questions about Kenwood TS820s

This is nonsense Bob, the (unmodified) TS520 only selects the CW filter when the mode switch is in the CW position.

From: Bob Macklin <macklinbob@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 1:53 PM
Subject: Re: [TS-520_820_530_830] Crystals/Filter and general questions about Kenwood TS820s

Mike,

The problem with installing the CW filter in a 520 Kenwood's way is it then makes the 520 a CW only unit.

I don't want that.

Bob Macklin
K5MYJ>"
> > <andre

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[Non-text portions of this message have been removed]

42466. Re: [TS-520_820_530_830] my 520 , what accessories to consider

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 19:07:44 UTC
From: John Davidson
Topic: 42425 Message: 42466

My $0.02
 Had my TS520 since it was new.
Never had a digi display and got along fine with the internal calibrator, I had to reset it to WWV about once every 3 years.

The salesman at the ham store threw in the VFO520 for free (I did not want it originally) because it would not work with the new TS520S model. He just wanted to get it off his shelf.
I played around with it to make sure it worked and never had occasion to really use it. Sold it for almost the new price a year later.

I never have used a multifunction, fancy, antenna analyzer myself but if you plan on doing a lot of building and experimenting with different antennas I would not say no to an analyzer.
I built a lot of antennas over the last 52 years and only used a basic SWR meter to tune them. Now I could not afford one anyway..
A few years ago I did get the MFJ 207 that is just a self generating SWR meter with an analog dial VFO in it, I believe it cost about $99 and is not made any longer.
It is battery powered and great to use outside when adjusting antennas. In the shack I still use a basic SWR meter to keep track of my antennas' performance.

From: Wes Will <wwill@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 2:25 AM
Subject: [TS-520_820_530_830] Assuming I get my 520 up, what accessories would you consider most needed?

I have the digital readout, with cables.

Would the external VFO be of most utility? If so, how much is the going
rate on one, and are there any caveats to be aware of, other than the
usual ones of not buying a pig in a poke and so on?

Using that grid dipper to make a multi-band trapped HF antenna from
co-ax cable (a la this article: http://degood.org/coaxtrap/) is proving
to be rather a pain in the tuccus.
I've never had a chance to use one of the low-cost (comparatively)
"antenna analyzers" that have appeared in the last few years, but they
look really --awesome--

Are the analyzers all they're advertised to be? From the hype, even the
MFJ model will do everything imaginable, and walk the dog twice a day, too.

What is the collected wisdom of the group regarding them, which is the
best way to go
TIA.

Wes Will
N9KDY

[Non-text portions of this message have been removed]

42467. Re: [TS-520_820_530_830] Re: eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 18:56:00 UTC
From: Jerry Barr
Topic: 42339 Message: 42467

ok on the photo thing I didnt no it took them away/ anyway yes the diode is on order along with most of the caps also going to repace the power cord and the rf output connector/ tho cannot find a fuse block for less the ten bucks/ ok lets see if i got the address right for the photos to go thru

Jerry KJ6NTL

From: Ken Winterling <wa2lbi@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 10:09 AM
Subject: Re: [TS-520_820_530_830] Re: eico324!!

Jerry,

I didn't get any pics with your last message since the reflector strips them from messages and I didn't find any at the group site. Try putting the personal e-mail address of a few of those individuals helping you into the "cc" field. That will deliver your message directly to them rather than through the reflector and the attachments should arrive intact.

As for encapsulating selenium rectifiers, I know that the one Collins used in the 516-F was encapsulated but that was a single rectifier (two terminals). Aside from that case, all the others I have encountered have been of the exposed "stack of plates" variety.

Ken
WA2LBI

On Fri, May 31, 2013 at 10:54 AM, Jerry Barr <mailto:kj6ntl%40yahoo.com> wrote:

> **
>
>
> ok guys unless they encapsulated selenium/ then its not and not a bridge/
> tho it has a bolt holding it to chassis/model 50 is the number on it
>
> here is the pics
> Jerry KJ6NTL
>
> From: Ken Winterling <mailto:wa2lbi%40gmail.com>
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Friday, May 31, 2013 7:07 AM
> Subject: Re: [TS-520_820_530_830] Re: eico324!!
>
>
>
> Jerry,

>
> The following link shows examples of selenium rectifiers. The "s" symbol
> on the terminals represents a sine wave and is where the transformer
> secondary would be connected. Does your device resemble any of these?
>
> http://4sale.sbszoo.com/diodes.htm
>
> Ken
> WA2LBI
>
> On Fri, May 31, 2013 at 9:50 AM, Terry Wagoner <mailto:
> wagstw46%40yahoo.com> wrote:
>
> > **
>
> >
> >
> > Bob:
> >
> > You may be correct with the arrow symbol on it. When he said like old
> > battery charger I thought of selenium. If it is a bridge rectifier ok to
> > leave it and not install the 1N4007.
> >
> > Of course if it is a bridge will have less ripple to filter but will
> still
> > have same 1.4 x xfmr secondary RMS if they didnt include series dropping
> > resistor.
> >
> > Would sure be nice if we had a real time Skype like feature to help us.
> > What is that they say about a picture!
> >
> > Terry K9TW
> >
> >
> > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Bob Macklin"
> <macklinbob@...>
>
> > wrote:
> > >
> > > Terry,
> > >
> > > The description I read sounds like a possible diode bridge rectifier.
> > >
> > > Does it have 4 terminals on it? How many terminals have wires on them?
> > >
> > > Bob Macklin
> > > K5MYJ
> > > Seattle, Wa.
> > > "Real Radios Glow In The Dark"
> > > ----- Original Message -----

> > > From: Terry Wagoner
> > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > Sent: Friday, May 31, 2013 4:00 AM
> > > Subject: [TS-520_820_530_830] Re: eico324!!
> > >
> > >
> > >
> > > Yes will be a miniature version of the bigger ones in the older style
> > battery chargers. Sounds like selenium is still there so only other
> reason
> > I can think of for high B+ is higher line voltage we have today?
> > >
> > > There should not be a series dropping resistor if the Selenium is still
> > there. So not likely it is source of your high plate voltage. I would
> still
> > get it out of there.
> > >
> > > As I noted earlier the selenium is followed by a pi filter so that is
> > the only resistor you should see close to selenium unless someone has
> > modded this unit.
> > >
> > > I used 120 vac as an example in previous response. Looking at the 324
> > schematic I see it shows the transformer secondary is 110vac so you
> should
> > measure that voltage. With todays line voltage it may be a little higher.
> > 110 x 1.414 = 155 vdc. 155 - 125 (shown at input of Pi filter) = 30 vdc.
> > That is the drop across the selenium and is a little high if my memory
> > serves right. Havent seen a selenium in a long time.
> > >
> > > I dont see what line voltage they are using. Typically in old days
> would
> > use 117vac. So we cannot tell what the transformer turns ratio is. Maybe
> it
> > is 1:1 which means if your line voltage at your house is 122 vac you
> could
> > have 122 x 1.414 = 173 vdc. 173-30 = 143vdc. So you could have 140 to 150
> > vdc at 1st filter cap.
> > >
> > > So measure across the transformer secondary and and then measure at
> > positive terminal of first filter cap.
> > >
> > > Terry K9TW
> > >
> > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, Jerry Barr
> <kj6ntl@> wrote:
> > > >
> > > > weeeellll hmmmm, it is a rectangular blackÂ thing abt 1/2 x3/4,x3/4/
> > the tag on it has a sorta s on theAnode?and sorta regular straight line
> on
> > the bottom of the arrowÂ Â hihi/ so dont know if that s indicates

> selenium
> > or not/ ive seen selenium diodes in battery chargers but bigger then this
> > by far and never encased in epoxy or whatever
> > > > but that wud explain the hi voltage on plates for sure cause i dont
> > see any resistors other then the schematics ones/ i might even have some
> > 1n4007 laying on the bench awaiting to be used may even have the resistor
> > salvaged from someÂ tv or somethin/ agin thanks Terry / U can be my
> Mentor
> > anytime/ it is really nice to have someoneÂ thats willing to spend time
> > helping /maybe someday i can pass it forward thanksÂ Â
> > > > Jerry KJ6NTL
> > > >
> > > > From: Terry Wagoner <wagstw46@>
> > > > To: mailto:TS-520_820_530_830%40yahoogroups.com
>
> > > > Sent: Thursday, May 30, 2013 6:13 PM
> > > > Subject: [TS-520_820_530_830] Re: eico324!!
> > > > >
> > > > Â
> > > > I forgot to ask did someone respond to your high anode voltage on
> > 12AU7? If not it may be possible that someone has already replaced the
> > selenium rectifier with a silicon diode as I suggested you do in earlier
> > post, but they may not have added the necessary series dropping resistor.
> > Must do that.
> > > > >
> > > > If you just replace the selenium you can end up with DC supply
> voltage
> > 15 to 20 vdc higher. For example: 120 vac secondary will charge filter
> caps
> > to the peak or 120 X 1.414 = 170 vdc. Output voltage at tubes plate will
> be
> > somewhat less than this due to drop across the Pi filter (C-R-C).
> > > > >
> > > > So do you know what a selenium rectifier looks like? If not, it is a
> > square cube that has stack of thin metal plates. Secondary lead of power
> > transformer will run to terminal on it. If it has been replaced they
> should
> > have added the series resistor from approx 100 to 200 ohms at 2-5 watts.
> > Often have to play with the value to tweak it in.
> > > > >
> > > > If selenium is there strongly recommend you replace it with 1N4007
> > silicon rectifier diode (mouser or radio shack). If you do not you will
> not
> > like the odor when it does fail. It is not a joke and can be a fire and
> the
> > fumes are toxic.
> > > > >
> > > > I usually mount the silicon diode and series resistor on a phenolic
> > terminal strip. Just dont connect to the ground lug!
> > > > >

> > > > Terry K9TW
> > > >
> > > > >
> > > > >
> > > >
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42468. Re: [TS-520_820_530_830] Crystals/Filter for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 19:18:13 UTC
From: John Davidson
Topic: 42465 Message: 42468

All I can ask is DID U DO THE FILTER INSTALLATION ?
I did it by-the-book and when you are in the CW mode the CW filter is working. In the SSB modes the SSB filter is working !
End of story !

From: Bob Macklin <macklinbob@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 2:26 PM
Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520

I don't see it that way.

The Kenwood instructions show moving the selection wire from the SSB filter to the CW filter.

That wire is connected to one pole of the MODE switch. That pole has Tune, CW, LSB, and SSB all jumpered together.

So with out rewiring the Mode switch or adding another switch, there is no way to switch between the filters.

This is an original TS-520.

Bob Macklin

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42469. Re: eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 19:27:07 UTC
From: Terry Wagoner
Topic: 42339 Message: 42469

Jerry:

I was sitting here watching golf and thought popped into my head. I think you said you have ordered replacement electrolytic filter caps. Did you need or get some help sizing these or did you get the UF and WVDC listed for C3A and C3B in the EICO manual?

If you ordered 150wvdc units you may want to rethink that. You know you have B+ that approaches or exceeds that. With todays line voltage I think if I saw 150wvdc filter caps and a 1/2 wave rectifier fed from a 117 to 120 vac secondary I would get a little nervous.

If you measure 120vac across secondary then 120 x 1.414 = 170vdc. Under load this will drop some but still too close for comfort for me.
I would want about 20% safety factor so 170 x 1.2 = 204 vdc.

I think I would buy electrolytic filter caps with minimum of 200wvdc rating.

As I previously suggested you should measure the secondary of your power transformer to know for sure what you have and then buy the filter caps.

Maybe Mike can jump in here and give his take. He does a lot of power supply rework.

Terry K9TW

> ok guys unless they encapsulated selenium/ thenÂ its not and not a bridge/ tho it has a bolt holding it to chassis/model 50Â is the number on it
>
>
>
>

42470. Re: Assuming I get my 520 up, what accessories would you consider most n

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 19:27:45 UTC
From: Brian Allen
Topic: 42470 Message: 42470

I think the TS 520 vfo is great. I have a few around the shack. Also have the matching speaker and DG 5. The last vfo I bought off ebay was about $35 shipped. So they are not expensive. Might as well go a head and get the speaker. They also run about $40. Then there is the matching antenna tuner. None of the accessories is a must but neat to have....

[Non-text portions of this message have been removed]

42471. Re: [TS-520_820_530_830] Crystals/Filter for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 19:31:13 UTC
From: Bob Macklin
Topic: 42465 Message: 42471

I have read the instructions. I have looked at the schematics. I have not opened my TS-520!

The schematics for the 520, 520S, and 520SE show only a single wire connected to the SSB select pin on the IF PCB.

If you move that wire to the CW select pin the CW filter is always selected.

The reason I have not installed the filter is I am not sure I want to try and modify the mode switch to make both filters work.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: John Davidson
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 12:18 PM
Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520

All I can ask is DID U DO THE FILTER INSTALLATION ?
I did it by-the-book and when you are in the CW mode the CW filter is working. In the SSB modes the SSB filter is working !
End of story !

From: Bob Macklin <macklinbob@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 2:26 PM
Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520

I don't see it that way.

The Kenwood instructions show moving the selection wire from the SSB filter to the CW filter.

That wire is connected to one pole of the MODE switch. That pole has Tune, CW, LSB, and SSB all jumpered together.

So with out rewiring the Mode switch or adding another switch, there is no way to switch between the filters.

This is an original TS-520.

Bob Macklin

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42472. Re: [TS-520_820_530_830] Re: eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 20:02:50 UTC
From: Jerry Barr
Topic: 42339 Message: 42472

thanks terry yess i did order them at 200vdc/ and the others i believe were at 600vdc/500 ac or the likes it was the x1/y2 or whatever safety caps/ i tried e-mailing u off list and keep meetimin th mailor daemon/was gonna send u the photos of the unit

Jerry KJ6NTL

From: Terry Wagoner <wagstw46@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 12:27 PM
Subject: [TS-520_820_530_830] Re: eico324!!

Jerry:

I was sitting here watching golf and thought popped into my head. I think you said you have ordered replacement electrolytic filter caps. Did you need or get some help sizing these or did you get the UF and WVDC listed for C3A and C3B in the EICO manual?

If you ordered 150wvdc units you may want to rethink that. You know you have B+ that approaches or exceeds that. With todays line voltage I think if I saw 150wvdc filter caps and a 1/2 wave rectifier fed from a 117 to 120 vac secondary I would get a little nervous.

If you measure 120vac across secondary then 120 x 1.414 = 170vdc. Under load this will drop some but still too close for comfort for me.
I would want about 20% safety factor so 170 x 1.2 = 204 vdc.

I think I would buy electrolytic filter caps with minimum of 200wvdc rating.

As I previously suggested you should measure the secondary of your power transformer to know for sure what you have and then buy the filter caps.

Maybe Mike can jump in here and give his take. He does a lot of power supply rework.

Terry K9TW

> ok guys unless they encapsulated selenium/ thenÂ its not and not a bridge/ tho it has a bolt holding it to chassis/model 50Â is the number on it
>
>
>
>

[Non-text portions of this message have been removed]

42473. Re: [TS-520_820_530_830] Crystals/Filter for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 20:20:24 UTC
From: Mike
Topic: 42465 Message: 42473

John and Bob,

I'm sorry Bob but your belief that by installing a CW filter in the 520 or 520S makes them CW only. There's no way I would ever believe a 520 and a 520S models were designed to either be SSB "ONLY" or CW "ONLY" based on the filters installed. That simply makes no sense. Having said that, I can see how you would think that by looking at the 520 and 520S schematics. The schematics for both models are clearly wrong. This would not be the first time I have ever come across errors in schematics and I'm sure it won't be the last.

There are 2 wires that are used to select the filters. One is for CW and the other is for SSB. This can be seen on page 39 in the 520 operator's manual and on page 35 in the 520S operator's manual,

73
Mike W5RKL

On 5/31/2013 2:31 PM, Bob Macklin wrote:
>
> I have read the instructions. I have looked at the schematics. I have
> not opened my TS-520!
>
> The schematics for the 520, 520S, and 520SE show only a single wire
> connected to the SSB select pin on the IF PCB.
>
> If you move that wire to the CW select pin the CW filter is always
> selected.
>
> The reason I have not installed the filter is I am not sure I want to
> try and modify the mode switch to make both filters work.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
>
> ----- Original Message -----
> From: John Davidson
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Friday, May 31, 2013 12:18 PM
> Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520
>
> All I can ask is DID U DO THE FILTER INSTALLATION ?
> I did it by-the-book and when you are in the CW mode the CW filter is

> working. In the SSB modes the SSB filter is working !
> End of story !
>
> _____
> From: Bob Macklin <macklinbob@... <mailto:macklinbob%40gmail.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Friday, May 31, 2013 2:26 PM
> Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520
>
> I don't see it that way.
>
> The Kenwood instructions show moving the selection wire from the SSB
> filter to the CW filter.
>
> That wire is connected to one pole of the MODE switch. That pole has
> Tune, CW, LSB, and SSB all jumpered together.
>
> So with out rewiring the Mode switch or adding another switch, there
> is no way to switch between the filters.
>
> This is an original TS-520.
>
> Bob Macklin
> _____
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42474. Re: eico324!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 20:16:09 UTC
From: Terry Wagoner
Topic: 42339 Message: 42474

OK good. 200 wvdc should be just fine. Try me at wagstw46@...

--- In TS-520_820_530_830@yahoogroups.com, Jerry Barr <kj6ntl@...> wrote:
>
> thanks terry yess i did order them at 200vdc/ and the others i believe were at 600vdc/500 ac or the likes it was the x1/y2 or whatever safety caps/ i tried e-mailing u off list and keep meetimin th mailor daemon/was gonna send u the photos of the unit
>
>
> Jerry KJ6NTL
>
> From: Terry Wagoner <wagstw46@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Friday, May 31, 2013 12:27 PM
> Subject: [TS-520_820_530_830] Re: eico324!!
>
> Â
> Jerry:
>
> I was sitting here watching golf and thought popped into my head. I think you said you have ordered replacement electrolytic filter caps. Did you need or get some help sizing these or did you get the UF and WVDC listed for C3A and C3B in the EICO manual?
>
> If you ordered 150wvdc units you may want to rethink that. You know you have B+ that approaches or exceeds that. With todays line voltage I think if I saw 150wvdc filter caps and a 1/2 wave rectifier fed from a 117 to 120 vac secondary I would get a little nervous.
>
> If you measure 120vac across secondary then 120 x 1.414 = 170vdc. Under load this will drop some but still too close for comfort for me.
> I would want about 20% safety factor so 170 x 1.2 = 204 vdc.
>
> I think I would buy electrolytic filter caps with minimum of 200wvdc rating.
>
> As I previously suggested you should measure the secondary of your power transformer to know for sure what you have and then buy the filter caps.
>
> Maybe Mike can jump in here and give his take. He does a lot of power supply rework.
>
> Terry K9TW
>
> > ok guys unless they encapsulated selenium/ thenÃ□Â its not and not a bridge/ tho it has a bolt holding it to chassis/model 50Ã□Â is the number on it
> >
> >

> >
> >
>
>
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>

42475. TS-520 Value?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 20:32:17 UTC
From: WalterT
Topic: 42475 Message: 42475

Anyone got a rough idea what a 520, in good condx, is worth?
Got #2 son here just got his General. Want to get him a rig
where he has to learn how to peak the grids, dip the plates,
etc., like I did. Extra gadgets inside are optional. Hell,
let him learn the same way I did back in 1952 (on a homebrew
rig). Don't want him entering this as a "plug & play" opr.
Would also consider comparible rigs.
73
Walt (N4GL)

42476. Re: [TS-520_820_530_830] Crystals/Filter for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 20:45:22 UTC
From: Bob Macklin
Topic: 42465 Message: 42476

Mike,

As I said I have not opened the unit. Maybe this weekend.

The instructions in the 520 manual for installing the CW filter say to move the wire from the SSB pin to the CW pin.

If there really are two wires there must be a jumper somewhere that needs to be removed because without a CW filter the SSB filter is active.

People have mentioned other ways to do the filter selection without modifying the mode switch.

I just looked at the TS-820 schematic and it also shows no connection from the mode switch to the CW filter diode switch network.

At the present time I really do not need the CW filter in my 520 working so I have been reluctant to mess with what seems to be an OK radio,

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Mike
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 1:20 PM
Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520

John and Bob,

I'm sorry Bob but your belief that by installing a CW filter in the 520 or 520S makes them CW only. There's no way I would ever believe a 520 and a 520S models were designed to either be SSB "ONLY" or CW "ONLY" based on the filters installed. That simply makes no sense. Having said that, I can see how you would think that by looking at the 520 and 520S schematics. The schematics for both models are clearly wrong. This would not be the first time I have ever come across errors in schematics and I'm sure it won't be the last.

There are 2 wires that are used to select the filters. One is for CW and the other is for SSB. This can be seen on page 39 in the 520 operator's manual and on page 35 in the 520S operator's manual,

73
Mike W5RKL

On 5/31/2013 2:31 PM, Bob Macklin wrote:
>
> I have read the instructions. I have looked at the schematics. I have
> not opened my TS-520!
>
> The schematics for the 520, 520S, and 520SE show only a single wire
> connected to the SSB select pin on the IF PCB.
>
> If you move that wire to the CW select pin the CW filter is always
> selected.
>
> The reason I have not installed the filter is I am not sure I want to
> try and modify the mode switch to make both filters work.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
>
> ----- Original Message -----
> From: John Davidson
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Friday, May 31, 2013 12:18 PM
> Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520
>
> All I can ask is DID U DO THE FILTER INSTALLATION ?
> I did it by-the-book and when you are in the CW mode the CW filter is
> working. In the SSB modes the SSB filter is working !
> End of story !
>
> _____
> From: Bob Macklin <macklinbob@... <mailto:macklinbob%40gmail.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Friday, May 31, 2013 2:26 PM
> Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520
>
> I don't see it that way.
>
> The Kenwood instructions show moving the selection wire from the SSB
> filter to the CW filter.
>
> That wire is connected to one pole of the MODE switch. That pole has
> Tune, CW, LSB, and SSB all jumpered together.
>
> So with out rewiring the Mode switch or adding another switch, there
> is no way to switch between the filters.
>
> This is an original TS-520.
>

> Bob Macklin
> _____
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42477. Re: [TS-520_820_530_830] Crystals/Filter and general questions about Kenwood TS820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 21:04:54 UTC
From: Joseph Stiles
Topic: 42442 Message: 42477

u r right....sry

73 Joe
WB7UQU

From: W LEWIS <nscb56a@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 8:57 AM
Subject: Re: [TS-520_820_530_830] Crystals/Filter and general questions about Kenwood TS820s

Just a slight correction. KE5FTF is Bob Mansker.

--- On Fri, 5/31/13, Joseph Stiles <stilesjoseph@...> wrote:

From: Joseph Stiles <stilesjoseph@...>
Subject: Re: [TS-520_820_530_830] Crystals/Filter and general questions about Kenwood TS820s
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Date: Friday, May 31, 2013, 10:53 AM

Andrew,

  CW filters for the 820(s) are hard to find. Some show up on.....arrrgg   EBAY from time to time.
   INRAD/FOX TANGO have them...but tend to be $$.
   Bob Macklin...ke5ftf may have one (he's on this board)
   Crystals for "fixed" operation can be had from International Crystals in Oklahoma City, OK
     they are top notch and really know their stuff!

    I am currently off of HF as I lost my antennas during a recent wind storm...and being partly handicapped
     it's real hard to get on the roof...when the WX sucks...friends don't let friends get on steep roof when wet/windy.
    I have had an 820(s) since about 1984 or so....it's still here

   I'll send you my off-list email addy in a few.

73 Joe
WB7UQU

From: "andrew@..." <andrew@tklcorp.com>
To: TS-520_820_530_830@yahoogroups.com

Sent: Thursday, May 30, 2013 11:48 PM
Subject: [TS-520_820_530_830] Crystals/Filter and general questions about Kenwood TS820s

RE TS820s

Anyone have suggestions on ....

Where to buy a CW filter?

Where to buy crystals for the fixed frequencies?

Anyone actively using this radio that I may contact directly with some
questions?

Andrew Schneider N7EBG
andrew@...

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[Non-text portions of this message have been removed]

42478. Re: [TS-520_820_530_830] Crystals/Filter for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 21:14:28 UTC
From: Mike
Topic: 42465 Message: 42478

Bob,

You're misinterpreting what the manual is saying. There are 2 wires connected to the IF Unit's "SSB" terminal, one is BROWN and the other appears to be WHITE/ORANGE. The manual should have said this but it doesn't which is how I believe you are misunderstanding the filter wiring. The schematic in the manual is also wrong, it only shows "1" wire when there are actually "2" wires.

The manual says to move the "BROWN" wire from the SSB terminal to the CW terminal on the IF UNIT. The manual didn't anything about the other wire connected to the SSB terminal, just move the BROWN wire.

73
Mike W5RKL

On 5/31/2013 3:45 PM, Bob Macklin wrote:
>
> Mike,
>
> As I said I have not opened the unit. Maybe this weekend.
>
> The instructions in the 520 manual for installing the CW filter say to
> move the wire from the SSB pin to the CW pin.
>
> If there really are two wires there must be a jumper somewhere that
> needs to be removed because without a CW filter the SSB filter is active.
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> People have mentioned other ways to do the filter selection without
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>
> I just looked at the TS-820 schematic and it also shows no connection
> from the mode switch to the CW filter diode switch network.
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> At the present time I really do not need the CW filter in my 520
> working so I have been reluctant to mess with what seems to be an OK
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>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Mike
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>

> Sent: Friday, May 31, 2013 1:20 PM
> Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520
>
> John and Bob,
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> I'm sorry Bob but your belief that by installing a CW filter in the 520
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>
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> > ----- Original Message -----
> > From: John Davidson
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Friday, May 31, 2013 12:18 PM
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> > Reply via web post Reply to sender Reply to group Start a New Topic
> > Messages in this topic (1)
> > Recent Activity: * New Members 18 * New Photos 3
> > Visit Your Group
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> > Switch to: Text-Only, Daily Digest • Unsubscribe • Terms of Use • Send
> > us Feedback
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42479. Re: Crystals/Filter for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 21:39:27 UTC
From: Terry Wagoner
Topic: 42465 Message: 42479

Mike:

You are correct there are two wires. That is why they tell you to move the "brown" one and not just move the wire landed on the SSB post to the CW post. The second wire may be green or wht/grn (perhaps other colors on other production runs?)

As you say no way you are locked in to SSB or CW only. I have stayed out of this one and probably should have as have done far too much jousting and frankly emotionally drained! However, I have your back my friend.

What people dont like is having to use the CW filter all the time when they place the mode switch in CW so there is a popular mod where they install a switch to allow listening to CW with the SSB filter switched in or with the CW filter switched in. I have seen this on a few full filtered TS-520 rigs.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
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> You're misinterpreting what the manual is saying. There are 2 wires
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> > > Messages in this topic (1)
> > > Recent Activity: * New Members 18 * New Photos 3
> > > Visit Your Group
> > >
> > > Switch to: Text-Only, Daily Digest â□¢ Unsubscribe â□¢ Terms of Use â□¢ Send
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42480. Re: [TS-520_820_530_830] Re: Crystals/Filter for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 22:07:17 UTC
From: Mike
Topic: 42465 Message: 42480

Terry,

Kenwood eliminated the H. Switch (Heater switch) in the 520SE, relabeled it WID/NAR so the operator, in CW mode, could switch the CW filter IN and OUT. This can be done with the 520 and 520S by rewiring the H. Switch or using a SPDT toggle switch mounted on the rear panel.

I agree, it's not a good thing for the CW filter to always be switched in when the MODE switch is set to CW.

Severe thunderstorms with a Torcon of 6 out of 10 for Tornadoes today and/or later on this evening. I'll be glad when this weather mess is over with!

73
Mike W5RKL

On 5/31/2013 4:39 PM, Terry Wagoner wrote:
>
> Mike:
>
> You are correct there are two wires. That is why they tell you to move
> the "brown" one and not just move the wire landed on the SSB post to
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> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Friday, May 31, 2013 1:20 PM
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> > > > Messages in this topic (1)
> > > > Recent Activity: * New Members 18 * New Photos 3
> > > > Visit Your Group
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> > > > Switch to: Text-Only, Daily Digest âEUR¢ Unsubscribe âEUR¢ Terms
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42481. Re: [TS-520_820_530_830] Re: Crystals/Filter for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 23:04:29 UTC
From: Bob Macklin
Topic: 42465 Message: 42481

Terry,

I have been waiting to hear from you on this issue. I am surprised to see so many manuals wrong.

I'll try and put my 520 on the bench over the weekend. It does not look like installing the filter is that difficult.

My SB-301 has all three filters. I use it for CW in the USB position unless I really do need the narrow filter.

My Drake R-4a has a variable BW filter. I just set it for the BW needed. Most of the time it is set for USB.

Will the 520 transmit CW in the USB position? My SB-401 will.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Terry Wagoner
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 2:39 PM
Subject: [TS-520_820_530_830] Re: Crystals/Filter for TS-520

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> > > _______
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42482. microphone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-05-31 22:54:05 UTC
From: kd5utc
Topic: 42482 Message: 42482

have a ts-530s wanting hook up a boom microphone .which would be a good mic with out amplifing it? i am trying to find one everything i have tried makes me to bassie and everyone tells me need one with more highs and less loss . does 600ohm impedance have something to do with it? if i go with a mic with less impedance give me more punch or less punch. just wondering as for frequency what range do i look for as well.....
Thanks KD5UTC and 73S

42483. Re: Crystals/Filter for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-01 00:44:59 UTC
From: Terry Wagoner
Topic: 42465 Message: 42483

Well there are plenty of 520 owners who should have helped with this.

I just opened up one here that has no brown wire on SSB post. It has an orange and a green. Orange is typically 14 vdc. It looks like factory routing but no way to tell for sure. No CW filter so I wont spend any time on it.

There are errors across all the hybrids and these are not just typos or translation issues with the various pieces of documentation. As built config can be a problem as well. Have to be careful with wholesale electrolytic change out. I try to document as many as I can in my notes and have large schematics that I mark up.

The TS-820 for some reason is the worst of the lot. Service manual is a beauty and some of the circuit descriptions defy understanding.

The TS-830 last of the line is pretty good but not immune from this problem.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@...> wrote:
>
> Terry,
>
> I have been waiting to hear from you on this issue. I am surprised to see so many manuals wrong.
>
> I'll try and put my 520 on the bench over the weekend. It does not look like installing the filter is that difficult.
>
> My SB-301 has all three filters. I use it for CW in the USB position unless I really do need the narrow filter.
>
> My Drake R-4a has a variable BW filter. I just set it for the BW needed. Most of the time it is set for USB.
>
> Will the 520 transmit CW in the USB position? My SB-401 will.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Terry Wagoner
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Friday, May 31, 2013 2:39 PM
> Subject: [TS-520_820_530_830] Re: Crystals/Filter for TS-520
>

>
>
> Mike:
>
> You are correct there are two wires. That is why they tell you to move the "brown" one and not just move the wire landed on the SSB post to the CW post. The second wire may be green or wht/grn (perhaps other colors on other production runs?)
>
> As you say no way you are locked in to SSB or CW only. I have stayed out of this one and probably should have as have done far too much jousting and frankly emotionally drained! However, I have your back my friend.
>
> What people dont like is having to use the CW filter all the time when they place the mode switch in CW so there is a popular mod where they install a switch to allow listening to CW with the SSB filter switched in or with the CW filter switched in. I have seen this on a few full filtered TS-520 rigs.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@...m, Mike <w5rkl@> wrote:
> >
> > Bob,
> >
> > You're misinterpreting what the manual is saying. There are 2 wires
> > connected to the IF Unit's "SSB" terminal, one is BROWN and the other
> > appears to be WHITE/ORANGE. The manual should have said this but it
> > doesn't which is how I believe you are misunderstanding the filter
> > wiring. The schematic in the manual is also wrong, it only shows "1"
> > wire when there are actually "2" wires.
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> > The manual says to move the "BROWN" wire from the SSB terminal to the CW
> > terminal on the IF UNIT. The manual didn't anything about the other wire
> > connected to the SSB terminal, just move the BROWN wire.
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> >
> > 73
> > Mike W5RKL
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> > On 5/31/2013 3:45 PM, Bob Macklin wrote:
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> > > Mike,
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> > > As I said I have not opened the unit. Maybe this weekend.
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> > > The instructions in the 520 manual for installing the CW filter say to
> > > move the wire from the SSB pin to the CW pin.
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> > > If there really are two wires there must be a jumper somewhere that
> > > needs to be removed because without a CW filter the SSB filter is active.
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> > > People have mentioned other ways to do the filter selection without
> > > modifying the mode switch.
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> > > I just looked at the TS-820 schematic and it also shows no connection
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> > > From: Mike
> > > To: TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Friday, May 31, 2013 1:20 PM
> > > Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520
> > >
> > > John and Bob,
> > >
> > > I'm sorry Bob but your belief that by installing a CW filter in the 520
> > > or 520S makes them CW only. There's no way I would ever believe a 520
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> > > based on the filters installed. That simply makes no sense. Having said
> > > that, I can see how you would think that by looking at the 520 and 520S
> > > schematics. The schematics for both models are clearly wrong. This would
> > > not be the first time I have ever come across errors in schematics and
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> > > There are 2 wires that are used to select the filters. One is for CW and
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> > > 73
> > > Mike W5RKL
> > >
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> > > > I have read the instructions. I have looked at the schematics. I have
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> > > > connected to the SSB select pin on the IF PCB.
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> > > > If you move that wire to the CW select pin the CW filter is always
> > > > selected.
> > > >

> > > > The reason I have not installed the filter is I am not sure I want to
> > > > try and modify the mode switch to make both filters work.
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> > > > Bob Macklin
> > > > K5MYJ
> > > > Seattle, Wa.
> > > > "Real Radios Glow In The Dark"
> > > >
> > > > ----- Original Message -----
> > > > From: John Davidson
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > Sent: Friday, May 31, 2013 12:18 PM
> > > > Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520
> > > >
> > > > All I can ask is DID U DO THE FILTER INSTALLATION ?
> > > > I did it by-the-book and when you are in the CW mode the CW filter is
> > > > working. In the SSB modes the SSB filter is working !
> > > > End of story !
> > > >
> > > > _____
> > > > From: Bob Macklin <macklinbob@
> > > <mailto:macklinbob%40gmail.com> <mailto:macklinbob%40gmail.com>>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > Sent: Friday, May 31, 2013 2:26 PM
> > > > Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520
> > > >
> > > > I don't see it that way.
> > > >
> > > > The Kenwood instructions show moving the selection wire from the SSB
> > > > filter to the CW filter.
> > > >
> > > > That wire is connected to one pole of the MODE switch. That pole has
> > > > Tune, CW, LSB, and SSB all jumpered together.
> > > >
> > > > So with out rewiring the Mode switch or adding another switch, there
> > > > is no way to switch between the filters.
> > > >
> > > > This is an original TS-520.
> > > >
> > > > Bob Macklin
> > > > _____
> > > > Reply via web post Reply to sender Reply to group Start a New Topic
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42484. Re: Does the group see/cover the TS-900?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-01 01:20:44 UTC
From: Dale
Topic: 37583 Message: 42484

Hi Max,
I have a TS-900 and the RF Gain control is inoperative. The on-line schematics are a bit hard to read. Does your service manual have detailed schematics of the RF Gain control and the RF and IF boards?

Thanks,

Dale W4OP
--- In TS-520_820_530_830@yahoogroups.com, "max.fretter" <max.fretter@...> wrote:
>
> Don't have one of these still, but they were the Kenwood flagship for a while - sort of the transciever you get when you weld together a T599 and R599, some had sweep tube finals, some had S2001... definitely hybrid. Only asking as I do have the service manual here and if anyone needs anything regarding one of these rarer rigs I'd be happy to help.
>
> 73s
> Max (de zl2ben)
>

42485. Re: [TS-520_820_530_830] Re: Crystals/Filter for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-01 01:26:46 UTC
From: Bob Macklin
Topic: 42465 Message: 42485

Terry,

In the three years I have had my 520 I have only used it as a receiver.

I've been thinking about the compromises they have made with transceivers over independent Tx/Rx.

My current thought is the if I do put the CW filter in I can still do coarse tuning in USB and switch to CW if I want to transmit.

I bought the 520 because I was told it had a very nice VFO and used the same conversion system I was used to with the Heath products.

If I have the time over the weekend I will try to take the covers off and look at the IF board.

I have a limited but real 40M dipole antenna. Three days ago I found the W1WA code practice on 20M at 4PM PT. At 7PM I found it on 40M.

Yesterday I got the code practice on 20M at 4PM but no 20M at 7PM.

Today I got the code practice on 20M at 4PM buy it was definitely weaker then the past 2 days.

The signal level on my 520 is comparable to what I see with my SB-301.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Terry Wagoner
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 5:44 PM
Subject: [TS-520_820_530_830] Re: Crystals/Filter for TS-520

Well there are plenty of 520 owners who should have helped with this.

I just opened up one here that has no brown wire on SSB post. It has an orange and a green. Orange is typically 14 vdc. It looks like factory routing but no way to tell for sure. No CW filter so I wont spend any time on it.

There are errors across all the hybrids and these are not just typos or translation issues with the various pieces of documentation. As built config can be a problem as well. Have to be careful with wholesale electrolytic change out. I try to document as many as I can in my notes and have large schematics that I mark up.

The TS-820 for some reason is the worst of the lot. Service manual is a beauty and some of the circuit descriptions defy understanding.

The TS-830 last of the line is pretty good but not immune from this problem.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@...> wrote:
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> Terry,
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> I have been waiting to hear from you on this issue. I am surprised to see so many manuals wrong.
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> I'll try and put my 520 on the bench over the weekend. It does not look like installing the filter is that difficult.
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> Seattle, Wa.
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> From: Terry Wagoner
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Friday, May 31, 2013 2:39 PM
> Subject: [TS-520_820_530_830] Re: Crystals/Filter for TS-520
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> > > To: TS-520_820_530_830@yahoogroups.com

> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Friday, May 31, 2013 1:20 PM
> > > Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520
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> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
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> > > > Sent: Friday, May 31, 2013 12:18 PM
> > > > Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520
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> > > <mailto:macklinbob%40gmail.com> <mailto:macklinbob%40gmail.com>>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
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42486. Re: Crystals/Filter for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-01 02:25:18 UTC
From: Terry Wagoner
Topic: 42465 Message: 42486

Yes basically same conversion scheme as Heath and they both copied Collins. I still think the receive audio quality of the TS-520 is hard to beat.

If you have never done a coil pack alignment suggest you read Section 6 of your owners manual. Using the Marker signal you can align the receiver pretty well. You will want to do the RF and IF section.

Note your S-meter levels on all bands before you do Sect 6 and then after you do it to see what improvement you made. Can do a pretty good job of peaking up your receiver performance. Not as good as full alignment with good RF sig gen but pretty close. If you have no means of accurate 50uv signal then just use the Marker and peak it with Drive control on 14.200 and set the S-meter span pot for S9. This will be close.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@...> wrote:
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> Terry,
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> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Friday, May 31, 2013 2:39 PM
> > Subject: [TS-520_820_530_830] Re: Crystals/Filter for TS-520
> >
> >
> >
> > Mike:
> >
> > You are correct there are two wires. That is why they tell you to move the "brown" one and not just move the wire landed on the SSB post to the CW post. The second wire may be green or wht/grn (perhaps other colors on other production runs?)
> >
> > As you say no way you are locked in to SSB or CW only. I have stayed out of this one and probably should have as have done far too much jousting and frankly emotionally drained! However, I have your back my friend.
> >
> > What people dont like is having to use the CW filter all the time when they place the mode switch in CW so there is a popular mod where they install a switch to allow listening to CW with the SSB filter switched in or with the CW filter switched in. I have seen this on a few full filtered TS-520 rigs.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@> wrote:
> > >
> > > Bob,
> > >
> > > You're misinterpreting what the manual is saying. There are 2 wires
> > > connected to the IF Unit's "SSB" terminal, one is BROWN and the other
> > > appears to be WHITE/ORANGE. The manual should have said this but it
> > > doesn't which is how I believe you are misunderstanding the filter
> > > wiring. The schematic in the manual is also wrong, it only shows "1"
> > > wire when there are actually "2" wires.
> > >
> > > The manual says to move the "BROWN" wire from the SSB terminal to the CW
> > > terminal on the IF UNIT. The manual didn't anything about the other wire
> > > connected to the SSB terminal, just move the BROWN wire.
> > >
> > >
> > > 73
> > > Mike W5RKL
> > >
> > > On 5/31/2013 3:45 PM, Bob Macklin wrote:
> > > >
> > > > Mike,
> > > >
> > > > As I said I have not opened the unit. Maybe this weekend.
> > > >
> > > > The instructions in the 520 manual for installing the CW filter say to

> > > > move the wire from the SSB pin to the CW pin.
> > > >
> > > > If there really are two wires there must be a jumper somewhere that
> > > > needs to be removed because without a CW filter the SSB filter is active.
> > > >
> > > > People have mentioned other ways to do the filter selection without
> > > > modifying the mode switch.
> > > >
> > > > I just looked at the TS-820 schematic and it also shows no connection
> > > > from the mode switch to the CW filter diode switch network.
> > > >
> > > > At the present time I really do not need the CW filter in my 520
> > > > working so I have been reluctant to mess with what seems to be an OK
> > > > radio,
> > > >
> > > > Bob Macklin
> > > > K5MYJ
> > > > Seattle, Wa.
> > > > "Real Radios Glow In The Dark"
> > > > ----- Original Message -----
> > > > From: Mike
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > Sent: Friday, May 31, 2013 1:20 PM
> > > > Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520
> > > >
> > > > John and Bob,
> > > >
> > > > I'm sorry Bob but your belief that by installing a CW filter in the 520
> > > > or 520S makes them CW only. There's no way I would ever believe a 520
> > > > and a 520S models were designed to either be SSB "ONLY" or CW "ONLY"
> > > > based on the filters installed. That simply makes no sense. Having said
> > > > that, I can see how you would think that by looking at the 520 and 520S
> > > > schematics. The schematics for both models are clearly wrong. This would
> > > > not be the first time I have ever come across errors in schematics and
> > > > I'm sure it won't be the last.
> > > >
> > > > There are 2 wires that are used to select the filters. One is for CW and
> > > > the other is for SSB. This can be seen on page 39 in the 520 operator's
> > > > manual and on page 35 in the 520S operator's manual,
> > > >
> > > > 73
> > > > Mike W5RKL
> > > >
> > > > On 5/31/2013 2:31 PM, Bob Macklin wrote:
> > > > >
> > > > > I have read the instructions. I have looked at the schematics. I have
> > > > > not opened my TS-520!
> > > > >
> > > > > The schematics for the 520, 520S, and 520SE show only a single wire

> > > > > connected to the SSB select pin on the IF PCB.
> > > > >
> > > > > If you move that wire to the CW select pin the CW filter is always
> > > > > selected.
> > > > >
> > > > > The reason I have not installed the filter is I am not sure I want to
> > > > > try and modify the mode switch to make both filters work.
> > > > >
> > > > > Bob Macklin
> > > > > K5MYJ
> > > > > Seattle, Wa.
> > > > > "Real Radios Glow In The Dark"
> > > > >
> > > > > ----- Original Message -----
> > > > > From: John Davidson
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > Sent: Friday, May 31, 2013 12:18 PM
> > > > > Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520
> > > > >
> > > > > All I can ask is DID U DO THE FILTER INSTALLATION ?
> > > > > I did it by-the-book and when you are in the CW mode the CW filter is
> > > > > working. In the SSB modes the SSB filter is working !
> > > > > End of story !
> > > > >
> > > > > _____
> > > > > From: Bob Macklin <macklinbob@
> > > > > <mailto:macklinbob%40gmail.com> <mailto:macklinbob%40gmail.com>>
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > Sent: Friday, May 31, 2013 2:26 PM
> > > > > Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520
> > > > >
> > > > > I don't see it that way.
> > > > >
> > > > > The Kenwood instructions show moving the selection wire from the SSB
> > > > > filter to the CW filter.
> > > > >
> > > > > That wire is connected to one pole of the MODE switch. That pole has
> > > > > Tune, CW, LSB, and SSB all jumpered together.
> > > > >
> > > > > So with out rewiring the Mode switch or adding another switch, there
> > > > > is no way to switch between the filters.
> > > > >
> > > > > This is an original TS-520.
> > > > >
> > > > > Bob Macklin
> > > > > _____

> > > > > Reply via web post Reply to sender Reply to group Start a New Topic
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> > > > > us Feedback
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42487. Re: [TS-520_820_530_830] Re: Does the group see/cover the TS-900?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-01 04:16:02 UTC
From: pmarkavage@...
Topic: 37583 Message: 42487

I have both the operating and service manuals for the TS-900. High resolution replications are taken directly from the original. Had a good review on it on eHam, see http://www.eham.net/reviews/detail/2272 Scroll down to the 1st review dated January 13, 2010.

Pete, wa2cwa
http://www.manualman.com

On Sat, 01 Jun 2013 01:20:44 -0000 "Dale" <parinc1@...> writes:
>
> Hi Max,
> I have a TS-900 and the RF Gain control is inoperative. The on-line
> schematics are a bit hard to read. Does your service manual have
> detailed schematics of the RF Gain control and the RF and IF
> boards?
>
> Thanks,
>
> Dale W4OP
> --- In TS-520_820_530_830@yahoogroups.com, "max.fretter"
> <max.fretter@...> wrote:
> >
> > Don't have one of these still, but they were the Kenwood flagship
> for a while - sort of the transciever you get when you weld together
> a T599 and R599, some had sweep tube finals, some had S2001...
> definitely hybrid. Only asking as I do have the service manual here
> and if anyone needs anything regarding one of these rarer rigs I'd
> be happy to help.
> >
> > 73s
> > Max (de zl2ben)

42488. Re: My TS-820 got sick... :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-01 04:59:19 UTC
From: coyoteinventor@ymail.com
Topic: 42157 Message: 42488

Thank you for your help Terry!

I adjusted RF-1 to 3.3V and was able to connect the antenna and hear things; no more pegged RF meter. :-)

One thing happened a few times while using the radio tonight, though. I would be tuning or talking to someone (transmitting) and then the radio would go completely silent and the end of the transmission; absolutely no noise and no movement in the RF meter. I tried using a headphone and also external speaker, but I knew that wouldn't help as there was no movement in the RF needle while moving through the band. Transmit would still work, but I would not receive anything. And just to clarify, it would not stay stuck in transmit mode. Then, I would push the ptt different times during the course of 1 to 5 minutes, and then one of those times receive would kick in again and everything would continue to work normally for a while. This happened maybe 3 times within the first hour of use, and after the last one the rig worked fine for the rest of the time I used it tonight (about an hour or so more).

Looking at the troubleshooting section, they made reference to Q3 in the AVR board again, but I had checked that yesterday and it was OK; and because everything starts working again probably means it's not a component failure, right?

Do you have some advice at what I could look for? What could cause it to go silent for a while but then come back alive after a few minutes? Again, it will be hard to find the problem if the radio keeps going back to normal. Should I try something different next time it happens? like not touch it and see if it comes back by itself, to see if the transmitting is what triggers it to get back in motion?

Anyway, thanks again for your patience. ;-)

--Cesar-- K1TNT

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> It all depends on the input Z of your DMM. Some are very low (< 1 meg) and some have different values of input Z depending on the voltage range. The lower the input Z the lower the reading you will get. 99% of all DMMs are just fine for measuring most hybrid power supply voltages including RF-1.
>
> If you measure and set RF-1 to 3.3vdc with your DMM it should be very close to the required 3.3vdc. 99% of your power supplies are low impedance sources so your DMM will not pull them down. A DMM is fine for all tube socket pin DC voltages and for all Transistor CBE voltages and all Mosfet DGS voltages.
>
> RF-1 is a power supply voltage. It is derived from the regulated 9vdc on your AVR board. It serves or feeds only two loads (buss or rail) and that is AGC and ALC.
>
> The only two high impedance voltage sources in your radio are the AGC bus and the ALC bus. These are both fed from RF-1 thru 2 meg ohm resistors by design. That means they

cannot support any current draw and that a 10 meg DMM and a 11 meg VTVM will pull them down to some degree. You cannot accurately measure them with just about any meter. As long as you understand that you will understand what you are seeing when you try to measure it. You can tell how bad your meter affects the AGC bus by listening to the receiver noise and watching the S-meter when you touch meter probe to agc bus. If receiver noise drops and your S-meter moves up scale you know your meter is the culprit and not a problem with RF-1 or the AGC bus or any of the devices hanging off it.
>
> Just set RF-1 to 3.3vdc using your DMM and definitely replace that missing board screw so that you ensure the entire AVR board ground plane is seeing the chassis ground.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@" <coyoteinventor@> wrote:
> >
> > Thanks again Terry!
> >
> > I have a question and a comment based on your last feedback.
> >
> > 1) When you say that I can adjust RF-1 to be 3.3V, you are assuming I'm not using a DMM, right? I think you said with a DMM I would be seeing smaller values.
> >
> > 2) I took the AVR board out to make the measurements on the Q1-3 on the back side, and when I put it back in its place I made sure the screws were nice and tight, maybe that's why it's working now. I did notice one of the 4 screws was missing, so I'll make sure I find a forth one and put it in place.
> >
> > Thanks again!
> >
> > --Cesar-- K1TNT
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > >
> > > OK Cesar:
> > >
> > > With rig not working I think you measured RF-1 at approx 1.9vdc. At that level you will have very low or no Receive because the AGC bus control voltage to the gain controlled devices (IF and RF amp mosfets) is too low.
> > >
> > > I think you said when rig is working you measured approx 2.9vdc at RF-1. You can adjust that with trim pot VR-1 on the AVR board. You want nothing less than 3.3vdc. Receiver will work on 2.9vdc, but not optimum.
> > >
> > > It sounds like you have a high resistance ground on the AVR board ground plane. This can account for the low RF-1 voltage. I would loosen all the hold down screws and re-tighten (snug) them. No need to install star lock washers. Just dont strip the screws out.
> > >
> > > Your resistance on the AGC bus of approx 2.7 meg is good. Tells you no shorts on it

(like failed meter FET) and no leaky timing caps to pull it down.
> > >
> > > It is ok to try the temporary 3vdc on the AGC bus when it is at 1.9 or 2.9 vdc. You are simply paralleling dc power supplies like jumpering your car battery with another. It will not hurt anything. No reason to do it if you have consistent 3.3 vdc. I only suggest it when you have low AGC voltage on the bus.
> > >
> > > Again: First suggest you loosen and tighten AVR board mounting screws and then adjust RF-1 voltage to 3.3vdc and see of receive now acts normal. As I recall there are couple of different AVR board revisions and the ground plane is not continuous around board perimeter so important that all hold down screws make good contact with chassis.
> > >
> > > Terry K9TW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@" <coyoteinventor@> wrote:
> > > >
> > > > Hello again Terry,
> > > >
> > > > I think my problem might be a loose/cracked connection somewhere, and those are hard to track down. I'm saying this because as I was following your instructions and looking into other measurements following some schematics I have, I flipped the rig and it started working. I then flipped it again and it stopped working, and then tried to flip it one more time and did not work anymore. So I proceeded to make measurements on the transistors on the AF-AVR board, and then, I screwed in place the AF-AVR board again, and now the radio is working again (even after I put it right-side up again). So I'm guessing it's not a component failure but more of a connection failure, right?
> > > >
> > > > In any case, here are the measurements I took when the rig was not working properly, and then after it started working properly:
> > > >
> > > > On the IF board, Conn IF-3, using a 10Meg DMM, I got the following values:
> > > >
> > > > 1. With power off measure AGC bus resistance at Pin 11. Should be approx 1.7 meg
> > > > ohm.
> > > > >>> I actually got 2.7 meg ohms between pins 11 and 17 (without removing any of the connectors).
> > > >
> > > > 2. With power on measure RF-1 at Pin 8. Should be approx 3.4vdc
> > > > >>> I measured 1.96V when not working, 2.9V when working.
> > > >
> > > > 3. With power on and RF gain pot full CW measure AGC at Pin 11. Should be approx
> > > > 2.8vdc with a 11 meg VTVM and somewhat less with a 10 meg ohm DMM.
> > > > >>> When not working I measured 1.47V, and the schematics I have said it should be at 3V (same as you said). I also measured AGC at pin 7 on RF board (RF-1 Conn), and also got 1.47V. When working I measured 2.2V.
> > > >
> > > > 4. If RF-1 is OK and AGC is very low you can try applying 3vdc to Pin 11 and see
> > > > if rig comes alive. If you do not have a bench supply then use a Radio Shack
> > > > battery holder and series up couple of 1.5vdc C or D cells. Connect negative
> > > > lead to chassis ground and touch positive 3vdc lead to Pin 11. Rig should come

> > > > alive. Watch S meter and see if it comes off the peg.
> > > > >>> I did not attempt this as you mentioned to do this "if" RF-1 was OK, which in this case it does not look like it's OK.
> > > >
> > > > 5. I forgot also measure voltage at Pin 6 AGL should be same as what you read at Pin 11 AGC. AGL and AGC at IF board should be same point electrically as they are connected in receive mode thru the NC contact of the aux relay you just cleaned. But possible to have bad molex connections at Relay board and/or IF board.
> > > > >>> When not working I measured 1.47V, so it does look like AGL and AGC are connected. When working I measured 2.2V.
> > > >
> > > > 6. Also apply temporary 3vdc to Pin 6 and see if S meter comes off the peg.
> > > > >>> I again, I did not attempt this for the same reason as mentioned in item 4.
> > > >
> > > >
> > > > Like I said at the beginning, and following some troubleshooting suggestions from the Service Manual, I checked the Q1 and Q2 transistors on the AF-AVR board and their voltages on B/C/E were correct, and then, for Q3, I only checked pins 1, 3, 5 and 6, and they all gave me values as shown in the schematics. Those schematics are very handy!!! :-)
> > > >
> > > > So, next time it fails, should I look into the RF board since the IF board did not have correct AGC or RF-1 voltages? Or do you suggest some other places I should make measurements to see if I can spot where the intermittent connection is?
> > > >
> > > > Thanks again for your help Terry! I have a feeling I'm going to really get to know and love my new rig. ;-)
> > > >
> > > > --Cesar-- K1TNT
> > > >
> > > >
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > > > >
> > > > > I forgot also measure voltage at Pin 6 AGL should be same as what you read at Pin 11 AGC.
> > > > >
> > > > > Also apply temporary 3vdc to Pin 6 and see if S meter comes off the peg.
> > > > >
> > > > > AGL and AGC at IF board should be same point electrically as they are connected in receive mode thru the NC contact of the aux relay you just cleaned. But possible to have bad molex connections at Relay board and/or IF board.
> > > > >
> > > >
> > > >
> > >
>

42489. RE: [TS-520_820_530_830] microphone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-01 06:15:09 UTC
From: fpath fpath
Topic: 42482 Message: 42489

G'day KD5UTC,

Please leave your name aswell, makes it more friendly to respond. I have 2 530s radios and I use the MC35 and MC50 mic, the MC 50 can be switch simply by changing the plug at the rear of the microphone (red dot is marked on plug)and will give you either 50K or 500ohm. The MC 50 can be removed from its stand and placed into a boom extension.

73s

DAve

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: kd5utc@yahoo.com
Date: Fri, 31 May 2013 22:54:05 +0000
Subject: [TS-520_820_530_830] microphone question

have a ts-530s wanting hook up a boom microphone .which would be a good mic with out amplifing it? i am trying to find one everything i have tried makes me to bassie and everyone tells me need one with more highs and less loss . does 600ohm impedance have something to do with it? if i go with a mic with less impedance give me more punch or less punch. just wondering as for frequency what range do i look for as well.....
Thanks KD5UTC and 73S

[Non-text portions of this message have been removed]

42490. Re: My TS-820 got sick... :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-01 10:58:07 UTC
From: Terry Wagoner
Topic: 42157 Message: 42490

When rig does not come back to receive at end of a transmission is S-meter at Zero or is it upscale or pegged again?

It still sounds like bad Relay. I believe you cleaned both and may have even swapped the Antenna TR relay with the Aux relay?

Next time see if you have any side tone by keying rig in CW mode. If you have side tone volume in the speaker then Audio Output Q3 cannot be bad. Not likely that Q3 is bad.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@..." <coyoteinventor@...> wrote:
>
> Thank you for your help Terry!
>
> I adjusted RF-1 to 3.3V and was able to connect the antenna and hear things; no more pegged RF meter. :-)
>
> One thing happened a few times while using the radio tonight, though. I would be tuning or talking to someone (transmitting) and then the radio would go completely silent and the end of the transmission; absolutely no noise and no movement in the RF meter. I tried using a headphone and also external speaker, but I knew that wouldn't help as there was no movement in the RF needle while moving through the band. Transmit would still work, but I would not receive anything. And just to clarify, it would not stay stuck in transmit mode. Then, I would push the ptt different times during the course of 1 to 5 minutes, and then one of those times receive would kick in again and everything would continue to work normally for a while. This happened maybe 3 times within the first hour of use, and after the last one the rig worked fine for the rest of the time I used it tonight (about an hour or so more).
>
> Looking at the troubleshooting section, they made reference to Q3 in the AVR board again, but I had checked that yesterday and it was OK; and because everything starts working again probably means it's not a component failure, right?
>
> Do you have some advice at what I could look for? What could cause it to go silent for a while but then come back alive after a few minutes? Again, it will be hard to find the problem if the radio keeps going back to normal. Should I try something different next time it happens? like not touch it and see if it comes back by itself, to see if the transmitting is what triggers it to get back in motion?
>
> Anyway, thanks again for your patience. ;-)
>
> --Cesar-- K1TNT
>
>

>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > It all depends on the input Z of your DMM. Some are very low (< 1 meg) and some have different values of input Z depending on the voltage range. The lower the input Z the lower the reading you will get. 99% of all DMMs are just fine for measuring most hybrid power supply voltages including RF-1.
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> > If you measure and set RF-1 to 3.3vdc with your DMM it should be very close to the required 3.3vdc. 99% of your power supplies are low impedance sources so your DMM will not pull them down. A DMM is fine for all tube socket pin DC voltages and for all Transistor CBE voltages and all Mosfet DGS voltages.
> >
> > RF-1 is a power supply voltage. It is derived from the regulated 9vdc on your AVR board. It serves or feeds only two loads (buss or rail) and that is AGC and ALC.
> >
> > The only two high impedance voltage sources in your radio are the AGC bus and the ALC bus. These are both fed from RF-1 thru 2 meg ohm resistors by design. That means they cannot support any current draw and that a 10 meg DMM and a 11 meg VTVM will pull them down to some degree. You cannot accurately measure them with just about any meter. As long as you understand that you will understand what you are seeing when you try to measure it. You can tell how bad your meter affects the AGC bus by listening to the receiver noise and watching the S-meter when you touch meter probe to agc bus. If receiver noise drops and your S-meter moves up scale you know your meter is the culprit and not a problem with RF-1 or the AGC bus or any of the devices hanging off it.
> >
> > Just set RF-1 to 3.3vdc using your DMM and definitely replace that missing board screw so that you ensure the entire AVR board ground plane is seeing the chassis ground.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@" <coyoteinventor@> wrote:
> > >
> > > Thanks again Terry!
> > >
> > > I have a question and a comment based on your last feedback.
> > >
> > > 1) When you say that I can adjust RF-1 to be 3.3V, you are assuming I'm not using a DMM, right? I think you said with a DMM I would be seeing smaller values.
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> > > 2) I took the AVR board out to make the measurements on the Q1-3 on the back side, and when I put it back in its place I made sure the screws were nice and tight, maybe that's why it's working now. I did notice one of the 4 screws was missing, so I'll make sure I find a forth one and put it in place.
> > >
> > > Thanks again!
> > >
> > > --Cesar-- K1TNT
> > >
> > >

> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > > >
> > > > OK Cesar:
> > > >
> > > > With rig not working I think you measured RF-1 at approx 1.9vdc. At that level you will have very low or no Receive because the AGC bus control voltage to the gain controlled devices (IF and RF amp mosfets) is too low.
> > > >
> > > > I think you said when rig is working you measured approx 2.9vdc at RF-1. You can adjust that with trim pot VR-1 on the AVR board. You want nothing less than 3.3vdc. Receiver will work on 2.9vdc, but not optimum.
> > > >
> > > > It sounds like you have a high resistance ground on the AVR board ground plane. This can account for the low RF-1 voltage. I would loosen all the hold down screws and re-tighten (snug) them. No need to install star lock washers. Just dont strip the screws out.
> > > >
> > > > Your resistance on the AGC bus of approx 2.7 meg is good. Tells you no shorts on it (like failed meter FET) and no leaky timing caps to pull it down.
> > > >
> > > > It is ok to try the temporary 3vdc on the AGC bus when it is at 1.9 or 2.9 vdc. You are simply paralleling dc power supplies like jumpering your car battery with another. It will not hurt anything. No reason to do it if you have consistent 3.3 vdc. I only suggest it when you have low AGC voltage on the bus.
> > > >
> > > > Again: First suggest you loosen and tighten AVR board mounting screws and then adjust RF-1 voltage to 3.3vdc and see of receive now acts normal. As I recall there are couple of different AVR board revisions and the ground plane is not continuous around board perimeter so important that all hold down screws make good contact with chassis.
> > > >
> > > > Terry K9TW
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@" <coyoteinventor@> wrote:
> > > > >
> > > > > Hello again Terry,
> > > > >
> > > > > I think my problem might be a loose/cracked connection somewhere, and those are hard to track down. I'm saying this because as I was following your instructions and looking into other measurements following some schematics I have, I flipped the rig and it started working. I then flipped it again and it stopped working, and then tried to flip it one more time and did not work anymore. So I proceeded to make measurements on the transistors on the AF-AVR board, and then, I screwed in place the AF-AVR board again, and now the radio is working again (even after I put it right-side up again). So I'm guessing it's not a component failure but more of a connection failure, right?
> > > > >
> > > > > In any case, here are the measurements I took when the rig was not working properly, and then after it started working properly:
> > > > >

> > > > > On the IF board, Conn IF-3, using a 10Meg DMM, I got the following values:
> > > > >
> > > > > 1. With power off measure AGC bus resistance at Pin 11. Should be approx 1.7 meg
> > > > > ohm.
> > > > > >>> I actually got 2.7 meg ohms between pins 11 and 17 (without removing any of the connectors).
> > > > >
> > > > > 2. With power on measure RF-1 at Pin 8. Should be approx 3.4vdc
> > > > > >>> I measured 1.96V when not working, 2.9V when working.
> > > > >
> > > > > 3. With power on and RF gain pot full CW measure AGC at Pin 11. Should be approx
> > > > > 2.8vdc with a 11 meg VTVM and somewhat less with a 10 meg ohm DMM.
> > > > > >>> When not working I measured 1.47V, and the schematics I have said it should be at 3V (same as you said). I also measured AGC at pin 7 on RF board (RF-1 Conn), and also got 1.47V. When working I measured 2.2V.
> > > > >
> > > > > 4. If RF-1 is OK and AGC is very low you can try applying 3vdc to Pin 11 and see
> > > > > if rig comes alive. If you do not have a bench supply then use a Radio Shack
> > > > > battery holder and series up couple of 1.5vdc C or D cells. Connect negative
> > > > > lead to chassis ground and touch positive 3vdc lead to Pin 11. Rig should come
> > > > > alive. Watch S meter and see if it comes off the peg.
> > > > > >>> I did not attempt this as you mentioned to do this "if" RF-1 was OK, which in this case it does not look like it's OK.
> > > > >
> > > > > 5. I forgot also measure voltage at Pin 6 AGL should be same as what you read at
> > > > > Pin 11 AGC. AGL and AGC at IF board should be same point electrically as they are connected in receive mode thru the NC contact of the aux relay you just cleaned. But possible to have bad molex connections at Relay board and/or IF board.
> > > > > >>> When not working I measured 1.47V, so it does look like AGL and AGC are connected. When working I measured 2.2V.
> > > > >
> > > > > 6. Also apply temporary 3vdc to Pin 6 and see if S meter comes off the peg.
> > > > > >>> I again, I did not attempt this for the same reason as mentioned in item 4.
> > > > >
> > > > >
> > > > > Like I said at the beginning, and following some troubleshooting suggestions from the Service Manual, I checked the Q1 and Q2 transistors on the AF-AVR board and their voltages on B/C/E were correct, and then, for Q3, I only checked pins 1, 3, 5 and 6, and they all gave me values as shown in the schematics. Those schematics are very handy!!! :-)
> > > > >
> > > > > So, next time it fails, should I look into the RF board since the IF board did not have correct AGC or RF-1 voltages? Or do you suggest some other places I should make measurements to see if I can spot where the intermittent connection is?
> > > > >
> > > > > Thanks again for your help Terry! I have a feeling I'm going to really get to know and love my new rig. ;-)
> > > > >
> > > > > --Cesar-- K1TNT
> > > > >
> > > > >

> > > > >
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > > > > >
> > > > > > I forgot also measure voltage at Pin 6 AGL should be same as what you read at Pin 11 AGC.
> > > > > >
> > > > > > Also apply temporary 3vdc to Pin 6 and see if S meter comes off the peg.
> > > > > >
> > > > > > AGL and AGC at IF board should be same point electrically as they are connected in receive mode thru the NC contact of the aux relay you just cleaned. But possible to have bad molex connections at Relay board and/or IF board.
> > > > > >
> > > > > >
> > > > >
> > > >
> > >
>

42491. Re: My TS-820 got sick... :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-01 11:08:46 UTC
From: Terry Wagoner
Topic: 42157 Message: 42491

Two more things to try if the S-meter is not pegged:

First: Try exercising the RF Attenuator push button switch a few times. It is in the RF path after the Ant relay.

2nd: Try turning on the Marker (crystal calibrator) and see if you can hear the 25khz marker signals. Marker signal is applied to the Coil Pack board after the Ant Relay nc contact.

Terry K9TW

42492. Re: [TS-520_820_530_830] Crystals/Filter for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-01 14:32:21 UTC
From: John Davidson
Topic: 42465 Message: 42492

Moving the wire allows the mode switch to select the filter , the way it comes from factory keeps the SSB filter in circuit so there will be a path for the IF signal in the CW mode when only one filter is installed.. You don't need to modify anything else when you install the CW filter !

From: Bob Macklin <macklinbob@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 3:31 PM
Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520

I have read the instructions. I have looked at the schematics. I have not opened my TS-520!

The schematics for the 520, 520S, and 520SE show only a single wire connected to the SSB select pin on the IF PCB.

If you move that wire to the CW select pin the CW filter is always selected.

The reason I have not installed the filter is I am not sure I want to try and modify the mode switch to make both filters work.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: John Davidson
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 12:18 PM
Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520

All I can ask is DID U DO THE FILTER INSTALLATION ?
I did it by-the-book and when you are in the CW mode the CW filter is working. In the SSB modes the SSB filter is working !
End of story !

From: Bob Macklin <macklinbob@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 2:26 PM
Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520

I don't see it that way.

The Kenwood instructions show moving the selection wire from the SSB filter to the CW filter.

That wire is connected to one pole of the MODE switch. That pole has Tune, CW, LSB, and SSB all jumpered together.

So with out rewiring the Mode switch or adding another switch, there is no way to switch between the filters.

This is an original TS-520.

Bob Macklin

_____
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42493. Re: [TS-520_820_530_830] Crystals/Filter for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-01 15:08:25 UTC
From: Bob Macklin
Topic: 42465 Message: 42493

The schematic for the 520 is misleading. The section for the filter selection shows all terminal connected together and a single wire going to the SSB connection on the IF board.

My understanding now is there are actually two wires from the mode switch, both connected to the SSB pin.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: John Davidson
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, June 01, 2013 7:32 AM
Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520

Moving the wire allows the mode switch to select the filter , the way it comes from factory keeps the SSB filter in circuit so there will be a path for the IF signal in the CW mode when only one filter is installed.. You don't need to modify anything else when you install the CW filter !

_____
From: Bob Macklin <macklinbob@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 3:31 PM
Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520

I have read the instructions. I have looked at the schematics. I have not opened my TS-520!

The schematics for the 520, 520S, and 520SE show only a single wire connected to the SSB select pin on the IF PCB.

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Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: John Davidson
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 12:18 PM
Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520

All I can ask is DID U DO THE FILTER INSTALLATION ?
I did it by-the-book and when you are in the CW mode the CW filter is working. In the SSB modes the SSB filter is working !
End of story !

_____
From: Bob Macklin <macklinbob@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 2:26 PM
Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520

I don't see it that way.

The Kenwood instructions show moving the selection wire from the SSB filter to the CW filter.

That wire is connected to one pole of the MODE switch. That pole has Tune, CW, LSB, and SSB all jumpered together.

So with out rewiring the Mode switch or adding another switch, there is no way to switch between the filters.

This is an original TS-520.

Bob Macklin

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42494. RE: [TS-520_820_530_830] microphone question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-01 10:46:51 UTC
From: AI4WM Bill
Topic: 42482 Message: 42494

The MC-50 has a Cardioid pattern which will increase bass response as you get closer to the microphone. I am not sure about the capsule in the other Kenwood microphones. I have and Electro-Voice MC300 which is also 600 ohm Z. I like the E-V because it has better response than the Kenwood although I get good audio reports using either. Another good microphone is the Shure D444 also is a dual-Z microphone. The other option is for a non directional mic. like the Astatic D-104 with an amplified base. I used one for years with an L-pad on the output to match 600 ohms although it is not required if the output is kept low. The D104 by itself is Hi-Z.

Generally if a microphone impedance is severely mismatched a hi-Z mic on a low-Z input will be tinny and a Lo-Z mic on a Hi-Z input will be very low and or muddy sounding.

If I remember (been a long time since I looked at a manual) correctly the TS-530S has a wide input impedance range like 500 ohm to 50k ohm. If switching your mic. to Hi-Z does not help try speaking farther away (if it is an MC-50 or other directional mic). The other option is to get an omnidirectional mic like the D-104.

73,

Bill

AI4WM

--- On Sat, 6/1/13, fpath fpath <fpath@...> wrote:

From: fpath fpath <fpath@...>
Subject: RE: [TS-520_820_530_830] microphone question
To: "TS-520_820_530_830@yahoogroups.com" <ts-520_820_530_830@yahoogroups.com>
Date: Saturday, June 1, 2013, 2:15 AM

G'day KD5UTC,

Please leave your name aswell, makes it more friendly to respond. I have 2 530s radios and I use the MC35 and MC50 mic, the MC 50 can be switch simply by changing the plug at the rear of the microphone (red dot is marked on plug)and will give you either 50K or 500ohm. The MC 50 can be removed from its stand and placed into a boom extension.

73s

DAve

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: kd5utc@...
Date: Fri, 31 May 2013 22:54:05 +0000
Subject: [TS-520_820_530_830] microphone question

have a ts-530s wanting hook up a boom microphone .which would be a good mic with out amplifing it? i am trying to find one everything i have tried makes me to bassie and everyone tells me need one with more highs and less loss . does 600ohm impedance have something to do with it? if i go with a mic with less impedance give me more punch or less punch. just wondering as for frequency what range do i look for as well.....
Thanks KD5UTC and 73S

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42495. Re: [TS-520_820_530_830] Re: Does the group see/cover the TS-900?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-01 14:08:27 UTC
From: Dale Parfitt
Topic: 37583 Message: 42495

Thanks Pete,
I'll pick up the service manual.
A previous owner had bypassed the RF attenuator control for some reason. I repaired that and now the rig is 100%. I have not checked calibration on all the bands yet but it does appear that the 80M het oscillator has aged about 4 KHz- may replace it so I don't have to move the curser so far to the left.
The 900 is one beautiful rig- no plastic trim rings, an extruded front panel and the interior build quality is outstanding- I would say higher than the 599 Twins.

Dale W4OP

----- Original Message -----
From: pmarkavage@...
To: TS-520_820_530_830@yahoogroups.com
Cc: parinc1@...
Sent: Saturday, June 01, 2013 12:16 AM
Subject: Re: [TS-520_820_530_830] Re: Does the group see/cover the TS-900?

I have both the operating and service manuals for the TS-900. High resolution replications are taken directly from the original. Had a good review on it on eHam, see http://www.eham.net/reviews/detail/2272 Scroll down to the 1st review dated January 13, 2010.

Pete, wa2cwa
http://www.manualman.com

On Sat, 01 Jun 2013 01:20:44 -0000 "Dale" <parinc1@...> writes:
>
> Hi Max,
> I have a TS-900 and the RF Gain control is inoperative. The on-line
> schematics are a bit hard to read. Does your service manual have
> detailed schematics of the RF Gain control and the RF and IF
> boards?
>
> Thanks,
>
> Dale W4OP
> --- In TS-520_820_530_830@yahoogroups.com, "max.fretter"
> <max.fretter@...> wrote:
> >
> > Don't have one of these still, but they were the Kenwood flagship
> for a while - sort of the transciever you get when you weld together
> a T599 and R599, some had sweep tube finals, some had S2001...
> definitely hybrid. Only asking as I do have the service manual here
> and if anyone needs anything regarding one of these rarer rigs I'd
> be happy to help.

> >
> > 73s
> > Max (de zl2ben)

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42496. ts 520se

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-01 14:55:14 UTC
From: Jerry
Topic: 42135 Message: 42496

I have read the manual/ but it doesnt say what the aux position is used for/ and i am curious/ still hear recieve noise/ am i just overlooking something in manual?
thanks Jerry

42497. TS-830 final cage

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-01 15:26:44 UTC
From: ronaldburnor@sbcglobal.net
Topic: 42497 Message: 42497

Hi Jim: KE7OAY : I found a lot of helpful information in your Final Cage Repair. My measured capacitance was as follows: Band 28 - 758, Band 24 - 759, Band 21 - 1160, Band 18 - 1160, Band 14 - 1569, Band 10 - 1569, Band 7 - 1831, Band 3.5 - 2630, Band 1.8 - 5040. In doing the check of the load control with one lead of my ohmmeter grounded, I found the rear section, on 24 band to be open,0 ohms,and the same on 21 band, middle section, 0 ohms, on the front section, 14 band i measured 2.3 ohms. With my ohmmeter leads shorted together i have 1.5 ohms. Are there capacitors on the rear band switch, or where should i look next? Thanks Ron KD0KPM

42498. Re: [TS-520_820_530_830] Crystals/Filter for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-01 15:34:37 UTC
From: John Davidson
Topic: 42465 Message: 42498

CORRECT !

From: Bob Macklin <macklinbob@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, June 1, 2013 11:08 AM
Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520

The schematic for the 520 is misleading. The section for the filter selection shows all terminal connected together and a single wire going to the SSB connection on the IF board.

My understanding now is there are actually two wires from the mode switch, both connected to the SSB pin.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: John Davidson
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, June 01, 2013 7:32 AM
Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520

Moving the wire allows the mode switch to select the filter , the way it comes from factory keeps the SSB filter in circuit so there will be a path for the IF signal in the CW mode when only one filter is installed.. You don't need to modify anything else when you install the CW filter !

From: Bob Macklin <macklinbob@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 3:31 PM
Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520

I have read the instructions. I have looked at the schematics. I have not opened my TS-520!

The schematics for the 520, 520S, and 520SE show only a single wire connected to the SSB select pin on the IF PCB.

If you move that wire to the CW select pin the CW filter is always selected.

The reason I have not installed the filter is I am not sure I want to try and modify the mode switch to make both filters work.

Bob Macklin
K5MYJ

Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: John Davidson
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 12:18 PM
Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520

All I can ask is DID U DO THE FILTER INSTALLATION ?
I did it by-the-book and when you are in the CW mode the CW filter is working. In the SSB modes the SSB filter is working !
End of story !

_____
From: Bob Macklin <macklinbob@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 31, 2013 2:26 PM
Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520

I don't see it that way.

The Kenwood instructions show moving the selection wire from the SSB filter to the CW filter.

That wire is connected to one pole of the MODE switch. That pole has Tune, CW, LSB, and SSB all jumpered together.

So with out rewiring the Mode switch or adding another switch, there is no way to switch between the filters.

This is an original TS-520.

Bob Macklin

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42499. Re: [TS-520_820_530_830] ts 520se

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-01 16:37:12 UTC
From: Mike
Topic: 42135 Message: 42499

Jerry,

The AUX position is for "receive only". A crystal and resonant tank circuit is required to use the AUX position. The AUX position cannot be used for transmit, ONLY receive.

For example, lets say you want to receive WWV on 10Mhz plus be able to receive the 30 meter band. Since the AUX position requires a crystal, what frequency would the crystal have to be in order to receive WWV on 10Mhz plus the 30 meter band using the AUX position?The crystal frequency would have to be "18.895Mhz".

10 + 8.895 = 18.895Mhz

I have no idea what your electronic and receiver knowledge level is. However, if you lack, for example, the knowledge/understanding of basic receiver operation/theory, I recommend you study basic receiver operation/theory first. In addition, you should study the Circuit Description and block diagram in the 520's manual as well. Without a solid understanding of how receiver's work and how the 520 processes a receive signal, you will have a difficult time understanding how the 520's AUX position, as well as all the other band switch positions, works.

73
Mike W5RKL

On 6/1/2013 9:55 AM, Jerry wrote:
>
> I have read the manual/ but it doesnt say what the aux position is
> used for/ and i am curious/ still hear recieve noise/ am i just
> overlooking something in manual?
> thanks Jerry
>
>

[Non-text portions of this message have been removed]

42500. Re: [TS-520_820_530_830] Crystals/Filter for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-01 17:08:43 UTC
From: Mike
Topic: 42465 Message: 42500

Boband John,

The TS-520/TS-520S schematics are wrong, there are "2" filter select wires, not "1", as the 520/520S schematics show, just as I said before. The TS-520/TS-520S operatormanualsections that shows how to install a CW filter and how to change the filter select wiring (move the BROWN wire from SSB to CW), clearly shows there are "2" wires, not "1". By studying the schematics and understanding how the filters are selected (diode select), it's clear that there has to be "2" wires, not "1", in order to change filter selections when changing modes.

It is also important to note that if the CW filter is permanently removed, for what ever reason, the BROWN wire MUST be moved from the "CW" terminal on the IF board back to the "SSB" terminal on the IF board. If this is not done and a mod has not been performed to add CW/SSB filter select flexibility in CW mode, then the 520/520S will not receive and transmit in CW mode!

This is not the first time, and it won't be the last, that I have found/noticed errors in schematics and had to do further research. A simple but important error I found some time ago in a Heathkit transceiver schematic is in the HW-101 and SB-100. The main schematic of these 2 transceivers shows the transceivers in "transmit", not "receive". The relays in both transceiver's are shown "energized" which puts these transceivers in "transmit". The Circuit Description section schematics, however,show the transceivers in "Receive". The Circuit Description section schematics are correct. Heathkit didn't change this error on the main schematics until the SB-101 transceiver came out. This small but important to know error may seem trivial to some but, like the 520's filter select error on it's schematic, it can create a significant amount of confusion.

73
Mike W5RKL

On 6/1/2013 10:34 AM, John Davidson wrote:
>
> CORRECT !
>
> _____
> From: Bob Macklin <macklinbob@... <mailto:macklinbob%40gmail.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Saturday, June 1, 2013 11:08 AM
> Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520
>

>
>
> The schematic for the 520 is misleading. The section for the filter
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> going to the SSB connection on the IF board.
>
> My understanding now is there are actually two wires from the mode
> switch, both connected to the SSB pin.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
>
> ----- Original Message -----
> From: John Davidson
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Saturday, June 01, 2013 7:32 AM
> Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520
>
> Moving the wire allows the mode switch to select the filter , the way
> it comes from factory keeps the SSB filter in circuit so there will be
> a path for the IF signal in the CW mode when only one filter is
> installed.. You don't need to modify anything else when you install
> the CW filter !
>
> _____
> From: Bob Macklin <macklinbob@... <mailto:macklinbob%40gmail.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Friday, May 31, 2013 3:31 PM
> Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520
>
> I have read the instructions. I have looked at the schematics. I have
> not opened my TS-520!
>
> The schematics for the 520, 520S, and 520SE show only a single wire
> connected to the SSB select pin on the IF PCB.
>
> If you move that wire to the CW select pin the CW filter is always
> selected.
>
> The reason I have not installed the filter is I am not sure I want to
> try and modify the mode switch to make both filters work.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"

>
> ----- Original Message -----
> From: John Davidson
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Friday, May 31, 2013 12:18 PM
> Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520
>
> All I can ask is DID U DO THE FILTER INSTALLATION ?
> I did it by-the-book and when you are in the CW mode the CW filter is
> working. In the SSB modes the SSB filter is working !
> End of story !
>
> _____
> From: Bob Macklin <macklinbob@... <mailto:macklinbob%40gmail.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Friday, May 31, 2013 2:26 PM
> Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520
>
> I don't see it that way.
>
> The Kenwood instructions show moving the selection wire from the SSB
> filter to the CW filter.
>
> That wire is connected to one pole of the MODE switch. That pole has
> Tune, CW, LSB, and SSB all jumpered together.
>
> So with out rewiring the Mode switch or adding another switch, there
> is no way to switch between the filters.
>
> This is an original TS-520.
>
> Bob Macklin
> _____
> Reply via web post Reply to sender Reply to group Start a New Topic
> Messages in this topic (1)
> Recent Activity: * New Members 18 * New Photos 3
> Visit Your Group
>
> Switch to: Text-Only, Daily Digest • Unsubscribe • Terms of Use • Send
> us Feedback
> .
>
> [Non-text portions of this message have been removed]
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42501. Re: [TS-520_820_530_830] Crystals/Filter for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-01 17:25:24 UTC
From: Bob Macklin
Topic: 42465 Message: 42501

I was an electronic design engineer from 1960 to 1998. There was on obsession in the electronic industry to squeeze out any possible cost.

I disagreed with that obsession. I drew my schematics as they really were. In the case of the 520(and it looks like this error alls applies to the 820) I would have connected the two wires to the proper two terminals and then placed a jumper between the two terminals. But this would have been more expensive than the way they did it.

I am beginning to get unimpressed by Kenwood's manufacturing!

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: Mike
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, June 01, 2013 10:08 AM
Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520

Boband John,

The TS-520/TS-520S schematics are wrong, there are "2" filter select wires, not "1", as the 520/520S schematics show, just as I said before. The TS-520/TS-520S operatormanualsections that shows how to install a CW filter and how to change the filter select wiring (move the BROWN wire from SSB to CW), clearly shows there are "2" wires, not "1". By studying the schematics and understanding how the filters are selected (diode select), it's clear that there has to be "2" wires, not "1", in order to change filter selections when changing modes.

It is also important to note that if the CW filter is permanently removed, for what ever reason, the BROWN wire MUST be moved from the "CW" terminal on the IF board back to the "SSB" terminal on the IF board. If this is not done and a mod has not been performed to add CW/SSB filter select flexibility in CW mode, then the 520/520S will not receive and transmit in CW mode!

This is not the first time, and it won't be the last, that I have found/noticed errors in schematics and had to do further research. A simple but important error I found some time ago in a Heathkit transceiver schematic is in the HW-101 and SB-100. The main schematic of these 2 transceivers shows the transceivers in "transmit", not "receive". The relays in both transceiver's are shown "energized" which puts these transceivers in "transmit". The Circuit Description section schematics, however,show the transceivers in "Receive". The Circuit

Description section schematics are correct. Heathkit didn't change this error on the main schematics until the SB-101 transceiver came out. This small but important to know error may seem trivial to some but, like the 520's filter select error on it's schematic, it can create a significant amount of confusion.

73
Mike W5RKL

On 6/1/2013 10:34 AM, John Davidson wrote:
>
> CORRECT !
>
> _____
> From: Bob Macklin <macklinbob@... <mailto:macklinbob%40gmail.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Saturday, June 1, 2013 11:08 AM
> Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520
>
>
>
> The schematic for the 520 is misleading. The section for the filter
> selection shows all terminal connected together and a single wire
> going to the SSB connection on the IF board.
>
> My understanding now is there are actually two wires from the mode
> switch, both connected to the SSB pin.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
>
> ----- Original Message -----
> From: John Davidson
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Saturday, June 01, 2013 7:32 AM
> Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520
>
> Moving the wire allows the mode switch to select the filter , the way
> it comes from factory keeps the SSB filter in circuit so there will be
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> <mailto:TS-520_820_530_830%40yahoogroups.com>

> Sent: Friday, May 31, 2013 3:31 PM
> Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520
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> K5MYJ
> Seattle, Wa.
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> ----- Original Message -----
> From: John Davidson
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> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Friday, May 31, 2013 12:18 PM
> Subject: Re: [TS-520_820_530_830] Crystals/Filter for TS-520
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> I did it by-the-book and when you are in the CW mode the CW filter is
> working. In the SSB modes the SSB filter is working !
> End of story !
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> Sent: Friday, May 31, 2013 2:26 PM
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> That wire is connected to one pole of the MODE switch. That pole has
> Tune, CW, LSB, and SSB all jumpered together.
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> So with out rewiring the Mode switch or adding another switch, there
> is no way to switch between the filters.
>

> This is an original TS-520.
>
> Bob Macklin
> _____
> Reply via web post Reply to sender Reply to group Start a New Topic
> Messages in this topic (1)
> Recent Activity: * New Members 18 * New Photos 3
> Visit Your Group
>
> Switch to: Text-Only, Daily Digest • Unsubscribe • Terms of Use • Send
> us Feedback
> .
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> [Non-text portions of this message have been removed]
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42502. Re: My TS-820 got sick... :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-01 19:16:57 UTC
From: coyoteinventor@ymail.com
Topic: 42157 Message: 42502

Terry,

I tried using the rig again today to contact some ships, and the rig went quiet again for a few seconds and came back to normal, but then again later it went quiet and it has not come back yet, so I took this time to run through the tests you mentioned:

When rig does not come back to receive at end of a transmission the S-meter is at Zero (not pegged). RF gain knob can move the needle.

Yes, I had cleaned both relays and swapped them too. I do hear the relay after I am done transmitting, I just don't hear anything at all when in receive mode.

I do have a side tone when I key the rig in CW mode.

I tried pressing the RF attenuator push botton a few times and nothing changed, still not hearing anything.

I also tried to hear the 25khz calibrator crystal, but I can not hear that one (and I hear it in the past when the rig works properly).

--Cesar-- K1TNT

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Two more things to try if the S-meter is not pegged:
>
> First: Try exercising the RF Attenuator push button switch a few times. It is in the RF path after the Ant relay.
>
> 2nd: Try turning on the Marker (crystal calibrator) and see if you can hear the 25khz marker signals. Marker signal is applied to the Coil Pack board after the Ant Relay nc contact.
>
> Terry K9TW
>

42503. Re: My TS-820 got sick... :-(

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-01 19:52:15 UTC
From: Terry Wagoner
Topic: 42157 Message: 42503

Cesar: This is good info. Here is what it means.

1. S meter at zero and turning RF gain ccw causes it to go up scale tells you that the AGC bus is energized and feeding control voltage to the IF and RF amps so they should have normal gain if rf signal makes it to their gate 1 inputs. This indicates to me that Aux relay you cleaned is OK.

2. Hearing the Side Tone tells you that Audio Amp Q3 is not the problem.

3. Hearing no Marker signal is a clue. As I mentioned the Marker signal doesnt pass thru the Antenna TR relay contacts or the RF attenuator. Look at the schematic and you will see it is coupled into the Coil Pack board at the ANT molex connector (small connector on the Coil Pack board in front of middle air variable VC-2).

Try this:

1.Wiggle ANT molex connector using an insulated tuning stick or probe when receive is dead. If comes alive carefully remove and clean.

2.Touch your finger to VC-2 air variable (middle cap). You will see two unused solder lugs sticking up in air. Touch your finger or use jumper lead and touch/tap the back lug nearer the PA cage and you should hear a noticeable increase in RX background noise.

If background noise peaks it tells you that RF amp, RIF mixer, AGC bus and IF amps all working and problem has to be from RG terminal on RF board back to the ANT terminal on Coil Pack board.

What is in that path is couple of molex connectors and couple of IF traps and the Antenna Step Up Transformer L8. L8 can be hurt, but usually it is not intermittent.

Report findings.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "coyoteinventor@..." <coyoteinventor@...> wrote:
>
> Terry,
>
> I tried using the rig again today to contact some ships, and the rig went quiet again for a few seconds and came back to normal, but then again later it went quiet and it has not come back yet, so I took this time to run through the tests you mentioned:
>
> When rig does not come back to receive at end of a transmission the S-meter is at Zero (not pegged). RF gain knob can move the needle.
>
> Yes, I had cleaned both relays and swapped them too. I do hear the relay after I am done transmitting, I just don't hear anything at all when in receive mode.

>
> I do have a side tone when I key the rig in CW mode.
>
> I tried pressing the RF attenuator push botton a few times and nothing changed, still not hearing anything.
>
> I also tried to hear the 25khz calibrator crystal, but I can not hear that one (and I hear it in the past when the rig works properly).
>
> --Cesar-- K1TNT
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Two more things to try if the S-meter is not pegged:
> >
> > First: Try exercising the RF Attenuator push button switch a few times. It is in the RF path after the Ant relay.
> >
> > 2nd: Try turning on the Marker (crystal calibrator) and see if you can hear the 25khz marker signals. Marker signal is applied to the Coil Pack board after the Ant Relay nc contact.
> >
> > Terry K9TW
> >
>

42504. Re: [TS-520_820_530_830] Re: Does the group see/cover the TS-900?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-01 20:17:48 UTC
From: pmarkavage@...
Topic: 37583 Message: 42504

I'm sort of partial to the 599D Twins. I had a TS-900 years ago and next to the Twins, cosmetically, I liked the look of the Twins better. Sold the 900 stuff and kept the Twins. Both rigs worked well but the TS-900 didn't have AM. I believe either the TS-900 or the TS-511 also appeared on the market for a short time as a Frontier Electronics transceiver. Picked up one at a hamfest late 80's or early 90's but it had problems. Didn't have time to work on it so I passed it on at a later hamfest.

Pete, wa2cwa
http://www.manualman.com

On Sat, 1 Jun 2013 10:08:27 -0400 "Dale Parfitt" <parinc1@...>
writes:
> Thanks Pete,
> I'll pick up the service manual.
> A previous owner had bypassed the RF attenuator control for some
> reason. I repaired that and now the rig is 100%. I have not checked
> calibration on all the bands yet but it does appear that the 80M
> het oscillator has aged about 4 KHz- may replace it so I don't have
> to move the curser so far to the left.
> The 900 is one beautiful rig- no plastic trim rings, an extruded
> front panel and the interior build quality is outstanding- I would
> say higher than the 599 Twins.
>
> Dale W4OP

42505. Re: Crystals/Filter for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-01 20:27:11 UTC
From: Terry Wagoner
Topic: 42465 Message: 42505

Bob:

I dont think they are any worse than any of the others of that era. I would much prefer to troubleshoot a Kenwood than a Yeasu. Some of that due to more likely hacked and abused. Yeasu was so cheap they only used one inter-stage coupling cap between the driver tube and finals and wrecked many finals when the poor quality cap failed and put driver tube plate voltage on the 6146 control grids and the tubes took off.

Plenty of examples of this across other radio brands.

Heath was not immune. I owned and built many of their ham rigs. Undersized bleeder resistors and plate transformers just to mention a couple of design flaws or calcs too close to the margins. Pretty sure bean counters in the loop there somewhere.

I attended a 2 year tech school in the early 70s and when we finished a radio receiver project the instructor picked on me as I was the hot shot who got his working first. He came to my bench and turned receiver on and then picked up pair of dykes and starting snipping out discrete components (mostly capacitors and resistors as I recall) until it got distorted or quit working after about the 5th part was removed. The lesson was we are selling 50,000 units so we dont waste money with nice to have performance. He was getting us ready for the real world when Bean Counters and Designers would cross swords and Bean Counters typically win. I never went on to design.

The other thing is you are thinking like the end user or customer. An old fashioned notion. In nuclear power we call it human factoring. Unfortunately a maintenance worker or tech is never consulted on how something should be designed and installed for ease of access and removal. We used very large pump motor sets on a fixed base/bedplate. The motors (maybe 2500 to 5000 horsepower) are always placed at back of this skid near the wall and the pumps are always on the walkway aisle. The motors are always removed and sent to a large offsite motor rewind shop. The pumps are always rebuilt in place. There is no overhead room and no I-beam for lifting. The motors must be removed with jacking and cribbing (like the pyramid days). Difficult and dangerous work. The Bean Counter and Design Engineers never removed a motor in their lives.

So with Kenwoods and other transceiver designs it is more than prints not matching as built configuration.

I often wished that Kenwood would have used boards on edge cards and use of extender cards to access voltage test points. Would have been really nice, but this method has problems as well.

Hey still beats trying to troubleshoot these modern DSP rigs with boards sandwiched and SMT components. Count me out!

Terry K9TW

> I was an electronic design engineer from 1960 to 1998. There was on obsession in the electronic industry to squeeze out any possible cost.
>
> I am beginning to get unimpressed by Kenwood's manufacturing!
>
> Bob Macklin
>

42506. Re: [TS-520_820_530_830] ts 520se

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-01 20:30:39 UTC
From: Jerry Barr
Topic: 42135 Message: 42506

thanks mike that is exactly what i wanted to know /tho why i wud wnt to hear 30 meters is beyond me/ is there a xtal socket onboard for that pos/ cant find it in my manual/ its a copy and very hard to read

Jerry KJ6NTL

From: Mike <w5rkl@...>
To: TS-520_820_530_830@...m
Sent: Saturday, June 1, 2013 9:37 AM
Subject: Re: [TS-520_820_530_830] ts 520se

Jerry,

The AUX position is for "receive only". A crystal and resonant tank circuit is required to use the AUX position. The AUX position cannot be used for transmit, ONLY receive.

For example, lets say you want to receive WWV on 10Mhz plus be able to receive the 30 meter band. Since the AUX position requires a crystal, what frequency would the crystal have to be in order to receive WWV on 10Mhz plus the 30 meter band using the AUX position?The crystal frequency would have to be "18.895Mhz".

10 + 8.895 = 18.895Mhz

I have no idea what your electronic and receiver knowledge level is. However, if you lack, for example, the knowledge/understanding of basic receiver operation/theory, I recommend you study basic receiver operation/theory first. In addition, you should study the Circuit Description and block diagram in the 520's manual as well. Without a solid understanding of how receiver's work and how the 520 processes a receive signal, you will have a difficult time understanding how the 520's AUX position, as well as all the other band switch positions, works.

73
Mike W5RKL

On 6/1/2013 9:55 AM, Jerry wrote:
>
> I have read the manual/ but it doesnt say what the aux position is
> used for/ and i am curious/ still hear recieve noise/ am i just
> overlooking something in manual?
> thanks Jerry
>
>

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42507. Re: [TS-520_820_530_830] ts 520se

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-01 21:39:00 UTC
From: Mike
Topic: 42135 Message: 42507

The AUX crystal and tank circuit are located on the TS-520's OSC COIL Unit where all the other HET OSC crystals and coils are located.

After removing the top and bottom covers, turn the 520 upside down, front panel facing you. The OSC COIL Unit board on the left closest to the front panel. The band switch shaft goes through the OSC COIL Unit board and the other 3 boards.

I didn't select 30 meters because I thought you wanted to receive 30 meters in your 520's AUX position. I selected 30 meters and WWV as an "example only" so you can see how the AUX position works, nothing more.

73
Mike W5RKL

On 6/1/2013 3:30 PM, Jerry Barr wrote:
>
> thanks mike that is exactly what i wanted to know /tho why i wud wnt
> to hear 30 meters is beyond me/ is there a xtal socket onboard for
> that pos/ cant find it in my manual/ its a copy and very hard to read
>
>
> Jerry KJ6NTL
>
> From: Mike <w5rkl@... <mailto:w5rkl%40yahoo.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Saturday, June 1, 2013 9:37 AM
> Subject: Re: [TS-520_820_530_830] ts 520se
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> Jerry,
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> circuit is required to use the AUX position. The AUX position cannot be
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42508. Re: [TS-520_820_530_830] ts 520se

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-01 22:19:12 UTC
From: Jerry Barr
Topic: 42135 Message: 42508

well thanks again mike i do appreciate/ and i kinda figureing it was example/ if u were going to use it what band wud u add for recieve only

Jerry KJ6NTL

From: Mike <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, June 1, 2013 2:39 PM
Subject: Re: [TS-520_820_530_830] ts 520se

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>
> Jerry KJ6NTL
>
> From: Mike <mailto:w5rkl%40yahoo.com <mailto:w5rkl%40yahoo.com>>
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Saturday, June 1, 2013 9:37 AM
> Subject: Re: [TS-520_820_530_830] ts 520se
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> Mike W5RKL
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> >
>
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42509. RE: [TS-520_820_530_830] TS-830 final cage

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-02 00:00:44 UTC
From: fpath fpath
Topic: 42497 Message: 42509

Hi Ron,

In relation to "are there caps on ther rear of the band switch (S22)"? There are 9 capacitors on the rear of this switch, 3 on the rear side near the first valve, which are normally the problem and relativily easy to get to and remove/replace. The other 6 are located on the other side of S22 and are very hard to get to and usually don't cause any problems. Partial disassembly of the PA cage is required and is not very easy or pleasant task, have done this job and can talk you through it if the need arises, but would look at other issues first. Like TIF, SG resistors, molex connectors, TX level diagrams, RF adjust pot on rear panel and SG switch as these are the biggest issues look at the basics first and then move to the more challenging and highly unlikely.

I'm unsure of your PA issue, if you have an issue with running out of capacitance and unable to tune radio on 160,80 and 40 with VR1 and VR2 not tuming in there respective areas, the first caps I would look at are C9 100pf, C10 390pf and C26 22pf. These 3 caps are the ones that are subjected to direct radiated heat from the Valve, what I have found is the capacitors go out of spec or crack, my 390 pf read about 220pf and 100pf read around 50pf. These are RF type 1, high voltage capacitors and cannot be subsituted with a normal cap refer to attached link for reference http://www.qsl.net/i0jx/capacit.html.

Most importantly before venturing into the PA or any other part of the radio, ensure the radio is turned off and disconnected from power source, discharge the HV at least twice as there are lethal voltages that will kill.

If you can repost you question\issue may be able to offer a little more help rather than delving straight into PA first.

73's

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: ronaldburnor@...
Date: Sat, 1 Jun 2013 15:26:44 +0000
Subject: [TS-520_820_530_830] TS-830 final cage

Hi Jim: KE7OAY : I found a lot of helpful information in your Final Cage Repair. My measured capacitance was as follows: Band 28 - 758, Band 24 - 759, Band 21 - 1160, Band 18 - 1160, Band 14 - 1569, Band 10 - 1569, Band 7 - 1831, Band 3.5 - 2630, Band 1.8 - 5040. In doing the check of the load control with one lead of my ohmmeter grounded, I found the rear section, on 24 band to be open,0 ohms,and the same on 21 band, middle section, 0 ohms, on the front section, 14 band i measured 2.3 ohms. With my ohmmeter leads shorted together i have 1.5 ohms. Are there capacitors on the rear band switch, or where should i look next? Thanks Ron KD0KPM

[Non-text portions of this message have been removed]

42510. RE: [TS-520_820_530_830] TS-830 final cage

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-02 00:10:06 UTC
From: fpath fpath
Topic: 42497 Message: 42510

Ron,

Forgot to add, the wafer switches on the RF board can also be a problem, clean these and S22 with deoxit and dry with compressed air. The fingers of the wafer switches can become sloppy and not make contact, it's a matter of just turn you band switch through its range and look at leach wafer to ensure there is good contact, these little fingers also twist out of contact, the other issue the rivets on the wafer switches do crack and can be repaired, look at Ken K4EAA, webpage for photos of that sort of issue

73s

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: ronaldburnor@...
Date: Sat, 1 Jun 2013 15:26:44 +0000
Subject: [TS-520_820_530_830] TS-830 final cage

Hi Jim: KE7OAY : I found a lot of helpful information in your Final Cage Repair. My measured capacitance was as follows: Band 28 - 758, Band 24 - 759, Band 21 - 1160, Band 18 - 1160, Band 14 - 1569, Band 10 - 1569, Band 7 - 1831, Band 3.5 - 2630, Band 1.8 - 5040. In doing the check of the load control with one lead of my ohmmeter grounded, I found the rear section, on 24 band to be open,0 ohms,and the same on 21 band, middle section, 0 ohms, on the front section, 14 band i measured 2.3 ohms. With my ohmmeter leads shorted together i have 1.5 ohms. Are there capacitors on the rear band switch, or where should i look next? Thanks Ron KD0KPM

[Non-text portions of this message have been removed]

42511. Re: [TS-520_820_530_830] ts 520se

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-02 01:46:56 UTC
From: Mike
Topic: 42135 Message: 42511

Jerry,

Personally I wouldn't mess with the AUX position especially since it's a
"receive only" position. It never interested me so I left it alone in
the TS-520SE and TS-820S I use to own.

73
Mike W5RKL

On 6/1/2013 5:19 PM, Jerry Barr wrote:
>
> well thanks again mike i do appreciate/ and i kinda figureing it was
> example/ if u were going to use it what band wud u add for recieve only
>
>
> Jerry KJ6NTL
>
> From: Mike <w5rkl@... <mailto:w5rkl%40yahoo.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Saturday, June 1, 2013 2:39 PM
> Subject: Re: [TS-520_820_530_830] ts 520se
>
>
> The AUX crystal and tank circuit are located on the TS-520's OSC COIL
> Unit where all the other HET OSC crystals and coils are located.
>
> After removing the top and bottom covers, turn the 520 upside down,
> front panel facing you. The OSC COIL Unit board on the left closest to
> the front panel. The band switch shaft goes through the OSC COIL Unit
> board and the other 3 boards.
>
> I didn't select 30 meters because I thought you wanted to receive 30
> meters in your 520's AUX position. I selected 30 meters and WWV as an
> "example only" so you can see how the AUX position works, nothing more.
>
> 73
> Mike W5RKL
>
> On 6/1/2013 3:30 PM, Jerry Barr wrote:
> >
> > thanks mike that is exactly what i wanted to know /tho why i wud wnt
> > to hear 30 meters is beyond me/ is there a xtal socket onboard for
> > that pos/ cant find it in my manual/ its a copy and very hard to read
> > >
> > >

> > Jerry KJ6NTL
> >
> > From: Mike <mailto:w5rkl%40yahoo.com <mailto:w5rkl%40yahoo.com>>
> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Saturday, June 1, 2013 9:37 AM
> > Subject: Re: [TS-520_820_530_830] ts 520se
> >
> >
> > Jerry,
> >
> > The AUX position is for "receive only". A crystal and resonant tank
> > circuit is required to use the AUX position. The AUX position cannot be
> > used for transmit, ONLY receive.
> >
> > For example, lets say you want to receive WWV on 10Mhz plus be able to
> > receive the 30 meter band. Since the AUX position requires a crystal,
> > what frequency would the crystal have to be in order to receive WWV on
> > 10Mhz plus the 30 meter band using the AUX position?The crystal
> > frequency would have to be "18.895Mhz".
> >
> > 10 + 8.895 = 18.895Mhz
> >
> > I have no idea what your electronic and receiver knowledge level is.
> > However, if you lack, for example, the knowledge/understanding of basic
> > receiver operation/theory, I recommend you study basic receiver
> > operation/theory first. In addition, you should study the Circuit
> > Description and block diagram in the 520's manual as well. Without a
> > solid understanding of how receiver's work and how the 520 processes a
> > receive signal, you will have a difficult time understanding how the
> > 520's AUX position, as well as all the other band switch positions,
> works.
> >
> > 73
> > Mike W5RKL
> >
> > On 6/1/2013 9:55 AM, Jerry wrote:
> > >
> > > I have read the manual/ but it doesnt say what the aux position is
> > > used for/ and i am curious/ still hear recieve noise/ am i just
> > > overlooking something in manual?
> > > thanks Jerry
> > >
> > >
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42512. Re: [TS-520_820_530_830] ts 520se

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-02 03:50:59 UTC
From: Jerry Barr
Topic: 42135 Message: 42512

thanks mike Do appreciate it I dought i will do anything with it eitherless its to monitor the music stuff hihi/not that either

Jerry KJ6NTL

From: Mike <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, June 1, 2013 6:46 PM
Subject: Re: [TS-520_820_530_830] ts 520se

Jerry,

Personally I wouldn't mess with the AUX position especially since it's a
"receive only" position. It never interested me so I left it alone in
the TS-520SE and TS-820S I use to own.

73
Mike W5RKL

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> example/ if u were going to use it what band wud u add for recieve only
>
>
> Jerry KJ6NTL
>
> From: Mike <mailto:w5rkl%40yahoo.com <mailto:w5rkl%40yahoo.com>>
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Saturday, June 1, 2013 2:39 PM
> Subject: Re: [TS-520_820_530_830] ts 520se
>
>
> The AUX crystal and tank circuit are located on the TS-520's OSC COIL
> Unit where all the other HET OSC crystals and coils are located.
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> After removing the top and bottom covers, turn the 520 upside down,
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> Mike W5RKL
>
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> > Jerry KJ6NTL
> >
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> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Saturday, June 1, 2013 9:37 AM
> > Subject: Re: [TS-520_820_530_830] ts 520se
> >
> >
> > Jerry,
> >
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> > what frequency would the crystal have to be in order to receive WWV on
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> > receive signal, you will have a difficult time understanding how the
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> > Mike W5RKL
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> > >
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> > > thanks Jerry
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42513. Faceplate repair?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-02 07:19:26 UTC
From: tfrugia81
Topic: 42513 Message: 42513

Good evening group,

I tried searching the group but couldn't find what I was looking for. Has anyone had success touching up the outer faceplate on the hybrids? I have a ts-520 with the previous owners name etched on the top of the faceplate. Is there an easy way to fill and repaint? I saw someone a few weeks ago hint that it has been done, but I would like a bit more detail if someone has done it.

73

Tyler
K7FRU

42514. ts830 rl1

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-02 11:18:18 UTC
From: chris_bridgehouse
Topic: 42514 Message: 42514

Hi all. Is rl1 just push in. I've been trying to pull one out but its tight as a ducks arse. It Won't budge so i thought i'd better check.

Cheers
Chris ZL1BR

42515. RE: [TS-520_820_530_830] ts830 rl1

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-02 11:56:39 UTC
From: fpath fpath
Topic: 42514 Message: 42515

hris which RL1 are you talking about? The one on the audio board is soldered in the Antenna relay is usually plugh in, but there are one or two around that have soldered type, have a look from the PA side and you should be able to tell.

73s

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: chris_bridgehouse@...
Date: Sun, 2 Jun 2013 11:18:18 +0000
Subject: [TS-520_820_530_830] ts830 rl1

Hi all. Is rl1 just push in. I've been trying to pull one out but its tight as a ducks arse. It Won't budge so i thought i'd better check.

Cheers
Chris ZL1BR

[Non-text portions of this message have been removed]

42516. RE: [TS-520_820_530_830] Faceplate repair?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-02 12:14:25 UTC
From: fpath fpath
Topic: 42513 Message: 42516

Tyler,

I have re-sprayed several front plates for the 530s and 830s series. There are several ways to do it and one takes longer than the other, but if you want to get it back to factory standard, fist thing is before doing anything else is getting a perfect colout match. Good automotive paint suppliers do a fantastic job from my experience.

For large dings and etchings I usually clean the panel first in dish washing detergent then give it a good dry, using XYLs hair dryer. I then use a good quality degreaser. I sand the entire out edge that your indicating using 400 grit and then working to 1200 wet and dry. Once your satisfied you can then get a good automotive filler and fill sand back and fill several more times. Once your happy with the smoothness leave it alone for a couple of months, this usually allows for shinkage as the solvent drys. Once it has completely finished shinking sand a leave 1-2 weeks. Wipe over the entire sanded edge and then take plenty of time to mask the entire front panel. I prefer the blue painters masking tape. Re-wipe the edge and then apply an paint etch, allow to dry and then sand, if it needs a little more you can apply another coat of etch. Allow to dry sand and then rewipe with degreaser and then thinners to match you paint, enamal, acryillic etc. For the edge I use a small airbrush with gravity feed and apply about 5-7 dry coats. Of course a little sanding between each coat. Once I'm happy I then apply 1 wet coat and allow to dry and then give a very light polish. Dont forget there will be a slight colour difference until it drys and then you shouldnt notice anything different. If you need to do the case have a look at WB4HFN.com, very good information. The attached pictures were taken minutes after the final wet coat was applied, 3 weeks later the paint had hardened and you couldnt notice anything different, not even greasy finger marks the controls

73s

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: tfrugia@...
Date: Sun, 2 Jun 2013 07:19:26 +0000
Subject: [TS-520_820_530_830] Faceplate repair?

Good evening group,

I tried searching the group but couldn't find what I was looking for. Has anyone had success touching up the outer faceplate on the hybrids? I have a ts-520 with the previous owners name etched on the top of the faceplate. Is there an easy way to fill and repaint? I saw someone a few weeks ago hint that it has been done, but I would like a bit more detail if someone has done it.

73

Tyler
K7FRU

[Non-text portions of this message have been removed]

42517. Re: Faceplate repair?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-02 13:26:45 UTC
From: Bob
Topic: 42513 Message: 42517

If you want to just replace the 520 face plate then I have a nice one for sale...
Bob
****

--- In TS-520_820_530_830@yahoogroups.com, "tfrugia81" <tfrugia@...> wrote:
>
> Good evening group,
>
> I tried searching the group but couldn't find what I was looking for. Has anyone had success touching up the outer faceplate on the hybrids? I have a ts-520 with the previous owners name etched on the top of the faceplate. Is there an easy way to fill and repaint? I saw someone a few weeks ago hint that it has been done, but I would like a bit more detail if someone has done it.
>
>
>
> 73
>
> Tyler
> K7FRU
>

42518. RE: [TS-520_820_530_830] Re: Faceplate repair?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-02 14:56:10 UTC
From: fpath fpath
Topic: 42513 Message: 42518

Tyler,

It's a lot of work and time, seeing Bob has one it would be quicker and easier. Have bought lots of stuff from Bob in the past and have been extremely happy with all my purchases.

73s

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: ke5ftf@...
Date: Sun, 2 Jun 2013 13:26:45 +0000
Subject: [TS-520_820_530_830] Re: Faceplate repair?

If you want to just replace the 520 face plate then I have a nice one for sale...
Bob
****

--- In TS-520_820_530_830@yahoogroups.com, "tfrugia81" <tfrugia@...> wrote:
>
> Good evening group,
>
> I tried searching the group but couldn't find what I was looking for. Has anyone had success touching up the outer faceplate on the hybrids? I have a ts-520 with the previous owners name etched on the top of the faceplate. Is there an easy way to fill and repaint? I saw someone a few weeks ago hint that it has been done, but I would like a bit more detail if someone has done it.
>
>
>
> 73
>
> Tyler
> K7FRU
>

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42519. RE:TS-520 No receive no TX?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-02 04:43:11 UTC
From: rayosfostoria
Topic: 42519 Message: 42519

Well did some more checks.
Checked Q5 on the IF board for voltages. manual states E=5.1v, C=9.0V, B=5.6v.
But what I had is E=1/2v, C=9.0v,B=7.0v. Changed it out with a replacement and still get the same voltage readings.

So making myself more confused. Having fun and learning.

42520. Re: RE:TS-520 No receive no TX?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-02 17:20:40 UTC
From: Terry Wagoner
Topic: 42519 Message: 42520

How did you get to Q5 on IF board as possible reason for no RX and no TX? No relationship?

Q5 is AGC buffer amp. Small sample of IF from last IF stage Q4 feeds Q5. Q5 feeds the AGC detector diodes D5/D6. These diodes rectify this RF and bias on AGC amp Q6 which is hanging on the AGC bus. With off air signals being detected Q6 acts like a variable resistor and pulls down the AGC bus voltage which reduces the gain of the IF and RF amps so strong signals dont blast your ears.

To measure CBE voltages on any of the IF or RF amps I would have rig on dummy load so off air signals cant cause any AGC action.

If Q5 is bad about worse that can happen is no S-meter action, but rig should still receive unless S-meter is pegged.

Usually with no RX and no TX people start by making a visual, poking and prodding and removing and cleaning both relays and exercising JJY/WWV push button and checking 8/9 jumper on rear of rig.

After you exhaust those things I would start with low voltage power supply voltages at AVR board and make sure have good RF-1 and 9vdc regulated. Then turn on Marker and see if you can hear it. I would focus on getting Rx back first although it could be something common to RX and TX and VFO comes to mind.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "rayosfostoria" <smokin4477@...> wrote:
>
> Well did some more checks.
> Checked Q5 on the IF board for voltages. manual states E=5.1v, C=9.0V, B=5.6v.
> But what I had is E=1/2v, C=9.0v,B=7.0v. Changed it out with a replacement and still get the same voltage readings.
>
> So making myself more confused. Having fun and learning.
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42521. KENWOOD HYBRID USER NET (June 2nd, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-02 18:38:12 UTC
From: mvgilger
Topic: 42521 Message: 42521

The Saturday's net on 40 meter had only 1 stations checking in with very poor band conditions. Out of all stations checking in, there was:

1 running TS-520(x)
0 running TS-530(x)
0 running TS-820(x)
0 running TS-830S

I was running my TS-940s. The rest were running non hybrids of one model or another.

The Sunday's net on 20 meter we had 9 stations checking in under very poor band conditions. We had 9 new check-in, KD0TGD, AE6OR, and VE4AMN.

Out of those, there was:

2 running TS-520(x)
1 running TS-530(x)
0 running TS-820(x)
1 running TS-830S

I was running my TS-940s. The rest were running non hybrids of one model or another.

We have been having several people checking in regularly with their TS-430, TS-440, and TS-940's, which of course is not a hybrid, although over 30+ years old. Everyone is welcome as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a net control station, please send me an email. Currently it's just myself, WB2KNR and WB0SGA. I would like to get several more. If we do, we can alternate so everyone might be on a 3-4 week rotation. It's a lot of fun and a good way to make sure you station is optimized.

For anyone that has not heard, we have a new web site that WB4HFN is hosting. He currently has a very nice site for Drake, Collins and Heathkit and now Kenwood Hybrids. Good quality manuals plus sale flyers and brochures will be found here, along with user supplied information for all Hybrids.

His URL is:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754 check-ins, Sunday total 563 check-ins

November 2012, Saturday's, net total = 47, Sundays total = 20
December 2012, Saturday's, net total = 74, Sunday's total = 70
January 2013, Saturday's, net total = 93, Sunday's total = 87
February 2013, Saturday's net total = 103, Sundays total = 87
March 2013, Saturday's, net total = 112, Sunday's total =39

April 2013, Saturday's net total = 52, Sunday's total = 29
May 2013, Saturday's net total = 45, Sunday's total = 50
June 2013, Saturday's net total = 1, Sunday's total = 9 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

42522. Re: [TS-520_820_530_830] KENWOOD HYBRID USER NET (June 2nd, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-02 18:46:39 UTC
From: Bob Macklin
Topic: 42521 Message: 42522

Don't expect the band conditions to improve unless we get a double peak to the solar cycle.

Are there any West Coast people on these nets?

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: mvgilger
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, June 02, 2013 11:38 AM
Subject: [TS-520_820_530_830] KENWOOD HYBRID USER NET (June 2nd, update)

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I was running my TS-940s. The rest were running non hybrids of one model or another.

We have been having several people checking in regularly with their TS-430, TS-440, and TS-940's, which of course is not a hybrid, although over 30+ years old. Everyone is welcome as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a net control station, please send me an email. Currently it's just myself, WB2KNR and WB0SGA. I would like to get several more. If we do, we can alternate so everyone might be on a 3-4 week rotation. It's a lot of fun and a good way to make sure you station is optimized.

For anyone that has not heard, we have a new web site that WB4HFN is hosting. He currently has a very nice site for Drake, Collins and Heathkit and now Kenwood Hybrids. Good quality manuals plus sale flyers and brochures will be found here, along with user supplied information for all Hybrids.

His URL is:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 - Oct. 2012 Saturday total 754 check-ins, Sunday total 563 check-ins

November 2012, Saturday's, net total = 47, Sundays total = 20
December 2012, Saturday's, net total = 74, Sunday's total = 70
January 2013, Saturday's, net total = 93, Sunday's total = 87
February 2013, Saturday's net total = 103, Sundays total = 87
March 2013, Saturday's, net total = 112, Sunday's total =39
April 2013, Saturday's net total = 52, Sunday's total = 29
May 2013, Saturday's net total = 45, Sunday's total = 50
June 2013, Saturday's net total = 1, Sunday's total = 9 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

[Non-text portions of this message have been removed]

42523. Re: RE:TS-520 No receive no TX?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-02 18:57:54 UTC
From: rayosfostoria
Topic: 42519 Message: 42523

Found that fix listed on a web site.
Also found mention to Q4 and Q5 on the RF board. Checked voltages on both. Both have low voltages except for the D leg, both show correct voltages per manual on leg D.
Kind of at a standstill for the moment.

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> How did you get to Q5 on IF board as possible reason for no RX and no TX? No relationship?
>
> Q5 is AGC buffer amp. Small sample of IF from last IF stage Q4 feeds Q5. Q5 feeds the AGC detector diodes D5/D6. These diodes rectify this RF and bias on AGC amp Q6 which is hanging on the AGC bus. With off air signals being detected Q6 acts like a variable resistor and pulls down the AGC bus voltage which reduces the gain of the IF and RF amps so strong signals dont blast your ears.
>
> To measure CBE voltages on any of the IF or RF amps I would have rig on dummy load so off air signals cant cause any AGC action.
>
> If Q5 is bad about worse that can happen is no S-meter action, but rig should still receive unless S-meter is pegged.
>
> Usually with no RX and no TX people start by making a visual, poking and prodding and removing and cleaning both relays and exercising JJY/WWV push button and checking 8/9 jumper on rear of rig.
>
> After you exhaust those things I would start with low voltage power supply voltages at AVR board and make sure have good RF-1 and 9vdc regulated. Then turn on Marker and see if you can hear it. I would focus on getting Rx back first although it could be something common to RX and TX and VFO comes to mind.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "rayosfostoria" <smokin4477@> wrote:
> >
> > Well did some more checks.
> > Checked Q5 on the IF board for voltages. manual states E=5.1v, C=9.0V, B=5.6v.
> > But what I had is E=1/2v, C=9.0v,B=7.0v. Changed it out with a replacement and still get the same voltage readings.
> >
> > So making myself more confused. Having fun and learning.
> >
>

42524. Re: [TS-520_820_530_830] Re: RE:TS-520 No receive no TX?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-02 20:30:46 UTC
From: Mike
Topic: 42519 Message: 42524

What's the web site link?

Mike

On 6/2/2013 1:57 PM, rayosfostoria wrote:
>
> Found that fix listed on a web site.
> Also found mention to Q4 and Q5 on the RF board. Checked voltages on
> both. Both have low voltages except for the D leg, both show correct
> voltages per manual on leg D.
> Kind of at a standstill for the moment.
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Terry Wagoner"
> <wagstw46@...> wrote:
> >
> > How did you get to Q5 on IF board as possible reason for no RX and
> no TX? No relationship?
> >
> > Q5 is AGC buffer amp. Small sample of IF from last IF stage Q4 feeds
> Q5. Q5 feeds the AGC detector diodes D5/D6. These diodes rectify this
> RF and bias on AGC amp Q6 which is hanging on the AGC bus. With off
> air signals being detected Q6 acts like a variable resistor and pulls
> down the AGC bus voltage which reduces the gain of the IF and RF amps
> so strong signals dont blast your ears.
> >
> > To measure CBE voltages on any of the IF or RF amps I would have rig
> on dummy load so off air signals cant cause any AGC action.
> >
> > If Q5 is bad about worse that can happen is no S-meter action, but
> rig should still receive unless S-meter is pegged.
> >
> > Usually with no RX and no TX people start by making a visual, poking
> and prodding and removing and cleaning both relays and exercising
> JJY/WWV push button and checking 8/9 jumper on rear of rig.
> >
> > After you exhaust those things I would start with low voltage power
> supply voltages at AVR board and make sure have good RF-1 and 9vdc
> regulated. Then turn on Marker and see if you can hear it. I would
> focus on getting Rx back first although it could be something common
> to RX and TX and VFO comes to mind.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com

> <mailto:TS-520_820_530_830%40yahoogroups.com>, "rayosfostoria"
> <smokin4477@> wrote:
> > >
> > > Well did some more checks.
> > > Checked Q5 on the IF board for voltages. manual states E=5.1v,
> C=9.0V, B=5.6v.
> > > But what I had is E=1/2v, C=9.0v,B=7.0v. Changed it out with a
> replacement and still get the same voltage readings.
> > >
> > > So making myself more confused. Having fun and learning.
> > >
> >
>
>

[Non-text portions of this message have been removed]

42525. Re: RE:TS-520 No receive no TX?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-02 21:09:48 UTC
From: Terry Wagoner
Topic: 42519 Message: 42525

OK you are looking at one of those so called "service bulletins" that has long list of one line entries. They have you hopscotching around your radio. Many if not all of these one line entries are anecdotal and useless as they were for one off events.

You never want to start replacing active devices. They seldom fail. I think only bad Q5 RF amp mosfets I ever saw were due to ESD or inadvertent transmit RF and certainly a bad Q5 RF amp mosfet isnt going to cause no TX output. The list you are looking at apparently has a one line entry that says if you have no receive you should replace the RF amp mosfet and/or the Het Mixer. That is silliness and shot gun approach.

If you have done the things I suggested in my first response and no luck then time to start troubleshooting.

Normally that consist of signal injection and signal tracing and when you find area where you are missing the "goes ins" and/or "goes out" then you can break out your DMM and take CBE or DSG voltages at the active devices.

If you care to restate the no RX symptoms in a detailed problem statement maybe I or someone else can direct you where to start logically and systematically.

Not trying to spoil your fun just trying to help you.

By the way having normal voltage on the Drains of Q4 and Q5 tells you that you have good 14vdc at the RF board N14 terminal post with the WWV push button in the out position. Is that how you took the DSG readings on these devices?

Terry K9TW
>
>

42526. Re: ts830 rl1

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-02 21:19:59 UTC
From: chris_bridgehouse
Topic: 42514 Message: 42526

Hi Dave. Its the one on the audio board. Lzn4 i think. It looks to be sat in a socket but apparantly thats not the case.

Chris
--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
> hris which RL1 are you talking about? The one on the audio board is soldered in the Antenna relay is usually plugh in, but there are one or two around that have soldered type, have a look from the PA side and you should be able to tell.
>
>
>
> 73s
>
>
>
> Dave
>
> VK5PDL
>
>
>
>
> To: TS-520_820_530_830@yahoogroups.com
> From: chris_bridgehouse@...
> Date: Sun, 2 Jun 2013 11:18:18 +0000
> Subject: [TS-520_820_530_830] ts830 rl1
>
>
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>
> Hi all. Is rl1 just push in. I've been trying to pull one out but its tight as a ducks arse. It Won't budge so i thought i'd better check.
>
> Cheers
> Chris ZL1BR
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> [Non-text portions of this message have been removed]

>

42527. Re: RE:TS-520 No receive no TX?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-02 21:32:42 UTC
From: Terry Wagoner
Topic: 42519 Message: 42527

Do you have a RF signal generator?

If so one last shot gun. Set sig gen for 5 mhz output and if you have calibrated output level set the output to approx +13dBm. If no calibrated output level then just turn the switched step to High and variable output as high as you can. Now connect signal to VFO terminal post on IF board (near front left edge of board). See if rig comes alive. If it does you know VFO signal isnt there. It is required for both RX and TX mixer operation. May have to swing the sig gen frequency between 5 and 6 mhz if you have no freq counter to verify accuracy of the dial.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> OK you are looking at one of those so called "service bulletins" that has long list of one line entries. They have you hopscotching around your radio. Many if not all of these one line entries are anecdotal and useless as they were for one off events.
>
> You never want to start replacing active devices. They seldom fail. I think only bad Q5 RF amp mosfets I ever saw were due to ESD or inadvertent transmit RF and certainly a bad Q5 RF amp mosfet isnt going to cause no TX output. The list you are looking at apparently has a one line entry that says if you have no receive you should replace the RF amp mosfet and/or the Het Mixer. That is silliness and shot gun approach.
>
> If you have done the things I suggested in my first response and no luck then time to start troubleshooting.
>
> Normally that consist of signal injection and signal tracing and when you find area where you are missing the "goes ins" and/or "goes out" then you can break out your DMM and take CBE or DSG voltages at the active devices.
>
> If you care to restate the no RX symptoms in a detailed problem statement maybe I or someone else can direct you where to start logically and systematically.
>
> Not trying to spoil your fun just trying to help you.
>
> By the way having normal voltage on the Drains of Q4 and Q5 tells you that you have good 14vdc at the RF board N14 terminal post with the WWV push button in the out position. Is that how you took the DSG readings on these devices?
>
> Terry K9TW
> >
> >
>

42528. RE: [TS-520_820_530_830] Re: ts830 rl1

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-02 22:14:39 UTC
From: fpath fpath
Topic: 42514 Message: 42528

Hi Chris,

Never seen a plug in type on the Audio board, Terry, Mike or Gordon may have seen more? When you go to change out the relay be careful removing the molex connectors and even more careful when de-soldering and soldering back in. Whilst you have the board out, check the molex connectors on the foil side under high magnification for foil cracks and dry joints,

73s

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: chris_bridgehouse@...
Date: Sun, 2 Jun 2013 21:19:59 +0000
Subject: [TS-520_820_530_830] Re: ts830 rl1

Hi Dave. Its the one on the audio board. Lzn4 i think. It looks to be sat in a socket but apparantly thats not the case.

Chris
--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
> hris which RL1 are you talking about? The one on the audio board is soldered in the Antenna relay is usually plugh in, but there are one or two around that have soldered type, have a look from the PA side and you should be able to tell.
>
>
>
> 73s
>
>
>
> Dave
>
> VK5PDL
>
>
>
> To: TS-520_820_530_830@yahoogroups.com
> From: chris_bridgehouse@...
> Date: Sun, 2 Jun 2013 11:18:18 +0000
> Subject: [TS-520_820_530_830] ts830 rl1
>
>

>
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>
> Hi all. Is rl1 just push in. I've been trying to pull one out but its tight as a ducks arse. It Won't budge so i thought i'd better check.
>
> Cheers
> Chris ZL1BR
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42529. Re: ts830 rl1

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-02 22:38:42 UTC
From: chris_bridgehouse
Topic: 42514 Message: 42529

Cheers Dave. I'll try and remove it later after the kids have gone to bed. I've just ordered a replacement off ebay.

Chris
--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
> Hi Chris,
>
>
>
> Never seen a plug in type on the Audio board, Terry, Mike or Gordon may have seen more? When you go to change out the relay be careful removing the molex connectors and even more careful when de-soldering and soldering back in. Whilst you have the board out, check the molex connectors on the foil side under high magnification for foil cracks and dry joints,
>
>
>
> 73s
>
> Dave
>
> VK5PDL
>
>
>
> To: TS-520_820_530_830@yahoogroups.com
> From: chris_bridgehouse@...
> Date: Sun, 2 Jun 2013 21:19:59 +0000
> Subject: [TS-520_820_530_830] Re: ts830 rl1
>
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>
> Hi Dave. Its the one on the audio board. Lzn4 i think. It looks to be sat in a socket but apparantly thats not the case.
>
> Chris
> --- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@> wrote:
> >
> > hris which RL1 are you talking about? The one on the audio board is soldered in the Antenna relay is usually plugh in, but there are one or two around that have soldered type, have a look from the PA side and you should be able to tell.

> >
> >
> >
> > 73s
> >
> >
> >
> > Dave
> >
> > VK5PDL
> >
> >
> >
> >
> > To: TS-520_820_530_830@yahoogroups.com
> > From: chris_bridgehouse@
> > Date: Sun, 2 Jun 2013 11:18:18 +0000
> > Subject: [TS-520_820_530_830] ts830 rl1
> >
> >
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> >
> >
> > Hi all. Is rl1 just push in. I've been trying to pull one out but its tight as a ducks arse. It Won't budge so i thought i'd better check.
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> > Chris ZL1BR
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42530. Re: [TS-520_820_530_830] Re: ts830 rl1

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-02 23:37:36 UTC
From: Mike
Topic: 42514 Message: 42530

It appears you are referring to the relay on the 830 audio board. If so
then that relay is not in a socket, it's soldered to the AF Unit board.
Don't try cleaning it because any cleaning success will be short lived.
If this relay is found to be the source of your problem, replace it. See
Ken, K4EAA, website link below for details on ordering a replacement.

www.k4eaa.com

73
Mike W5RKL

On 6/2/2013 5:38 PM, chris_bridgehouse wrote:
>
>
> Cheers Dave. I'll try and remove it later after the kids have gone to
> bed. I've just ordered a replacement off ebay.
>
> Chris
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, fpath fpath <fpath@...>
> wrote:
> >
> > Hi Chris,
> >
> >
> >
> > Never seen a plug in type on the Audio board, Terry, Mike or Gordon
> may have seen more? When you go to change out the relay be careful
> removing the molex connectors and even more careful when de-soldering
> and soldering back in. Whilst you have the board out, check the molex
> connectors on the foil side under high magnification for foil cracks
> and dry joints,
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> >
> > 73s
> >
> > Dave
> >
> > VK5PDL
> >
> >
> >
> >
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>

> > From: chris_bridgehouse@...
> > Date: Sun, 2 Jun 2013 21:19:59 +0000
> > Subject: [TS-520_820_530_830] Re: ts830 rl1
> >
> >
> >
> >
> >
> >
> > Hi Dave. Its the one on the audio board. Lzn4 i think. It looks to
> be sat in a socket but apparantly thats not the case.
> >
> > Chris
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, fpath fpath <fpath@> wrote:
> > >
> > > hris which RL1 are you talking about? The one on the audio board
> is soldered in the Antenna relay is usually plugh in, but there are
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> side and you should be able to tell.
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> > > 73s
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> > > Dave
> > >
> > > VK5PDL
> > >
> > >
> > >
> > >
> > > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > From: chris_bridgehouse@
> > > Date: Sun, 2 Jun 2013 11:18:18 +0000
> > > Subject: [TS-520_820_530_830] ts830 rl1
> > >
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> > >
> > >
> > >
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> > > Chris ZL1BR
> > >

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42531. 520 vfo issues

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-03 00:16:35 UTC
From: greg
Topic: 42531 Message: 42531

Hi Guys, does anybody have a remedy to fix a 520 vfo that has some dead spots? When I get higher up on the bands I have to play with the knob to get the sound to come back on. acts just like a dirty pot but is there a fix to actually make things right? Thanks for any help

42532. Re: [TS-520_820_530_830] 520 vfo issues

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-03 00:37:35 UTC
From: John Davidson
Topic: 42531 Message: 42532

This is a common problem, the fix involves cleaning grounding fingers contacting against a rotating shaft.

From: greg <buzztrill@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, June 2, 2013 8:16 PM
Subject: [TS-520_820_530_830] 520 vfo issues

Hi Guys, does anybody have a remedy to fix a 520 vfo that has some dead spots? When I get higher up on the bands I have to play with the knob to get the sound to come back on. acts just like a dirty pot but is there a fix to actually make things right? Thanks for any help

[Non-text portions of this message have been removed]

42533. Ts-520 TIF signal going to die, no acc

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-03 00:36:56 UTC
From: cx3cj
Topic: 42533 Message: 42533

Hi All,

have a problem in a IF board, had to replace Q1 & Q2 (3SK35gr & 3SK41) because not tif mixing signal present in, after replace measure in TP1 (IF board midle q1,q2) and the signal starting with noise 3.4 mhz and 360mv-vpp and this going to die in a few seconds similar to a discharge cap, the same problem in a TIF with the diference 8.5mhz(the mixing car & vfo it's ok) this singal checked in other circuit any idea?

42534. Re: Ts-520 TIF signal going to die, no acc

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-03 01:27:19 UTC
From: Terry Wagoner
Topic: 42533 Message: 42534

To measure TP-1 signal level make sure you have Screen Grid switch off. Mode switch in CW mode. Key the rig with Car Level Pot advanced and Drive Control peaked for maximum ALC reading on the meter.

I think you are saying at TP-1 you see approx 360 mv P-P, but it decays off like a capacitor discharging. 360mv is a good level and 3.39mhz is correct frequency. The 8.8mhz TIF signal will be mixed by Q2 and the TIF signal at the TIF terminal post on IF board will be approx 100mv P-P. If signal at TP-1 is decaying then signal at TIF post will do likewise.

What is the S-meter doing as the signal decays? Is it slowly falling down scale?

It sounds like you are losing ALC to Gate 2 of Q1. Need at least a 11 meg ohm VTVM or DMM to measure the AGL terminal post on IF board and see what the ALC control rail voltage is doing. Your meter will pull it down to around 2 volts, but should hold at that level.

You can connect a temporary +3vdc to the AGL terminal on the IF board and see if signal level at TP-1 stays at 360mv P-P.

If AGL voltage is decaying then pull your Aux Relay and clean the contacts as a first step.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "cx3cj" <cx3cj@...> wrote:
>
> Hi All,
>
>
> have a problem in a IF board, had to replace Q1 & Q2 (3SK35gr & 3SK41) because not tif mixing signal present in, after replace measure in TP1 (IF board midle q1,q2) and the signal starting with noise 3.4 mhz and 360mv-vpp and this going to die in a few seconds similar to a discharge cap, the same problem in a TIF with the diference 8.5mhz(the mixing car & vfo it's ok) this singal checked in other circuit any idea?
>

42535. Re: [TS-520_820_530_830] Re: RE:TS-520 No receive no TX?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-03 01:49:49 UTC
From: Mike
Topic: 42519 Message: 42535

Have you verified the rear panel jumper plug or jumper wire is in placed between pins 8 and 9 on the 520's rear panel VFO socket? Don't just look at it, check it to be sure the jumper is making good contact. A jumper wire can be shoved into the pins but not make contact. If the jumper is not in place and making good contact then the internal VFO will not receive power which results in the 520 having no transmit and not receive. The jumper plug or jumper wire, both perform the same function, provides a path for the 9VDC supply to power the VFO. If the jumper plug or jumper wire is missing or not making contact with pins 8 and 9 then the VFO will NOT receive power and won't provide the necessary signal to the IF Unit board and, again, receive and transmit won't work.

73
Mike W5RKL

On 6/2/2013 1:57 PM, rayosfostoria wrote:
>
> Found that fix listed on a web site.
> Also found mention to Q4 and Q5 on the RF board. Checked voltages on
> both. Both have low voltages except for the D leg, both show correct
> voltages per manual on leg D.
> Kind of at a standstill for the moment.
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> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Terry Wagoner"
> <wagstw46@...> wrote:
> >
> > How did you get to Q5 on IF board as possible reason for no RX and
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> > Q5 is AGC buffer amp. Small sample of IF from last IF stage Q4 feeds
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> air signals being detected Q6 acts like a variable resistor and pulls
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> >
> > Usually with no RX and no TX people start by making a visual, poking
> and prodding and removing and cleaning both relays and exercising

> JJY/WWV push button and checking 8/9 jumper on rear of rig.
> >
> > After you exhaust those things I would start with low voltage power
> supply voltages at AVR board and make sure have good RF-1 and 9vdc
> regulated. Then turn on Marker and see if you can hear it. I would
> focus on getting Rx back first although it could be something common
> to RX and TX and VFO comes to mind.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "rayosfostoria"
> <smokin4477@> wrote:
> > >
> > > Well did some more checks.
> > > Checked Q5 on the IF board for voltages. manual states E=5.1v,
> C=9.0V, B=5.6v.
> > > But what I had is E=1/2v, C=9.0v,B=7.0v. Changed it out with a
> replacement and still get the same voltage readings.
> > >
> > > So making myself more confused. Having fun and learning.
> > >
> >
>
>

[Non-text portions of this message have been removed]

42536. Re: [TS-520_820_530_830] KENWOOD HYBRID USER NET (June 2nd, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-03 02:52:49 UTC
From: pmarkavage@...
Topic: 42521 Message: 42536

I wouldn't jump to any conclusions. 20 meters is rocking right now as I type (10:44 PM EDT), with coast to coast signals, and to Europe, and to Australia and New Zealand. We've had some disturbed conditions over the last 48 hours but whether we hit the sun spot peak already is still in the hands of the jury. I was on 20 this morning from 9:30 to 11 EDT and worked about a dozen stations in Eastern and Western Europe. Last night (Saturday) I worked 5 stations in Australia. And, 6 meters has been open all day, every day, somewhere in the U. S. Right now, 6 is open from the West Coast to all across the southern states to Florida and to Mexico. You need to get out more Bob. Hi

Pete, wa2cwa
http://www.manualman.com

On Sun, 2 Jun 2013 11:46:39 -0700 "Bob Macklin" <macklinbob@...>
writes:
> Don't expect the band conditions to improve unless we get a double
> peak to the solar cycle.
>
> Are there any West Coast people on these nets?
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: mvgilger
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sunday, June 02, 2013 11:38 AM
> Subject: [TS-520_820_530_830] KENWOOD HYBRID USER NET (June 2nd,
> update)
>
>
>
> The Saturday's net on 40 meter had only 1 stations checking in
> with very poor band conditions. Out of all stations checking in,
> there was:
>
> 1 running TS-520(x)
> 0 running TS-530(x)
> 0 running TS-820(x)
> 0 running TS-830S
>
> I was running my TS-940s. The rest were running non hybrids of one

> model or another.
>
> The Sunday's net on 20 meter we had 9 stations checking in under
> very poor band conditions. We had 9 new check-in, KD0TGD, AE6OR, and
> VE4AMN.
>
> Out of those, there was:
>
> 2 running TS-520(x)
> 1 running TS-530(x)
> 0 running TS-820(x)
> 1 running TS-830S
>
> I was running my TS-940s. The rest were running non hybrids of one
> model or another.
>
> We have been having several people checking in regularly with
> their TS-430, TS-440, and TS-940's, which of course is not a hybrid,
> although over 30+ years old. Everyone is welcome as long as they
> have an interest in the older equipment.
>
> If anyone would be interested in filling in as a net control
> station, please send me an email. Currently it's just myself, WB2KNR
> and WB0SGA. I would like to get several more. If we do, we can
> alternate so everyone might be on a 3-4 week rotation. It's a lot of
> fun and a good way to make sure you station is optimized.
>
> For anyone that has not heard, we have a new web site that WB4HFN
> is hosting. He currently has a very nice site for Drake, Collins and
> Heathkit and now Kenwood Hybrids. Good quality manuals plus sale
> flyers and brochures will be found here, along with user supplied
> information for all Hybrids.
>
> His URL is:
> http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm
>
> To date, we have had the following check-in:
>
> Nov. 2011 - Oct. 2012 Saturday total 754 check-ins, Sunday total
> 563 check-ins
>
> November 2012, Saturday's, net total = 47, Sundays total = 20
> December 2012, Saturday's, net total = 74, Sunday's total = 70
> January 2013, Saturday's, net total = 93, Sunday's total = 87
> February 2013, Saturday's net total = 103, Sundays total = 87
> March 2013, Saturday's, net total = 112, Sunday's total =39
> April 2013, Saturday's net total = 52, Sunday's total = 29
> May 2013, Saturday's net total = 45, Sunday's total = 50
> June 2013, Saturday's net total = 1, Sunday's total = 9 (Month to
> date)

>
> Net Info:
> Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
> Sunday: 14.316 @ 1800 UTC following the ICOM net
>
> Web Site:
> http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm
>
> 73's,
> Mark, WB0IQK
>
>
>
>
>
> [Non-text portions of this message have been removed]
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
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42537. Re: [TS-520_820_530_830] KENWOOD HYBRID USER NET (June 2nd, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-03 03:02:10 UTC
From: Mark Gilger
Topic: 42521 Message: 42537

Yes, usually 3-4 check in on the Sunday 20 meter
net. Today was excellent to the west cost.

Mark

At 02:46 PM 6/2/2013, you wrote:
>
>
>Don't expect the band conditions to improve
>unless we get a double peak to the solar cycle.
>
>Are there any West Coast people on these nets?
>
>Bob Macklin
>K5MYJ
>Seattle, Wa.
>"Real Radios Glow In The Dark"
>----- Original Message -----
>From: mvgilger
>To:
><mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>
>Sent: Sunday, June 02, 2013 11:38 AM
>Subject: [TS-520_820_530_830] KENWOOD HYBRID USER NET (June 2nd, update)
>
>The Saturday's net on 40 meter had only 1
>stations checking in with very poor band
>conditions. Out of all stations checking in, there was:
>
>1 running TS-520(x)
>0 running TS-530(x)
>0 running TS-820(x)
>0 running TS-830S
>
>I was running my TS-940s. The rest were running
>non hybrids of one model or another.
>
>The Sunday's net on 20 meter we had 9 stations
>checking in under very poor band conditions. We
>had 9 new check-in, KD0TGD, AE6OR, and VE4AMN.
>
>Out of those, there was:
>
>2 running TS-520(x)

>1 running TS-530(x)
>0 running TS-820(x)
>1 running TS-830S
>
>I was running my TS-940s. The rest were running
>non hybrids of one model or another.
>
>We have been having several people checking in
>regularly with their TS-430, TS-440, and
>TS-940's, which of course is not a hybrid,
>although over 30+ years old. Everyone is welcome
>as long as they have an interest in the older equipment.
>
>If anyone would be interested in filling in as a
>net control station, please send me an email.
>Currently it's just myself, WB2KNR and WB0SGA. I
>would like to get several more. If we do, we can
>alternate so everyone might be on a 3-4 week
>rotation. It's a lot of fun and a good way to
>make sure you station is optimized.
>
>For anyone that has not heard, we have a new web
>site that WB4HFN is hosting. He currently has a
>very nice site for Drake, Collins and Heathkit
>and now Kenwood Hybrids. Good quality manuals
>plus sale flyers and brochures will be found
>here, along with user supplied information for all Hybrids.
>
>His URL is:
><http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodH
omePage.htm
>
>To date, we have had the following check-in:
>
>Nov. 2011 - Oct. 2012 Saturday total 754
>check-ins, Sunday total 563 check-ins
>
>November 2012, Saturday's, net total = 47, Sundays total = 20
>December 2012, Saturday's, net total = 74, Sunday's total = 70
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>May 2013, Saturday's net total = 45, Sunday's total = 50
>June 2013, Saturday's net total = 1, Sunday's total = 9 (Month to date)
>
>Net Info:
>Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
>Sunday: 14.316 @ 1800 UTC following the ICOM net
>

>Web Site:
><http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm>http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm
>
>73's,
>Mark, WB0IQK
>
>[Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

42538. Re: RE:TS-520 No receive no TX?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-03 03:56:18 UTC
From: rayosfostoria
Topic: 42519 Message: 42538

Mike
When I first recieved the 520 it was missing the 9 pin plug, that was my first thought as to why it was not working (I have a TS 700SP, same deal with the 9 pin plug). However when I removed the cabinet I checked the plug and it had a solder blob placed between 8 and 9. Through advice on here I removed the blob, replaced with a soldered in wire jumper and checked the voltage, 9 volts. Some I'm quite sure thats not the problem.

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> Have you verified the rear panel jumper plug or jumper wire is in placed
> between pins 8 and 9 on the 520's rear panel VFO socket? Don't just look
> at it, check it to be sure the jumper is making good contact. A jumper
> wire can be shoved into the pins but not make contact. If the jumper is
> not in place and making good contact then the internal VFO will not
> receive power which results in the 520 having no transmit and not
> receive. The jumper plug or jumper wire, both perform the same function,
> provides a path for the 9VDC supply to power the VFO. If the jumper plug
> or jumper wire is missing or not making contact with pins 8 and 9 then
> the VFO will NOT receive power and won't provide the necessary signal to
> the IF Unit board and, again, receive and transmit won't work.
>
> 73
> Mike W5RKL
>
> On 6/2/2013 1:57 PM, rayosfostoria wrote:
> >
> > Found that fix listed on a web site.
> > Also found mention to Q4 and Q5 on the RF board. Checked voltages on
> > both. Both have low voltages except for the D leg, both show correct
> > voltages per manual on leg D.
> > Kind of at a standstill for the moment.
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Terry Wagoner"
> > <wagstw46@> wrote:
> > >
> > > How did you get to Q5 on IF board as possible reason for no RX and
> > no TX? No relationship?
> > >
> > > Q5 is AGC buffer amp. Small sample of IF from last IF stage Q4 feeds
> > Q5. Q5 feeds the AGC detector diodes D5/D6. These diodes rectify this
> > RF and bias on AGC amp Q6 which is hanging on the AGC bus. With off
> > air signals being detected Q6 acts like a variable resistor and pulls
> > down the AGC bus voltage which reduces the gain of the IF and RF amps
> > so strong signals dont blast your ears.

> > >
> > > To measure CBE voltages on any of the IF or RF amps I would have rig
> > on dummy load so off air signals cant cause any AGC action.
> > >
> > > If Q5 is bad about worse that can happen is no S-meter action, but
> > rig should still receive unless S-meter is pegged.
> > >
> > > Usually with no RX and no TX people start by making a visual, poking
> > and prodding and removing and cleaning both relays and exercising
> > JJY/WWV push button and checking 8/9 jumper on rear of rig.
> > >
> > > After you exhaust those things I would start with low voltage power
> > supply voltages at AVR board and make sure have good RF-1 and 9vdc
> > regulated. Then turn on Marker and see if you can hear it. I would
> > focus on getting Rx back first although it could be something common
> > to RX and TX and VFO comes to mind.
> > >
> > > Terry K9TW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "rayosfostoria"
> > <smokin4477@> wrote:
> > > >
> > > > Well did some more checks.
> > > > Checked Q5 on the IF board for voltages. manual states E=5.1v,
> > C=9.0V, B=5.6v.
> > > > But what I had is E=1/2v, C=9.0v,B=7.0v. Changed it out with a
> > replacement and still get the same voltage readings.
> > > >
> > > > So making myself more confused. Having fun and learning.
> > > >
> > > >
> > >
> > >
> >
> >
> > [Non-text portions of this message have been removed]
> >

42539. Re: RE:TS-520 No receive no TX?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-03 04:28:20 UTC
From: rayosfostoria
Topic: 42519 Message: 42539

Yes one of the kenwood service bulletins,I printed it out.

I checked the N14 post on the rf board as you suggested, yes 14 volts in the out position.

Receive symtoms are as follows: With the WWV button pushed in it will receive wwv and the whole 30 Meter band great, will do it all day.

Now if you have the WWV button in the out position you get static noise, the noise best way I can describe it, is like your listening to a quite spot on a band, but has a little lower volume. Now on occasion it will recieve normaly once you set the switch (JJY) out but only for a few seconds but it's sporadic at best and I could not get it to do that all weekend. I have cleaned, checked, cleaned and tested the wwv switch till my fingers hurt (hi hi). I have even ran jumpers across the switch terminals to see if it would recieve, wich would tell me if the switch was bad, no differance.

Trust me your not spoiling anything! I need the help! My TS-450 was easy to fix, swap out a board and it works great. This one is my first real major repair.
TNX
Steve

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> OK you are looking at one of those so called "service bulletins" that has long list of one line entries. They have you hopscotching around your radio. Many if not all of these one line entries are anecdotal and useless as they were for one off events.
>
> You never want to start replacing active devices. They seldom fail. I think only bad Q5 RF amp mosfets I ever saw were due to ESD or inadvertent transmit RF and certainly a bad Q5 RF amp mosfet isnt going to cause no TX output. The list you are looking at apparently has a one line entry that says if you have no receive you should replace the RF amp mosfet and/or the Het Mixer. That is silliness and shot gun approach.
>
> If you have done the things I suggested in my first response and no luck then time to start troubleshooting.
>
> Normally that consist of signal injection and signal tracing and when you find area where you are missing the "goes ins" and/or "goes out" then you can break out your DMM and take CBE or DSG voltages at the active devices.
>
> If you care to restate the no RX symptoms in a detailed problem statement maybe I or someone else can direct you where to start logically and systematically.
>
> Not trying to spoil your fun just trying to help you.
>
> By the way having normal voltage on the Drains of Q4 and Q5 tells you that you have good 14vdc at the RF board N14 terminal post with the WWV push button in the out position. Is

that how you took the DSG readings on these devices?
>
> Terry K9TW
> >
> >
>

42540. Re: RE:TS-520 No receive no TX?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-03 04:31:13 UTC
From: rayosfostoria
Topic: 42519 Message: 42540

Wish I had one! Just have a Volt/ohm meter and a picky freq counter!

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Do you have a RF signal generator?
>
> If so one last shot gun. Set sig gen for 5 mhz output and if you have calibrated output level set the output to approx +13dBm. If no calibrated output level then just turn the switched step to High and variable output as high as you can. Now connect signal to VFO terminal post on IF board (near front left edge of board). See if rig comes alive. If it does you know VFO signal isnt there. It is required for both RX and TX mixer operation. May have to swing the sig gen frequency between 5 and 6 mhz if you have no freq counter to verify accuracy of the dial.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > OK you are looking at one of those so called "service bulletins" that has long list of one line entries. They have you hopscotching around your radio. Many if not all of these one line entries are anecdotal and useless as they were for one off events.
> >
> > You never want to start replacing active devices. They seldom fail. I think only bad Q5 RF amp mosfets I ever saw were due to ESD or inadvertent transmit RF and certainly a bad Q5 RF amp mosfet isnt going to cause no TX output. The list you are looking at apparently has a one line entry that says if you have no receive you should replace the RF amp mosfet and/or the Het Mixer. That is silliness and shot gun approach.
> >
> > If you have done the things I suggested in my first response and no luck then time to start troubleshooting.
> >
> > Normally that consist of signal injection and signal tracing and when you find area where you are missing the "goes ins" and/or "goes out" then you can break out your DMM and take CBE or DSG voltages at the active devices.
> >
> > If you care to restate the no RX symptoms in a detailed problem statement maybe I or someone else can direct you where to start logically and systematically.
> >
> > Not trying to spoil your fun just trying to help you.
> >
> > By the way having normal voltage on the Drains of Q4 and Q5 tells you that you have good 14vdc at the RF board N14 terminal post with the WWV push button in the out position. Is that how you took the DSG readings on these devices?
> >
> > Terry K9TW

> > >
> > >
> >
>

42541. Re: RE:TS-520 No receive no TX?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-03 10:20:44 UTC
From: Terry Wagoner
Topic: 42519 Message: 42541

OK-- Well as we previously discussed if you have good and consistent 10 mhz WWV then you have to have VFO signal at IF board. Still sounds like N14 is not coming hot or Q5 and/or Q4 are not getting Drain voltage.

They are both in sockets so could remove and re-insert being careful to orient correctly. They have a tab on them to help with this. Q4 tab will face the front panel and Q5 tab will point to the VFO. Could just wiggle them around.

With a small sharp probe tip you can use your VOM to measure the Drain lead at the socket on each to make sure they are getting 14vdc.

Easier to just measure the Source voltage by touching probe to the device metal can. This may be easier for you and if they are turned on should see approx 2.3vdc on Q5 and 1.6vdc on Q4 from can to chassis ground.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "rayosfostoria" <smokin4477@...> wrote:
>
> Wish I had one! Just have a Volt/ohm meter and a picky freq counter!
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Do you have a RF signal generator?
> >
> > If so one last shot gun. Set sig gen for 5 mhz output and if you have calibrated output level set the output to approx +13dBm. If no calibrated output level then just turn the switched step to High and variable output as high as you can. Now connect signal to VFO terminal post on IF board (near front left edge of board). See if rig comes alive. If it does you know VFO signal isnt there. It is required for both RX and TX mixer operation. May have to swing the sig gen frequency between 5 and 6 mhz if you have no freq counter to verify accuracy of the dial.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > >
> > > OK you are looking at one of those so called "service bulletins" that has long list of one line entries. They have you hopscotching around your radio. Many if not all of these one line entries are anecdotal and useless as they were for one off events.
> > >
> > > You never want to start replacing active devices. They seldom fail. I think only bad Q5 RF amp mosfets I ever saw were due to ESD or inadvertent transmit RF and certainly a bad Q5 RF amp mosfet isnt going to cause no TX output. The list you are looking at apparently has a one line entry that says if you have no receive you should replace the RF amp mosfet and/or the Het Mixer. That is silliness and shot gun approach.

> > >
> > > If you have done the things I suggested in my first response and no luck then time to start troubleshooting.
> > >
> > > Normally that consist of signal injection and signal tracing and when you find area where you are missing the "goes ins" and/or "goes out" then you can break out your DMM and take CBE or DSG voltages at the active devices.
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> > > Not trying to spoil your fun just trying to help you.
> > >
> > > By the way having normal voltage on the Drains of Q4 and Q5 tells you that you have good 14vdc at the RF board N14 terminal post with the WWV push button in the out position. Is that how you took the DSG readings on these devices?
> > >
> > > Terry K9TW
> > > >
> > > >
> > >
> >
>

42542. Re: RE:TS-520 No receive no TX?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-03 11:00:58 UTC
From: Terry Wagoner
Topic: 42519 Message: 42542

Steve: I have said it many times be very careful with these so called "service bulletins" especially No. 21. If it was really originated by Kenwood factory engineers, approved by them, and issued by them then it was when they landed on our shores and working out of a garage in LA!

You can go line by line and see problems with just about all entries. Anyone can produce a service bulletin that list each IF amp mosfet and each RF amp mosfet as the reason for No Receive condition. What sane person would replace all the gain controlled devices every time they had no receive?

I think No. 21 is just anecdotal collection from owners and perhaps from Techs at authorized Kenwood dealers. Very different than from Kenwood.

Here is just one example under the Transmit list:

18. No bias: 10 ohm cathode resistors burned in final VOX.

What it is trying to say is this.....If you have no resting or idle or quiescent plate current with the rig keyed then check for open 10 ohm cathode resistors on the final board. Did you get that out of it?

No engineer or knowledgeable tech would say rig has no "No Bias" if they meant No Idle Current. When I see that I would ask do you mean cutoff bias voltage or operating bias voltage or both are missing? I would be measuring bias voltage at the control grid of the tube. Of course if No Bias then you would have lots of plate current until the tube failed.

So my advise to you is DO NOT implement any of these line items unless you understand what they are saying and it makes technical sense to you that it could be source of your problem.

I can write a No. 21 for a lawn mower engine.

"Engine wont start"
1. Replace the spark plug
2. Replace the fuel filter
3. Replace fly wheel key
4. Replace fuel bowel needle and seat
5. Replace magneto coil
6. Replace coil wire
7. Replace voltage regulator module
8. Replace.....You get the idea

No engine tech would ever follow this No 21 "service bulletin". Well maybe unscrupulous dealer who likes to sell parts and has no qualified techs might if the customer was willing to pay for parts they dont need.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "rayosfostoria" <smokin4477@...> wrote:
>
> Yes one of the kenwood service bulletins,I printed it out.
>
> I checked the N14 post on the rf board as you suggested, yes 14 volts in the out position.
>
> Receive symtoms are as follows: With the WWV button pushed in it will receive wwv and the whole 30 Meter band great, will do it all day.
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> Now if you have the WWV button in the out position you get static noise, the noise best way I can describe it, is like your listening to a quite spot on a band, but has a little lower volume. Now on occasion it will recieve normaly once you set the switch (JJY) out but only for a few seconds but it's sporadic at best and I could not get it to do that all weekend. I have cleaned, checked, cleaned and tested the wwv switch till my fingers hurt (hi hi). I have even ran jumpers across the switch terminals to see if it would recieve, wich would tell me if the switch was bad, no differance.
>
> Trust me your not spoiling anything! I need the help! My TS-450 was easy to fix, swap out a board and it works great. This one is my first real major repair.
> TNX
> Steve
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > OK you are looking at one of those so called "service bulletins" that has long list of one line entries. They have you hopscotching around your radio. Many if not all of these one line entries are anecdotal and useless as they were for one off events.
> >
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> >
> > If you have done the things I suggested in my first response and no luck then time to start troubleshooting.
> >
> > Normally that consist of signal injection and signal tracing and when you find area where you are missing the "goes ins" and/or "goes out" then you can break out your DMM and take CBE or DSG voltages at the active devices.
> >
> > If you care to restate the no RX symptoms in a detailed problem statement maybe I or someone else can direct you where to start logically and systematically.
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> > Not trying to spoil your fun just trying to help you.
> >
> > By the way having normal voltage on the Drains of Q4 and Q5 tells you that you have good 14vdc at the RF board N14 terminal post with the WWV push button in the out position. Is that how you took the DSG readings on these devices?

> >
> > Terry K9TW
> > >
> > >
> >
>

42543. TS-520 MOD?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-03 12:12:03 UTC
From: tjb813
Topic: 42543 Message: 42543

I picked up a 520 in less than operating condition. The strangest thing, three of the trim pots had lost their wipers. Two were on the AVR board. I replaced all three, adjusted the voltages and viola, the rig works. But, there seems to be a mod that I can not trace. There is a 1K trim pot with a 3.3k resistor in series mounted on a terminal strip next to the CW filter. There is a blue wire going under the 100KC calibrator and a red wire going somewhere underneath in the front. I checked several pictures in the manual and I do not see this teminal strip. Does anyone know what this may be for? My TS-520se does not have this.

42544. Re: TS-520 MOD?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-03 12:43:33 UTC
From: Terry Wagoner
Topic: 42543 Message: 42544

It is not a mod. You have early version. It provides bias voltage for Q2 TIF amp mosfet on the IF board via TBL. On later versions these components are incorporated on the RF board.

Look at the schematic in your Owners Operating manual and see if the pot and resistor appear just left of the RF board.

Do not remove these components.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "tjb813" <tjb813@...> wrote:
>
> I picked up a 520 in less than operating condition. The strangest thing, three of the trim pots had lost their wipers. Two were on the AVR board. I replaced all three, adjusted the voltages and viola, the rig works. But, there seems to be a mod that I can not trace. There is a 1K trim pot with a 3.3k resistor in series mounted on a terminal strip next to the CW filter. There is a blue wire going under the 100KC calibrator and a red wire going somewhere underneath in the front. I checked several pictures in the manual and I do not see this teminal strip. Does anyone know what this may be for? My TS-520se does not have this.
>

42545. Re: TS-520 MOD?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-03 12:58:12 UTC
From: tjb813
Topic: 42543 Message: 42545

THanks for the info! I will check that out tonight.

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> It is not a mod. You have early version. It provides bias voltage for Q2 TIF amp mosfet on the IF board via TBL. On later versions these components are incorporated on the RF board.
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> Look at the schematic in your Owners Operating manual and see if the pot and resistor appear just left of the RF board.
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> Do not remove these components.
>
> Terry K9TW
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "tjb813" <tjb813@> wrote:
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> > I picked up a 520 in less than operating condition. The strangest thing, three of the trim pots had lost their wipers. Two were on the AVR board. I replaced all three, adjusted the voltages and viola, the rig works. But, there seems to be a mod that I can not trace. There is a 1K trim pot with a 3.3k resistor in series mounted on a terminal strip next to the CW filter. There is a blue wire going under the 100KC calibrator and a red wire going somewhere underneath in the front. I checked several pictures in the manual and I do not see this teminal strip. Does anyone know what this may be for? My TS-520se does not have this.
> >
>

42546. Re: TS-520 MOD?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-03 13:10:47 UTC
From: Terry Wagoner
Topic: 42543 Message: 42546

Your SE has same parts mounted on the RF board.

Some owners do remove the terminal strip and trim pot and resistor and replace it by tack soldering a single 3.3k resistor between the TBL and RLT terminal posts on the RF board.

This is OK as it retains the +1.8vdc bias voltage you need to turn on the TIF amp in TX mode and the -5.6vdc or so bias voltage you need to turn off the TIF amp in RX mode.

You can tell if your external config is working properly by measuring IF board TBL post voltages in RX and TX mode.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "tjb813" <tjb813@...> wrote:
>
> THanks for the info! I will check that out tonight.
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
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> > Look at the schematic in your Owners Operating manual and see if the pot and resistor appear just left of the RF board.
> >
> > Do not remove these components.
> >
> > Terry K9TW
> >
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> > --- In TS-520_820_530_830@yahoogroups.com, "tjb813" <tjb813@> wrote:
> > >
> > > I picked up a 520 in less than operating condition. The strangest thing, three of the trim pots had lost their wipers. Two were on the AVR board. I replaced all three, adjusted the voltages and viola, the rig works. But, there seems to be a mod that I can not trace. There is a 1K trim pot with a 3.3k resistor in series mounted on a terminal strip next to the CW filter. There is a blue wire going under the 100KC calibrator and a red wire going somewhere underneath in the front. I checked several pictures in the manual and I do not see this teminal strip. Does anyone know what this may be for? My TS-520se does not have this.
> > >
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>

42547. Re: RE:TS-520 No receive no TX?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-03 13:30:56 UTC
From: rayosfostoria
Topic: 42519 Message: 42547

Terry
OK checked Q4 for orientation,tab is facing front panel, touching the top of Q4 I have 1.6 volts this is only in the JJY position, in the WWV position, nothing.
Q5 it's tab is facing the driver tube, top of can measures 10 volts in the JJY position and nothing in the WWV position.
So oviously Q5 is oriented wrong, should I put the tab facing the vfo and see what happens?? I'm guessing this ones (Q5 is toast) bad just due to wrong orientation and the high voltage??

Side note: I bought this rig locally from a gentleman who had said it just died during a qso on 20 meters, was told that the day I bought it. Next day I talked with him on 2 meters, he told me it's been down for 2 months and that he had messed with it a bit trying to get it to work, Kind of sounds like an ebay deal??? I havent messed with the rf board yet other than tightening screws on the board.

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> OK-- Well as we previously discussed if you have good and consistent 10 mhz WWV then you have to have VFO signal at IF board. Still sounds like N14 is not coming hot or Q5 and/or Q4 are not getting Drain voltage.
>
> They are both in sockets so could remove and re-insert being careful to orient correctly. They have a tab on them to help with this. Q4 tab will face the front panel and Q5 tab will point to the VFO. Could just wiggle them around.
>
> With a small sharp probe tip you can use your VOM to measure the Drain lead at the socket on each to make sure they are getting 14vdc.
>
> Easier to just measure the Source voltage by touching probe to the device metal can. This may be easier for you and if they are turned on should see approx 2.3vdc on Q5 and 1.6vdc on Q4 from can to chassis ground.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "rayosfostoria" <smokin4477@> wrote:
> >
> > Wish I had one! Just have a Volt/ohm meter and a picky freq counter!
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > >
> > > Do you have a RF signal generator?
> > >
> > > If so one last shot gun. Set sig gen for 5 mhz output and if you have calibrated output level set the output to approx +13dBm. If no calibrated output level then just turn the switched step to High and variable output as high as you can. Now connect signal to VFO

terminal post on IF board (near front left edge of board). See if rig comes alive. If it does you know VFO signal isnt there. It is required for both RX and TX mixer operation. May have to swing the sig gen frequency between 5 and 6 mhz if you have no freq counter to verify accuracy of the dial.
> > >
> > > Terry K9TW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > > >
> > > > OK you are looking at one of those so called "service bulletins" that has long list of one line entries. They have you hopscotching around your radio. Many if not all of these one line entries are anecdotal and useless as they were for one off events.
> > > >
> > > > You never want to start replacing active devices. They seldom fail. I think only bad Q5 RF amp mosfets I ever saw were due to ESD or inadvertent transmit RF and certainly a bad Q5 RF amp mosfet isnt going to cause no TX output. The list you are looking at apparently has a one line entry that says if you have no receive you should replace the RF amp mosfet and/or the Het Mixer. That is silliness and shot gun approach.
> > > >
> > > > If you have done the things I suggested in my first response and no luck then time to start troubleshooting.
> > > >
> > > > Normally that consist of signal injection and signal tracing and when you find area where you are missing the "goes ins" and/or "goes out" then you can break out your DMM and take CBE or DSG voltages at the active devices.
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> > > > If you care to restate the no RX symptoms in a detailed problem statement maybe I or someone else can direct you where to start logically and systematically.
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> > > > Not trying to spoil your fun just trying to help you.
> > > >
> > > > By the way having normal voltage on the Drains of Q4 and Q5 tells you that you have good 14vdc at the RF board N14 terminal post with the WWV push button in the out position. Is that how you took the DSG readings on these devices?
> > > >
> > > > Terry K9TW
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42548. Re: RE:TS-520 No receive no TX?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-03 14:39:58 UTC
From: Terry Wagoner
Topic: 42519 Message: 42548

OK having 1.6vdc source voltage on Q4 in JJY proves it is turned on and as you know you have good 10 mhz receive.

Having zero vdc on Q4 source in Normal position of course means it is not turned on. Reasons for not turning on include no 14vdc drain voltage, no bias voltage on Gate 1. Really best to measure all voltages at the leads of Q4. You can do that with a small probe carefully at the socket with Q4 inserted or you can pull Q4 and measure at the socket.

Can take same measurements at Q5. If you are using a VOM you will get a low reading on Gate 2 but D,G1, and S should be close to values listed in your manual. Gate 2 is AGC and your meter will pull it down.

Q5 could have been replaced with a sub thus the different orientation of the tab or maybe my recollection is flawed. If Q5 was bad you would not be able to get the momentary receive that you report with WWV push button in Normal position. Mosfets typically either open or shorted and dont heal themselves. Always look for normal DSG RX and TX dc voltages before suspecting bad mosfet and replacing. Of course easy to swap in your TS520. A 40673 and 3N211 are good subs as well as NTE 222. If you have a sub can try it but make sure leads oriented correctly. When you measure voltages at socket make a drawing so you can id DSG1G2.

Momentary good HF receive sounds more like loose connection, bad wire wrap or dirty contact. If N14 voltage is there and stays there then not likely that Q4 and Q5 are not seeing Drain voltage. More likely they are not getting their dc operating bias. Q4 and Q5 get there operating bias voltage from RLR on RF board, from NC aux relay contact, from 9vdc on AVR board. If that NC contact on Aux Relay is bad then you could have momentary good HF receive.

Remove Aux Relay and clean contacts. Can try swapping with Antenna TR relay. Can also monitor voltage at RLR terminal on RF board and see if have good steady 9vdc when you key rig on and off.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "rayosfostoria" <smokin4477@...> wrote:
>
> Terry
> OK checked Q4 for orientation,tab is facing front panel, touching the top of Q4 I have 1.6 volts this is only in the JJY position, in the WWV position, nothing.
> Q5 it's tab is facing the driver tube, top of can measures 10 volts in the JJY position and nothing in the WWV position.
> So oviously Q5 is oriented wrong, should I put the tab facing the vfo and see what happens?? I'm guessing this ones (Q5 is toast) bad just due to wrong orientation and the high voltage??
>
> Side note: I bought this rig locally from a gentleman who had said it just died during a qso on 20 meters, was told that the day I bought it. Next day I talked with him on 2

meters, he told me it's been down for 2 months and that he had messed with it a bit trying to get it to work, Kind of sounds like an ebay deal??? I havent messed with the rf board yet other than tightening screws on the board.
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > OK-- Well as we previously discussed if you have good and consistent 10 mhz WWV then you have to have VFO signal at IF board. Still sounds like N14 is not coming hot or Q5 and/or Q4 are not getting Drain voltage.
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> > They are both in sockets so could remove and re-insert being careful to orient correctly. They have a tab on them to help with this. Q4 tab will face the front panel and Q5 tab will point to the VFO. Could just wiggle them around.
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> > With a small sharp probe tip you can use your VOM to measure the Drain lead at the socket on each to make sure they are getting 14vdc.
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> > --- In TS-520_820_530_830@yahoogroups.com, "rayosfostoria" <smokin4477@> wrote:
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> > > Wish I had one! Just have a Volt/ohm meter and a picky freq counter!
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> > > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > > >
> > > > Do you have a RF signal generator?
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> > > > If so one last shot gun. Set sig gen for 5 mhz output and if you have calibrated output level set the output to approx +13dBm. If no calibrated output level then just turn the switched step to High and variable output as high as you can. Now connect signal to VFO terminal post on IF board (near front left edge of board). See if rig comes alive. If it does you know VFO signal isnt there. It is required for both RX and TX mixer operation. May have to swing the sig gen frequency between 5 and 6 mhz if you have no freq counter to verify accuracy of the dial.
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> > > > > You never want to start replacing active devices. They seldom fail. I think only bad Q5 RF amp mosfets I ever saw were due to ESD or inadvertent transmit RF and certainly a bad Q5 RF amp mosfet isnt going to cause no TX output. The list you are looking at apparently has a one line entry that says if you have no receive you should replace the RF

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> > > > > Not trying to spoil your fun just trying to help you.
> > > > >
> > > > > By the way having normal voltage on the Drains of Q4 and Q5 tells you that you have good 14vdc at the RF board N14 terminal post with the WWV push button in the out position. Is that how you took the DSG readings on these devices?
> > > > >
> > > > > Terry K9TW
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42549. Re: RE:TS-520 No receive no TX?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-03 15:16:23 UTC
From: Terry Wagoner
Topic: 42519 Message: 42549

Just a quick reminder with Q5 pulled from socket and taking dc voltages you will have 0 (Zero) vdc on the Source pin as you need current flow thru the source resistor to have any voltage. Also Drain voltage will be high and close to 14vdc supply voltage. Gate 1 will be somewhere around +1.8vdc.

Gate 2 voltages will be:
1. With VOM or any low Z multimeter approx +1.3 vdc and S-meter nearly pegged full scale

2. With 11 meg VTVM or other high Z multimeter approx +2.5vdc and S-meter near S4 to S5.

Looking straight down on socket Source is upper left, Drain is lower left, Gate 1 is upper right, and Gate 2 is lower right.

Lastly do not plug and unplug Q4 and Q5 in and out of sockets with power on and dont handle the bare leads.

Scotts Electronic Parts who sells Crystal Radio parts use to carry NOS 40673 devices. Not cheap but work well.

Terry K9TW

42550. Re: TS-520 MOD?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-03 17:14:14 UTC
From: tjb813
Topic: 42543 Message: 42550

Thank you. Good information. The pot in my rig was measured at 1K and is wired as a variable resistor (wiper connected to one side of the pot) and is therefore a two terminal device. The schematic shows VR3 near the RF board as 10K and a three terminal pot.

I will measure the bias on Q2 and see if adusting the pot on my rig changes the bias voltages. Thanks for the voltage readings, that will help alot.

Tim, KD8CN

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Your SE has same parts mounted on the RF board.
>
> Some owners do remove the terminal strip and trim pot and resistor and replace it by tack soldering a single 3.3k resistor between the TBL and RLT terminal posts on the RF board.
>
> This is OK as it retains the +1.8vdc bias voltage you need to turn on the TIF amp in TX mode and the -5.6vdc or so bias voltage you need to turn off the TIF amp in RX mode.
>
> You can tell if your external config is working properly by measuring IF board TBL post voltages in RX and TX mode.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "tjb813" <tjb813@> wrote:
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> > > Do not remove these components.
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> > > Terry K9TW
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the trim pots had lost their wipers. Two were on the AVR board. I replaced all three, adjusted the voltages and viola, the rig works. But, there seems to be a mod that I can not trace. There is a 1K trim pot with a 3.3k resistor in series mounted on a terminal strip next to the CW filter. There is a blue wire going under the 100KC calibrator and a red wire going somewhere underneath in the front. I checked several pictures in the manual and I do not see this teminal strip. Does anyone know what this may be for? My TS-520se does not have this.
> > > >
> > >
> >
>

42551. Heath Kit PK-3 RF Probe

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-03 17:24:43 UTC
From: Terry Wagoner
Topic: 42551 Message: 42551

There is a Heathkit PK-3 RF Probe listed on Ebay. He is wants $49 for it which is a little stiff, but that includes shipping which is just about $10.00 anymore. It appears to be in good physical condition?

This probe will allow you to measure RF drive levels at the Plate of the 12BY7A Driver Tube and at the Control Grids of the 6146 finals.

About the worse that can happen is that the builder did not install 3 of the 1N191 diodes. It was a builder option. These diodes are pricey when you can find them. You do not need a gold bond point contact diode. You can use 3 1N34, 1N60, OA91 etc. So if you buy need to open it up and see how many diodes installed. Can just slide the back black plastic strain relief back and shine flashlite in to see the diodes.

Pretty hard to homebrew a RF probe with this nice a packaging. It has a 1/4 phone plug on end of shielded test lead so that it mates with Heath VTVM. Could be changed for other brand of meters.

Terry K9TW

42552. Re: TS-520 MOD?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-03 17:48:30 UTC
From: Terry Wagoner
Topic: 42543 Message: 42552

You are looking at VR-3 RF Gain pot which tells me you have the wrong rev Operating Manual for TBL config on your rig. Go to Gordons website and download the TS520 operating manual and look at Fig 38 Main Schematic and you will see the components I mentioned that I believe is what you are seeing at your IF board.

It is possible there are more than one combinations of trim pot and resistors. I have only seen one.

Gordons schematic will show VR-1 as a 5k pot. The pot installed on TS-520S and SE RF board is a 1k. As I mentioned a resistance value of approx 3.3k to 3.9k ohms between RLT and TBL is just about right.

Just go to TBL terminal on IF board and measure voltage in RX and TX modes as I noted previously. If you can get on Gate 2 of Q2 can measure there as well.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "tjb813" <tjb813@...> wrote:
>
> Thank you. Good information. The pot in my rig was measured at 1K and is wired as a variable resistor (wiper connected to one side of the pot) and is therefore a two terminal device. The schematic shows VR3 near the RF board as 10K and a three terminal pot.
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> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
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> >
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42553. Re: Faceplate repair?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-03 21:00:54 UTC
From: tfrugia81
Topic: 42513 Message: 42553

Thanks for all of the helpful information. Bob I will contact you off list.

Thanks again, and 73,

-Tyler
k7fru

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
> Tyler,
>
>
>
> It's a lot of work and time, seeing Bob has one it would be quicker and easier. Have bought lots of stuff from Bob in the past and have been extremely happy with all my purchases.
>
>
>
> 73s
>
>
>
> Dave
>
> VK5PDL
>
>
>
>
> To: TS-520_820_530_830@yahoogroups.com
> From: ke5ftf@...
> Date: Sun, 2 Jun 2013 13:26:45 +0000
> Subject: [TS-520_820_530_830] Re: Faceplate repair?
>
>
>
>
>
>
> If you want to just replace the 520 face plate then I have a nice one for sale...
> Bob
> **********
>
> --- In TS-520_820_530_830@yahoogroups.com, "tfrugia81" <tfrugia@> wrote:
> >
> > Good evening group,

> >
> > I tried searching the group but couldn't find what I was looking for. Has anyone had success touching up the outer faceplate on the hybrids? I have a ts-520 with the previous owners name etched on the top of the faceplate. Is there an easy way to fill and repaint? I saw someone a few weeks ago hint that it has been done, but I would like a bit more detail if someone has done it.
> >
> >
> >
> > 73
> >
> > Tyler
> > K7FRU
> >
>
>
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

42554. eico 324

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-03 22:59:33 UTC
From: Jerry
Topic: 42554 Message: 42554

Hello all! ok replaced the safety caps the filter and the power plug and the out put to bnc/ havent changed the rectifier yet/but when it getshere i will! supposed to hit 110 to 115 by end of week here, anyway the voltages are as follows primary 117 ac/ sec 145. voltsfirst filter 158 thru the 2200 resistor 140. so i need to drop that to 110? shud i increase the 2200 ohmsR1 or add a resistor befor the diode what is the prevailing reccomendation hihi
Jerry KJ6NTL with a new 4 element beam for 6 meters thanks folks

42555. Re: eico 324

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-03 23:38:31 UTC
From: Terry Wagoner
Topic: 42554 Message: 42555

Jerry:

Are you saying the transformer secondary is 145vac? I am surprised if that is the case. I would have guessed ratio was close to 1:1. Need to measure secondary AC then can calculate what the dc output will be.

Ordinarily when you replace a selenium with a silicon you end up placing somewhere around a 100 to 200 ohm resistor in series with the silicon diode down stream between it and the filter. This is because a good selenium normally has around 5 volts drop across it and the silicon about 0.7 drop so the dc output from the silicon will be approx 4 to 5 volts higher being applied to your Pi-filter. If you know the Ma load current can calculate the value of the needed series resistor but usually just temporarily try values.

You can just swap out for the silicon and install the new filter caps and see what happens to the B+ line. If it is only 4 or 5 volts more than shown on schematic I would not worry about it. Part of reason that you may currently have such high voltage is that seleniums do age and when they do the output voltage may go up. So with the silicon in its place the new output voltage may not be anywhere near what you are seeing now.

I think I would install the diode and filter caps and measure the tube anode voltage at the socket and decide if a series resistor is needed based on what you find.

I would not change the value of your Pi Filter resistor. I would measure it as likely carbon and may have drifted high. Its value is chosen for correct time constant for filtering. It is poor mans choke.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Jerry" <kj6ntl@...> wrote:
>
> Hello all! ok replaced the safety caps the filter and the power plug and the out put to bnc/ havent changed the rectifier yet/but when it getshere i will! supposed to hit 110 to 115 by end of week here, anyway the voltages are as follows primary 117 ac/ sec 145. voltsfirst filter 158 thru the 2200 resistor 140. so i need to drop that to 110? shud i increase the 2200 ohmsR1 or add a resistor befor the diode what is the prevailing reccomendation hihi
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>

42556. Ts-820s with low plate current

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-04 00:35:48 UTC
From: erics
Topic: 42556 Message: 42556

I just received the above radio in which the mail service was not to kind with the shipment. When I unpacked the unit and tried to check the receive of the radio, it kept blowing fuses. I checked the fuses and plugs and found numerous loose connections. Once I made sure everything was seated, the rx was good. Now I am trying to tune the transmitter and am checking the plate idling current. The current will not exceed 10 ma's and that's with the bias all the way up. I have found numerous articles about excessive current and no current but not anything about low current.

I think the heater is kicking on as I see the meter lighting dim a little when switching it on. When the heater is on, should I feel warmth on the case as I wonder if it is running correctly? Could it be something else that might be loose?

Something a little different, I have read Walt's article on discharging the units voltage, I wonder if there is a picture out there demonstrating this procedure?

Thanks in advance and 73 .

Eric
Kd8owb

42557. Re: [TS-520_820_530_830] Re: eico 324

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-04 00:59:46 UTC
From: Jerry Barr
Topic: 42554 Message: 42557

well Terry that is what it reads in circuit and that makes my B+ 140 v or 142/and the schematic says 110 is the b+ so i need to get it down substantiallybut shall see when the diodes get here wednesday
Jerry KJ6NTL

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 3, 2013 4:38 PM
Subject: [TS-520_820_530_830] Re: eico 324

Jerry:

Are you saying the transformer secondary is 145vac? I am surprised if that is the case. I would have guessed ratio was close to 1:1. Need to measure secondary AC then can calculate what the dc output will be.

Ordinarily when you replace a selenium with a silicon you end up placing somewhere around a 100 to 200 ohm resistor in series with the silicon diode down stream between it and the filter. This is because a good selenium normally has around 5 volts drop across it and the silicon about 0.7 drop so the dc output from the silicon will be approx 4 to 5 volts higher being applied to your Pi-filter. If you know the Ma load current can calculate the value of the needed series resistor but usually just temporarily try values.

You can just swap out for the silicon and install the new filter caps and see what happens to the B+ line. If it is only 4 or 5 volts more than shown on schematic I would not worry about it. Part of reason that you may currently have such high voltage is that seleniums do age and when they do the output voltage may go up. So with the silicon in its place the new output voltage may not be anywhere near what you are seeing now.

I think I would install the diode and filter caps and measure the tube anode voltage at the socket and decide if a series resistor is needed based on what you find.

I would not change the value of your Pi Filter resistor. I would measure it as likely carbon and may have drifted high. Its value is chosen for correct time constant for filtering. It is poor mans choke.

Terry K9TW

--- In mailto:TS-520_820_530_830%40yahoogroups.com, "Jerry" <kj6ntl@...> wrote:
>
> Hello all! ok replaced the safety caps the filter and the power plug and the out put to bnc/ havent changed the rectifier yet/but when it getshere i will! supposed to hit 110 to 115 by end of week here, anyway the voltages are as follows primary 117 ac/ sec 145. voltsfirst filter 158 thru the 2200 resistor 140. so i need to drop that to 110? shud i increase the 2200 ohmsR1 or add a resistor befor the diode what is the prevailing reccomendation hihi
> Jerry KJ6NTL with a new 4 element beam for 6 meters thanks folks

>

[Non-text portions of this message have been removed]

42558. Re: eico 324

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-04 01:45:04 UTC
From: Terry Wagoner
Topic: 42554 Message: 42558

OK then if you assume that your load current is 50 ma (max rating of the Selenium)and you want to drop 140vdc to 110vdc then 30vdc/.050 = 600 ohms. Wattage rating = I squared x R = .050 x .050 x 600 = 1.5 watts. I think I would start with a 470 ohm 2 watt resistor after the new Silicon diode.

Of course you could measure the B+ current.

Maybe some one else with experience replacing a selenium can help you size your series dropping resistor.

73s Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Jerry Barr <kj6ntl@...> wrote:
>
> well Terry that is what it reads in circuitÂ and that makes my B+ 140 v or 142/and the schematic says 110 is the b+ so i need to get it down substantiallybutÂ shall see when the diodes get here wednesdayÂ
> Jerry KJ6NTL
>
> From: Terry Wagoner <wagstw46@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, June 3, 2013 4:38 PM
> Subject: [TS-520_820_530_830] Re: eico 324
>
> Â
> Jerry:
>
> Are you saying the transformer secondary is 145vac? I am surprised if that is the case. I would have guessed ratio was close to 1:1. Need to measure secondary AC then can calculate what the dc output will be.
>
> Ordinarily when you replace a selenium with a silicon you end up placing somewhere around a 100 to 200 ohm resistor in series with the silicon diode down stream between it and the filter. This is because a good selenium normally has around 5 volts drop across it and the silicon about 0.7 drop so the dc output from the silicon will be approx 4 to 5 volts higher being applied to your Pi-filter. If you know the Ma load current can calculate the value of the needed series resistor but usually just temporarily try values.
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> You can just swap out for the silicon and install the new filter caps and see what happens to the B+ line. If it is only 4 or 5 volts more than shown on schematic I would not worry about it. Part of reason that you may currently have such high voltage is that seleniums do age and when they do the output voltage may go up. So with the silicon in its place the new output voltage may not be anywhere near what you are seeing now.
>
> I think I would install the diode and filter caps and measure the tube anode voltage at the socket and decide if a series resistor is needed based on what you find.

>
> I would not change the value of your Pi Filter resistor. I would measure it as likely carbon and may have drifted high. Its value is chosen for correct time constant for filtering. It is poor mans choke.
>
> Terry K9TW
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Jerry" <kj6ntl@> wrote:
> >
> > Hello all! ok replaced the safety caps the filter and the power plug and the out put to bnc/ havent changed the rectifier yet/but when it getshere i will! supposed to hit 110 to 115 by end of week here, anyway the voltages are as follows primary 117 ac/ sec 145. voltsfirst filter 158 thru the 2200 resistor 140. so i need to drop that to 110? shud i increase the 2200 ohmsR1 or add a resistor befor the diode what is the prevailing reccomendation hihi
> > Jerry KJ6NTL with a new 4 element beam for 6 meters thanks folks
> >
>
>
>
>
> [Non-text portions of this message have been removed]
>

42559. TS-830S No audio

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-04 03:08:47 UTC
From: baamaster
Topic: 42559 Message: 42559

Folks

My TS-830S audio just stopped one night. The radio appears to work correctly, i.e. tunes, calibrate peaks, etc. but I get no audio with the AGC in Fast or Slow. If I turn the AGC Off, I get audio. Not perfect audio, but audio as one would expect with no AGC.

Anyone have any suggestions as to where to start to look?

Thanks,

Bill
KA4GAV

42560. Re: Ts-820s with low plate current

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-04 10:30:13 UTC
From: Terry Wagoner
Topic: 42556 Message: 42560

Eric:

There is no "heater" in the radio that you will feel any warmth from. Heater is a term for the tube filaments. When you turn it on it supplies AC voltage to the filaments and they heat the cathodes so the tubes will have electron emission. If you had covers off you could see the glow of the filaments or heaters inside the glass envelopes of the three vacuum tubes (12BY7A driver tube and 6146 final tubes). The tubes do get hot but not hot enough for you to feel much heat on the cabinet. The cooling fan on rear of rig pulls air thru the PA (power amplifier) metal gage to help cool the final tubes.

It is very wise not to remove covers or work inside the radio if you are uncomfortable doing so. However, it appears you recognize there is dangerous high voltage and you need to make sure the HV filter caps are discharged before you work inside the radio. I dont know of any pictures. Since rig was so roughly treated you do need to open up and do a visual inspection and especially make sure that all three tubes remain seated in their sockets. Here is what I would do:

1. Unplug the rig and let it set for 1/2 hour or so that the bleeder resistors on the HV filter caps have chance to discharge them.

2. Remove the top and button covers of the radio and be careful to unplug the yellow cable from the speaker.

3. You should see the 12BY7A tube on the RF board. Make sure it is seated in its socket. It should have a black metal shield can on it.

4. Remove the PA cage cover (top right rear). You will see the two 6146 final tubes and between them the RF Plate Choke.

5. The top of this plate choke is where you need to place a short to ground to ensure there is no voltage remaining in the filter caps. With rig turned on there will be 900vdc at this point and enough current behind it to kill you. Never point,touch or drop anything in the PA cage with rig energized. Some folks will use a screw driver to short from top of the plate choke to the metal shield. That is poor practice. Your radio is not a welder. You dont want to transfer any metal and leave arc and pit marks. Best way is to make a short jumper lead with good insulated test lead wire and place about a 4.7k ohm resistor in series with it. Resistor value isnt too critical just dont make it too high a value. Can get by with no resistor if you leave rig unplugged long enough. Place alligator clips on each end. Connect one clip to chassis ground and hold other end on top of plate choke. Dont just tap it but actually connect it there for a while. Now you have the HV filter caps discharged, but be aware there are other lower voltage filter caps (300 vdc) that can still have voltage on them for screen supplies etc so dont bare hand touch anything on the rectifier board or on RF board near base of Driver tube.

6. Now that you have 900 vdc B+ discharged it is safe to get a hold of each 6146 final tube and make sure they are seated in their sockets and that the anode caps are firmly seated on top of the tubes and that the parasitic suppressors from top of plate choke to anode caps

are soldered well. Just give gentle tug on the leads. Sometimes the solder sublimates (dull grey looking) and the connections to the anodes are not good. While there see what kind of finals you have ie 6146B or 6146W and both tubes should be same designator.

7.Note the filter caps standing by the Power Transformer. Are they tall black original ones?

8. Flip rig over and look at filter caps rupture vents to see if there is any swelling or leakage. May see convex curvature of the rubber vent and/or white powdery deposits around the vents. If really bad may see some brown/black tar like leakage. If caps have been changed out they will be short black or blue units.

9. As to 10 ma resting plate current what test equipment do you have?

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "erics" <selle@...> wrote:
>
> I just received the above radio in which the mail service was not to kind with the shipment. When I unpacked the unit and tried to check the receive of the radio, it kept blowing fuses. I checked the fuses and plugs and found numerous loose connections. Once I made sure everything was seated, the rx was good. Now I am trying to tune the transmitter and am checking the plate idling current. The current will not exceed 10 ma's and that's with the bias all the way up. I have found numerous articles about excessive current and no current but not anything about low current.
>
> I think the heater is kicking on as I see the meter lighting dim a little when switching it on. When the heater is on, should I feel warmth on the case as I wonder if it is running correctly? Could it be something else that might be loose?
>
> Something a little different, I have read Walt's article on discharging the units voltage, I wonder if there is a picture out there demonstrating this procedure?
>
> Thanks in advance and 73 .
>
> Eric
> Kd8owb
>

42561. Re: TS-830S No audio

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-04 10:31:46 UTC
From: Terry Wagoner
Topic: 42559 Message: 42561

What is the S-meter doing in Slow or Fast when you have no Audio?

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "baamaster" <guido@...> wrote:
>
> Folks
>
> My TS-830S audio just stopped one night. The radio appears to work correctly, i.e. tunes, calibrate peaks, etc. but I get no audio with the AGC in Fast or Slow. If I turn the AGC Off, I get audio. Not perfect audio, but audio as one would expect with no AGC.
>
> Anyone have any suggestions as to where to start to look?
>
> Thanks,
>
> Bill
> KA4GAV
>

42562. Re: TS-830S No audio

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-04 12:08:25 UTC
From: Terry Wagoner
Topic: 42559 Message: 42562

Bill:

I tried to respond to your off list response and got message that your mail box was exceeded. I dont need any typing practice!

Do you have cw side tone with AGC in fast or slow?

Reason I asked about S-meter is if you do not have the Product Detector carrier nulled the carrier can leak back to the AGC detector diodes thru L12 and they see this as the same as a very strong off air signal and bias on Q10 AGC amp transistor and can saturate it and place -6vdc on the AGC bus and shut done the receiver. When Q10 is turned on reduces receiver gain and it drives the S-meter up scale.

AGC in Off turns off Q10. Sometimes the null capacitor TC-1 can be set on the edge and it can just drift off and cause this problem. If S-meter is at Zero in fast or slow then the AGC bus isnt being shut down by Q10. So carrier null not the problem.

No connection between AGC and Audio board that I am aware of. Will look at schematic.

Other thing you can do is with AGC on fast or slow inject some audio at the Product Detector output on the IF board at Conn 11 Pin 1 and see if you hear it.

As you mentioned with AGC off audio distorts on strong signals so you need to control by riding the RF gain pot. Can get normal sounding audio that way so rig is usable. Many Ops prefer to run that way especially CW Ops. Maybe running this way is old timers technique?

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> What is the S-meter doing in Slow or Fast when you have no Audio?
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "baamaster" <guido@> wrote:
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> > My TS-830S audio just stopped one night. The radio appears to work correctly, i.e. tunes, calibrate peaks, etc. but I get no audio with the AGC in Fast or Slow. If I turn the AGC Off, I get audio. Not perfect audio, but audio as one would expect with no AGC.
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> > Thanks,
> >
> > Bill

> > KA4GAV
> >
>

42563. Re: Ts-820s with low plate current

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-04 14:46:27 UTC
From: Terry Wagoner
Topic: 42556 Message: 42563

Eric:

I forgot to ask do you have the screen grid switch on back of rig in the on position? Should have no resting plate current if it is off but need to check it and cycle it couple of times.

Also, reason I asked about test gear is if you have a decent multimeter (DMM or VTVM). So that you can measure:

1. Cathode resistors ohmic value on final board
2. Operating and cutoff -dc bias voltage at 6146 final tube socket
3. Screen grid voltage at 6146 final tube socket

You can also place panel meter in HV position and read B+ but remember all this tells you is the power supply is working and you havent lost a HV filter cap. It does not tell you if any B+ on the 6146 anodes.

Dont try to measure the 900vdc at tube anode caps until we discuss how to do this safely.

I also forgot to mention when you are performing the visual inspection in the PA cage to make sure the finals arent broken and still seated in sockets to look at the Plate choke to see if it has been overheated.

Lastly ,only if you are comfortable taking these resistance and voltage readings safely.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Eric:
>
> There is no "heater" in the radio that you will feel any warmth from. Heater is a term for the tube filaments. When you turn it on it supplies AC voltage to the filaments and they heat the cathodes so the tubes will have electron emission. If you had covers off you could see the glow of the filaments or heaters inside the glass envelopes of the three vacuum tubes (12BY7A driver tube and 6146 final tubes). The tubes do get hot but not hot enough for you to feel much heat on the cabinet. The cooling fan on rear of rig pulls air thru the PA (power amplifier) metal gage to help cool the final tubes.
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> 1. Unplug the rig and let it set for 1/2 hour or so that the bleeder resistors on the HV

filter caps have chance to discharge them.
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> 2. Remove the top and button covers of the radio and be careful to unplug the yellow cable from the speaker.
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> 3. You should see the 12BY7A tube on the RF board. Make sure it is seated in its socket. It should have a black metal shield can on it.
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> 4. Remove the PA cage cover (top right rear). You will see the two 6146 final tubes and between them the RF Plate Choke.
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> 5. The top of this plate choke is where you need to place a short to ground to ensure there is no voltage remaining in the filter caps. With rig turned on there will be 900vdc at this point and enough current behind it to kill you. Never point,touch or drop anything in the PA cage with rig energized. Some folks will use a screw driver to short from top of the plate choke to the metal shield. That is poor practice. Your radio is not a welder. You dont want to transfer any metal and leave arc and pit marks. Best way is to make a short jumper lead with good insulated test lead wire and place about a 4.7k ohm resistor in series with it. Resistor value isnt too critical just dont make it too high a value. Can get by with no resistor if you leave rig unplugged long enough. Place alligator clips on each end. Connect one clip to chassis ground and hold other end on top of plate choke. Dont just tap it but actually connect it there for a while. Now you have the HV filter caps discharged, but be aware there are other lower voltage filter caps (300 vdc) that can still have voltage on them for screen supplies etc so dont bare hand touch anything on the rectifier board or on RF board near base of Driver tube.
>
> 6. Now that you have 900 vdc B+ discharged it is safe to get a hold of each 6146 final tube and make sure they are seated in their sockets and that the anode caps are firmly seated on top of the tubes and that the parasitic suppressors from top of plate choke to anode caps are soldered well. Just give gentle tug on the leads. Sometimes the solder sublimates (dull grey looking) and the connections to the anodes are not good. While there see what kind of finals you have ie 6146B or 6146W and both tubes should be same designator.
>
> 7.Note the filter caps standing by the Power Transformer. Are they tall black original ones?
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> 8. Flip rig over and look at filter caps rupture vents to see if there is any swelling or leakage. May see convex curvature of the rubber vent and/or white powdery deposits around the vents. If really bad may see some brown/black tar like leakage. If caps have been changed out they will be short black or blue units.
>
> 9. As to 10 ma resting plate current what test equipment do you have?
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> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "erics" <selle@> wrote:
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> > I just received the above radio in which the mail service was not to kind with the shipment. When I unpacked the unit and tried to check the receive of the radio, it kept blowing fuses. I checked the fuses and plugs and found numerous loose connections. Once I

made sure everything was seated, the rx was good. Now I am trying to tune the transmitter and am checking the plate idling current. The current will not exceed 10 ma's and that's with the bias all the way up. I have found numerous articles about excessive current and no current but not anything about low current.
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> >
> > Eric
> > Kd8owb
> >
>

42564. Re: [TS-520_820_530_830] Re: Ts-520 TIF signal going to die, no acc

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-04 11:27:21 UTC
From: Pepe Lancero
Topic: 42533 Message: 42564

Terry thank you for this words... the problem is solved, it was in the relay RL-1, i cleaned with isopropyl alcohol and finaly TIF signal it's present and stable
but sometimes the reception failure, I suspect that contact of relay y not perfect, i think that i will to replace, now i concentrate in the rf board that have some several problems, jajaja .... it´s a true rebuilding.

De: Terry Wagoner <wagstw46@...>
Para: TS-520_820_530_830@yahoogroups.com
Enviado: Domingo, 2 de junio, 2013 10:27 P.M.
Asunto: [TS-520_820_530_830] Re: Ts-520 TIF signal going to die, no acc

To measure TP-1 signal level make sure you have Screen Grid switch off. Mode switch in CW mode. Key the rig with Car Level Pot advanced and Drive Control peaked for maximum ALC reading on the meter.

I think you are saying at TP-1 you see approx 360 mv P-P, but it decays off like a capacitor discharging. 360mv is a good level and 3.39mhz is correct frequency. The 8.8mhz TIF signal will be mixed by Q2 and the TIF signal at the TIF terminal post on IF board will be approx 100mv P-P. If signal at TP-1 is decaying then signal at TIF post will do likewise.

What is the S-meter doing as the signal decays? Is it slowly falling down scale?

It sounds like you are losing ALC to Gate 2 of Q1. Need at least a 11 meg ohm VTVM or DMM to measure the AGL terminal post on IF board and see what the ALC control rail voltage is doing. Your meter will pull it down to around 2 volts, but should hold at that level.

You can connect a temporary +3vdc to the AGL terminal on the IF board and see if signal level at TP-1 stays at 360mv P-P.

If AGL voltage is decaying then pull your Aux Relay and clean the contacts as a first step.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "cx3cj" <cx3cj@...> wrote:
>
> Hi All,
>
>
>   have a problem in a IF board, had to replace Q1 & Q2 (3SK35gr & 3SK41) because not tif mixing signal present in, after replace measure in TP1 (IF board midle q1,q2) and the signal starting with noise 3.4 mhz and 360mv-vpp and this going to die in a few seconds similar to a discharge cap, the same problem in a TIF with the diference 8.5mhz(the mixing car & vfo it's ok) this singal checked in other circuit any idea?
>

Yahoo! Groups Links

[Non-text portions of this message have been removed]

42565. Re: [TS-520_820_530_830] Re: TS-830S No audio

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-04 11:29:55 UTC
From: Bill Turini
Topic: 42559 Message: 42565

On 6/4/2013 5:31 AM, Terry Wagoner wrote:
>
> What is the S-meter doing in Slow or Fast when you have no Audio?
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "baamaster" <guido@...>
> wrote:
> >
> > Folks
> >
> > My TS-830S audio just stopped one night. The radio appears to work
> correctly, i.e. tunes, calibrate peaks, etc. but I get no audio with
> the AGC in Fast or Slow. If I turn the AGC Off, I get audio. Not
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> >
> > Anyone have any suggestions as to where to start to look?
> >
> > Thanks,
> >
> > Bill
> > KA4GAV
> >
>
>

The s-meter operates normally in the Fast and Slow positions of the AGC knob. It does not function in the Off position, as usual.

I traced the signal thru the IF board, and a normal signal exits the board to the AF board. I gave up at midnight as I had a 5:30 AM meeting, but I plan to continue the signal tracing later today.

Bill
KA4GAV

--
Bill Turini
KA4GAV

[Non-text portions of this message have been removed]

42566. (no subject)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-04 11:37:58 UTC
From: Ron Witt
Topic: 42566 Message: 42566

Hello everyone,
Here's the problem that I'm having. My Kenwood TS-520SE has a wobble on sideband, plus when I talk on it, it drifts pretty bad. I have put new HV Caps in it. I have replaced 4 transistors in the 9 volt section of the FIX CH-AVR board X43-1100-00 and also put two new diodes in it. Ok, have had one other ham directing me on things to check. I have lifted the red wiring coming off the X43-1100-00 and the 9 volts that is supposed the be there is there. I found the drag on the 9 volt line seems to be coming from the RF Board. Has anyone had any such problem with a 520SE?

[Non-text portions of this message have been removed]

42567. X43-1100-00 Board-what is drawing the 9 volts down to 7.99?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-04 11:44:35 UTC
From: spectrum2092
Topic: 42567 Message: 42567

Hello everyone,
Here's the problem that I'm having. My Kenwood TS-520SE has a wobble on sideband, plus when I talk on it, it drifts pretty bad. I have put new HV Caps in it. I have replaced 4 transistors in the 9 volt section of the FIX CH-AVR board X43-1100-00 and also put two new diodes in it. Ok, have had one other ham directing me on things to check. I have lifted the red wiring coming off the X43-1100-00 and the 9 volts that is supposed the be there is there. I found the drag on the 9 volt line seems to be coming from the RF Board. Has anyone had any such problem with a 520SE? Thanks, Ron AC4AA

42568. Re: [TS-520_820_530_830] Re: eico 324

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-04 13:19:21 UTC
From: Jerry Barr
Topic: 42554 Message: 42568

I think Y ou have it pretty close Terry/ amazing what u can do with Ohms law is it not?its too bad i forget the basics/ i am gonna have to print the pie out so i can remember to use it/ put it in the window in front of the work bench! HiHI! thanks Terry/ U have a good day

Jerry KJ6NTL

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 3, 2013 6:45 PM
Subject: [TS-520_820_530_830] Re: eico 324

OK then if you assume that your load current is 50 ma (max rating of the Selenium)and you want to drop 140vdc to 110vdc then 30vdc/.050 = 600 ohms. Wattage rating = I squared x R = .050 x .050 x 600 = 1.5 watts. I think I would start with a 470 ohm 2 watt resistor after the new Silicon diode.

Of course you could measure the B+ current.

Maybe some one else with experience replacing a selenium can help you size your series dropping resistor.

73s Terry K9TW

--- In mailto:TS-520_820_530_830%40yahoogroups.com, Jerry Barr <kj6ntl@...> wrote:
>
> well Terry that is what it reads in circuitÂ and that makes my B+ 140 v or 142/and the schematic says 110 is the b+ so i need to get it down substantiallybutÂ shall see when the diodes get here wednesdayÂ
> Jerry KJ6NTL
>
> From: Terry Wagoner <wagstw46@...>
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Monday, June 3, 2013 4:38 PM
> Subject: [TS-520_820_530_830] Re: eico 324
>
> Â
> Jerry:
>
> Are you saying the transformer secondary is 145vac? I am surprised if that is the case. I would have guessed ratio was close to 1:1. Need to measure secondary AC then can calculate what the dc output will be.
>
> Ordinarily when you replace a selenium with a silicon you end up placing somewhere around a 100 to 200 ohm resistor in series with the silicon diode down stream between it and the filter. This is because a good selenium normally has around 5 volts drop across it and the silicon about 0.7 drop so the dc output from the silicon will be approx 4 to 5 volts higher

being applied to your Pi-filter. If you know the Ma load current can calculate the value of the needed series resistor but usually just temporarily try values.
>
> You can just swap out for the silicon and install the new filter caps and see what happens to the B+ line. If it is only 4 or 5 volts more than shown on schematic I would not worry about it. Part of reason that you may currently have such high voltage is that seleniums do age and when they do the output voltage may go up. So with the silicon in its place the new output voltage may not be anywhere near what you are seeing now.
>
> I think I would install the diode and filter caps and measure the tube anode voltage at the socket and decide if a series resistor is needed based on what you find.
>
> I would not change the value of your Pi Filter resistor. I would measure it as likely carbon and may have drifted high. Its value is chosen for correct time constant for filtering. It is poor mans choke.
>
> Terry K9TW
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Jerry" <kj6ntl@> wrote:
> >
> > Hello all! ok replaced the safety caps the filter and the power plug and the out put to bnc/ havent changed the rectifier yet/but when it getshere i will! supposed to hit 110 to 115 by end of week here, anyway the voltages are as follows primary 117 ac/ sec 145. voltsfirst filter 158 thru the 2200 resistor 140. so i need to drop that to 110? shud i increase the 2200 ohmsR1 or add a resistor befor the diode what is the prevailing reccomendation hihi
> > Jerry KJ6NTL with a new 4 element beam for 6 meters thanks folks
> >
>
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

42569. Re: Ts-820s with low plate current

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-04 14:35:12 UTC
From: erics
Topic: 42556 Message: 42569

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" wrote:
>
> Eric:
>
> There is no "heater" in the radio that you will feel any warmth from.
Heater is a term for the tube filaments. When you turn it on it
supplies AC voltage to the filaments and they heat the cathodes so the
tubes will have electron emission. If you had covers off you could see
the glow of the filaments or heaters inside the glass envelopes of the
three vacuum tubes (12BY7A driver tube and 6146 final tubes). The tubes
do get hot but not hot enough for you to feel much heat on the cabinet.
The cooling fan on rear of rig pulls air thru the PA (power amplifier)
metal gage to help cool the final tubes.

Pulled the covers off and checked everything out like you said, still
only ten ma's. Turned the heater on, this time with the finals exposed.
I only saw two small glowing spots as I looked down on the finals. How
much glow should there be?

> 3. You should see the 12BY7A tube on the RF board. Make sure it is
seated in its socket. It should have a black metal shield can on it.

Did this earlier but checked again. It was fine.
>

> 6. Now that you have 900 vdc B+ discharged it is safe to get a hold of
each 6146 final tube and make sure they are seated in their sockets and
that the anode caps are firmly seated on top of the tubes and that the
parasitic suppressors from top of plate choke to anode caps are soldered
well. Just give gentle tug on the leads. Sometimes the solder sublimates
(dull grey looking) and the connections to the anodes are not good.
While there see what kind of finals you have ie 6146B or 6146W and both
tubes should be same designator.

Did all this, all seemed to be okay. The finals are "B's"
>
> 7.Note the filter caps standing by the Power Transformer. Are they
tall black original ones?
Yes, they look like the originals.
>
> 8. Flip rig over and look at filter caps rupture vents to see if there
is any swelling or leakage. May see convex curvature of the rubber vent
and/or white powdery deposits around the vents. If really bad may see
some brown/black tar like leakage. If caps have been changed out they
will be short black or blue units.
If the vents are the the underside of where the filter caps are

inserted, they look fine.
>
> 9. As to 10 ma resting plate current what test equipment do you have?
Unfortunately, just a cheap digital meter.

Terry,
I do thank you for responding. The receive on this radio is fantastic.
20 meters was incredible yesterday. Was pulling in Scotland, England,
Croatia like they were next door and was hearing the people they were
talking to from the states.

Of course being only a Tech, 10 meters is all I got and unfortunately 10
has been dead. I really hope I can get this rig up and running so when
it gets hot again, I'll be ready.

Thanks again for the help,
Eric
kd8owb
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "erics" selle@ wrote:
> >
> > I just received the above radio in which the mail service was not to
kind with the shipment. When I unpacked the unit and tried to check the
receive of the radio, it kept blowing fuses. I checked the fuses and
plugs and found numerous loose connections. Once I made sure everything
was seated, the rx was good. Now I am trying to tune the transmitter
and am checking the plate idling current. The current will not exceed
10 ma's and that's with the bias all the way up. I have found numerous
articles about excessive current and no current but not anything about
low current.
> >
> > I think the heater is kicking on as I see the meter lighting dim a
little when switching it on. When the heater is on, should I feel
warmth on the case as I wonder if it is running correctly? Could it be
something else that might be loose?
> >
> > Something a little different, I have read Walt's article on
discharging the units voltage, I wonder if there is a picture out there
demonstrating this procedure?
> >
> > Thanks in advance and 73 .
> >
> > Eric
> > Kd8owb
> >
>

[Non-text portions of this message have been removed]

42570. Re: Ts-520 TIF signal going to die, no acc

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-04 22:06:20 UTC
From: Terry Wagoner
Topic: 42533 Message: 42570

Pepe:

State side you can purchase a new relay from HybridRestore or Kens Electronics in Kalamazoo Michigan. Both have websites. I do not know if they ship international. I have used quite a few of the relays from Kens with good success.

73s Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Pepe Lancero <cx3cj@...> wrote:
>
> Terry thank you for this words... the problem is solved, it was in the relay RL-1, i cleaned with isopropyl alcohol and finaly TIF signal it's present and stable
but sometimes the reception failure, I suspect that contact of relay y not perfect, i think that i will to replace, now i concentrate in the rf board that have some several problems, jajaja .... it´s a true rebuilding.
>
>
> _____
> De: Terry Wagoner <wagstw46@...>
> Para: TS-520_820_530_830@yahoogroups.com
> Enviado: Domingo, 2 de junio, 2013 10:27 P.M.
> Asunto: [TS-520_820_530_830] Re: Ts-520 TIF signal going to die, no acc
>
>
> To measure TP-1 signal level make sure you have Screen Grid switch off. Mode switch in CW mode. Key the rig with Car Level Pot advanced and Drive Control peaked for maximum ALC reading on the meter.
>
> I think you are saying at TP-1 you see approx 360 mv P-P, but it decays off like a capacitor discharging. 360mv is a good level and 3.39mhz is correct frequency. The 8.8mhz TIF signal will be mixed by Q2 and the TIF signal at the TIF terminal post on IF board will be approx 100mv P-P. If signal at TP-1 is decaying then signal at TIF post will do likewise.
>
> What is the S-meter doing as the signal decays? Is it slowly falling down scale?
>
> It sounds like you are losing ALC to Gate 2 of Q1. Need at least a 11 meg ohm VTVM or DMM to measure the AGL terminal post on IF board and see what the ALC control rail voltage is doing. Your meter will pull it down to around 2 volts, but should hold at that level.
>
> You can connect a temporary +3vdc to the AGL terminal on the IF board and see if signal level at TP-1 stays at 360mv P-P.
>
> If AGL voltage is decaying then pull your Aux Relay and clean the contacts as a first step.
>

> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "cx3cj" <cx3cj@> wrote:
> >
> > Hi All,
> >
> >
> > > have a problem in a IF board, had to replace Q1 & Q2 (3SK35gr & 3SK41) because not tif mixing signal present in, after replace measure in TP1 (IF board midle q1,q2) and the signal starting with noise 3.4 mhz and 360mv-vpp and this going to die in a few seconds similar to a discharge cap, the same problem in a TIF with the diference 8.5mhz(the mixing car & vfo it's ok) this singal checked in other circuit any idea?
> > >
>
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
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>
> [Non-text portions of this message have been removed]
>

42571. Re: X43-1100-00 Board-what is drawing the 9 volts down to 7.99?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-05 00:42:57 UTC
From: Terry Wagoner
Topic: 42567 Message: 42571

As anyone responded to help you? If so, stick with them and let me know as I am overloaded at present time.

What makes you think the heavy load is on the RF board?

Are you certain you have repaired the AVR board and it now capable of regulating? Always best to test the repairs you made and then land the radio loads. Normal load in RX mode is approx 60ma.

When I repair these boards I leave the two leads off the 9VDC wire wrap post and place a 150 ohm dummy load from post to chassis ground. If you can measure 9vdc across this dummy load then you know the repairs you made have been effective in restoring the regulator. I have a 250 ohm rheostat and vary it and monitor to see if the regulator is working after installation of any new components. If it is then I can land the load wires and if it doesnt regulate then you know you have a fault current beyond what the regulator can supply.

With the two leads lifted I would measure the resistance of each to ground. One lead will read approx 150 ohms and the other approx 2.2k ohm.

Have you lifted the wire off the 9vdc post on RF board as you monitored 9vdc output at the AVR board and observed the 7.99 vdc go back to 9vdc? Also need to lift RLR lead on RF board and watch the voltage. It also supplies 9vdc in RX mode.

Give us a little more detail why you believe AVR board is fixed and why you believe problem is on the RF board.

If your regulated 9vdc is not regulating then you will have VFO drift and FM-ing and ????

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "spectrum2092" <spectrum2092@...> wrote:
>
> Hello everyone,
> Here's the problem that I'm having. My Kenwood TS-520SE has a wobble on sideband, plus when I talk on it, it drifts pretty bad. I have put new HV Caps in it. I have replaced 4 transistors in the 9 volt section of the FIX CH-AVR board X43-1100-00 and also put two new diodes in it. Ok, have had one other ham directing me on things to check. I have lifted the red wiring coming off the X43-1100-00 and the 9 volts that is supposed the be there is there. I found the drag on the 9 volt line seems to be coming from the RF Board. Has anyone had any such problem with a 520SE? Thanks, Ron AC4AA
>

42572. Key jack for TS-830s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-05 02:29:48 UTC
From: Greg Mason
Topic: 42572 Message: 42572

I am looking for a key jack (same as the phone jack) for a TS-830s, part E11-0404-05? http://www.kenwoodparts.com/ does not seem to have any. Failing that, is anyone parting out a TS-830s?

Greg, VE4AMN

[Non-text portions of this message have been removed]

42573. Advice please, wire wrap vs. other connection methods, 520SE.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-05 03:00:33 UTC
From: Wes Will
Topic: 42567 Message: 42573

I'll be back home in Illinois in about a week (traveling to see grand-wiggles in TX) and will likely dive into the 520SE that needs a new power board. Thanks to Bob I've got a nice one to replace the dead unit.

Wire wrap is the name of the game inside this chassis, but I'm having one HECK of a time finding a simple hand wire wrap tool to fit these posts. The ones I find are for the smaller sort, not the old-style ones Kenwood used.

First thing, is it best to keep it all wire wrap in the first place?

Or should I consider soldering the new board in? Or something else I don't even know of yet?

And if wire wrap is the proper method (as I suspect it is - always worked well for me before) where in the Sam Hill do I get one of those (used to be five buck) wrap tools, not one of the hundred-dollar power wrap guns? Mouser nor DigiKey had them, and I haven't been finding any the right size in any local or on-line places that I usually use.

So, there's a few items to ponder, but nothing that needs a VTVM. Answers for this should be cake for this bunch.

--
Wes Will
N9KDY

42574. Re: [TS-520_820_530_830] Re: X43-1100-00 Board-what is drawing the 9 volts down to 7.99?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-05 03:10:48 UTC
From: Ron Witt
Topic: 42567 Message: 42574

Today I traced the other red wire from the AVR board to the x54-0001-00, when I lifted the first red wire from the board-just fixing to work on checks again. The reports that I have gotten when I transmit are that it sounds like the rig is starving for voltage. No one other than you has answered me.
Thanks,
Ron

--- On Tue, 6/4/13, Terry Wagoner <wagstw46@...> wrote:

From: Terry Wagoner <wagstw46@...>
Subject: [TS-520_820_530_830] Re: X43-1100-00 Board-what is drawing the 9 volts down to 7.99?
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, June 4, 2013, 5:42 PM

As anyone responded to help you? If so, stick with them and let me know as I am overloaded at present time.

What makes you think the heavy load is on the RF board?

Are you certain you have repaired the AVR board and it now capable of regulating? Always best to test the repairs you made and then land the radio loads. Normal load in RX mode is approx 60ma.

When I repair these boards I leave the two leads off the 9VDC wire wrap post and place a 150 ohm dummy load from post to chassis ground. If you can measure 9vdc across this dummy load then you know the repairs you made have been effective in restoring the regulator. I have a 250 ohm rheostat and vary it and monitor to see if the regulator is working after installation of any new components. If it is then I can land the load wires and if it doesnt regulate then you know you have a fault current beyond what the regulator can supply.

With the two leads lifted I would measure the resistance of each to ground. One lead will read approx 150 ohms and the other approx 2.2k ohm.

Have you lifted the wire off the 9vdc post on RF board as you monitored 9vdc output at the AVR board and observed the 7.99 vdc go back to 9vdc? Also need to lift RLR lead on RF board and watch the voltage. It also supplies 9vdc in RX mode.

Give us a little more detail why you believe AVR board is fixed and why you believe problem is on the RF board.

If your regulated 9vdc is not regulating then you will have VFO drift and FM-ing and ????

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "spectrum2092" <spectrum2092@...> wrote:

>

> Hello everyone,

> Here's the problem that I'm having. My Kenwood TS-520SE has a wobble on sideband, plus when I talk on it, it drifts pretty bad. I have put new HV Caps in it. I have replaced 4 transistors in the 9 volt section of the FIX CH-AVR board X43-1100-00 and also put two new diodes in it. Ok, have had one other ham directing me on things to check. I have lifted the red wiring coming off the X43-1100-00 and the 9 volts that is supposed the be there is there. I found the drag on the 9 volt line seems to be coming from the RF Board. Has anyone had any such problem with a 520SE? Thanks, Ron AC4AA

>

[Non-text portions of this message have been removed]

42575. Re: [TS-520_820_530_830] Advice please, wire wrap vs. other connection methods, 520SE.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-05 03:41:30 UTC
From: JIM LYNCH
Topic: 42567 Message: 42575

I'm in the same boat, but Graybar, if you can find one, has them.

From: Wes Will <wwill@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 4, 2013 7:00 PM
Subject: [TS-520_820_530_830] Advice please, wire wrap vs. other connection methods, 520SE.

I'll be back home in Illinois in about a week (traveling to see grand-wiggles in TX) and will likely dive into the 520SE that needs a new power board. Thanks to Bob I've got a nice one to replace the dead unit.

Wire wrap is the name of the game inside this chassis, but I'm having one HECK of a time finding a simple hand wire wrap tool to fit these posts. The ones I find are for the smaller sort, not the old-style ones Kenwood used.

First thing, is it best to keep it all wire wrap in the first place?

Or should I consider soldering the new board in? Or something else I don't even know of yet?

And if wire wrap is the proper method (as I suspect it is - always worked well for me before) where in the Sam Hill do I get one of those (used to be five buck) wrap tools, not one of the hundred-dollar power wrap guns? Mouser nor DigiKey had them, and I haven't been finding any the right size in any local or on-line places that I usually use.

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Wes Will
N9KDY

Yahoo! Groups Links

[Non-text portions of this message have been removed]

42576. Re: [TS-520_820_530_830] Advice please, wire wrap vs. other connection methods, 520SE.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-05 04:40:01 UTC
From: Joseph Stiles
Topic: 42567 Message: 42576

Wes,

  I got my wrap/unwrap tool from JONARD Industries. It kind of looks like a fountain pen. It has an end for wrapping and another
for unwrapping. They come in various sizes....post diameter/wire diameter(gauge) to fill various needs. Not real cheap...but I found
well worth the price...sorry but can't remember price...$70 comes to mind...yea...ouch! If interested...look for "hand wrap/un-wrap tool"
on their web site. Lots to choose from.

You may want to skip the wrap tool...as when you try and get all those wraps off the posts...you're going to break more that one,
and end up with a short wire...try and re-do it IF your lucky enough to have a long enough end...and it'll break when you try and
re-wrap it. These tool like nice smooth wires...no some kinked up ones...remember those wires have been wrapped on those posts
for 30+ years!

  Make sure that you have some spare wire around...and some heat shrink tubing...as you will come up short on some of those wires
that got broken...and there's not a lot of slack to be had on some of those wires!

  Just my recommendation....

73 Joe
WB7UQU

From: JIM LYNCH <lynchjl@yahoo.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, June 4, 2013 8:41 PM
Subject: Re: [TS-520_820_530_830] Advice please, wire wrap vs. other connection methods, 520SE.

I'm in the same boat, but Graybar, if you can find one, has them.

From: Wes Will <wwill@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 4, 2013 7:00 PM
Subject: [TS-520_820_530_830] Advice please, wire wrap vs. other connection methods, 520SE.

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grand-wiggles in TX) and will likely dive into the 520SE that needs a
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--
Wes Will
N9KDY

Yahoo! Groups Links

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42577. Re: [TS-520_820_530_830] Key jack for TS-830s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-05 04:42:23 UTC
From: Joseph Stiles
Topic: 42572 Message: 42577

Greg,

Try Bob Mansker...ke5ftf@... he has a rather good inventory of parts...fair price, fast service.

73 Joe
WB7UQU

From: Greg Mason <masongregc43@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, June 4, 2013 7:29 PM
Subject: [TS-520_820_530_830] Key jack for TS-830s

I am looking for a key jack (same as the phone jack) for a TS-830s, part E11-0404-05? http://www.kenwoodparts.com/ does not seem to have any. Failing that, is anyone parting out a TS-830s?

Greg, VE4AMN

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

42578. Re: [TS-520_820_530_830] Advice please, wire wrap vs. other connection methods, 520SE.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-05 04:26:17 UTC
From: Wes Will
Topic: 42567 Message: 42578

On 06/04/2013 10:41 PM, JIM LYNCH wrote:
> I'm in the same boat, but Graybar, if you can find one, has them.

Eureka. I think there's a GreyBar in Abilene. (Thunderstorm at the moment, hope I'm not repairing lightning damaged stuff for the kid tomorrow after this. It's a lollapalooza, too. One hum-dinger of an electrical storm.)

I'll give them a try. Thanks.

Any other possibilities??

--
Wes Will
N9KDY

42579. Re: Advice please, wire wrap vs. other connection methods, 520SE.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-05 10:40:52 UTC
From: Terry Wagoner
Topic: 42567 Message: 42579

Hi Joe:

You are correct can seldom ever remove without breaking and if you did you need to cut off the old coiled end and prepare a new straight end for re-wrapping.

The Jonard is model WDUD-2224 for 22 to 24 gauge wire of the Hybrids.

Newark Electronics carries this model for $100.00 (ouch).

I never re-wrap. This was assembly line method used with wire wrap guns. Telephone companies also employed it.

If you are replacing a board easy to remove all the old wire wrap and lightly sand the posts and blow out and vacuum off all the conductive fines and then just solder the new leads back on the post. Of course have to get to clean new wire because if you try to use an unwrapped end very easy to break it.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Wes,
>
> Â I got my wrap/unwrap tool from JONARD Industries. It kind of looks like a fountain pen. It has an end for wrapping and another
> for unwrapping. They come in various sizes....post diameter/wire diameter(gauge) to fill various needs. Not real cheap...but I found
> well worth the price...sorry but can't remember price...$70 comes to mind...yea...ouch! If interested...look for "hand wrap/un-wrap tool"
> on their web site. Lots to choose from.
>
> You may want to skip the wrap tool...as when you try and get all those wraps off the posts...you're going to break more that one,
> and end up with a short wire...try and re-do it IF your lucky enough to have a long enough end...and it'll break when you try and
> re-wrap it. These tool like nice smooth wires...no some kinked up ones...remember those wires have been wrapped on those posts
> for 30+ years!
>
>
> Â Make sure that you have some spare wire around...and some heat shrink tubing...as you will come up short on some of those wires
> that got broken...and there's not a lot of slack to be had on some of those wires!
>
> Â Just my recommendation....
>
> Â

> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: JIM LYNCH <lynchjl@...>
> To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
> Sent: Tuesday, June 4, 2013 8:41 PM
> Subject: Re: [TS-520_820_530_830] Advice please, wire wrap vs. other connection methods,
520SE.
>
>
>
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> I'm in the same boat, but Graybar, if you can find one, has them.
> Â
>
>
> _____
> From: Wes Will <wwill@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tuesday, June 4, 2013 7:00 PM
> Subject: [TS-520_820_530_830] Advice please, wire wrap vs. other connection methods,
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> Or should I consider soldering the new board in?Â Or something else I
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> So, there's a few items to ponder, but nothing that needs a VTVM.
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>
> --
> Wes Will
> N9KDY
>
> ------------------------------------
>
> Yahoo! Groups Links
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> [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
>

42580. Re: Advice please, wire wrap vs. other connection methods, 520SE.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-05 11:20:00 UTC
From: Terry Wagoner
Topic: 42567 Message: 42580

Did a real quick Google and found that Amazon.com carries a cheaper model by OK industries. Allied Electronics has the good Jonard at $85.00 and TESSCO carries both Jonard and OK industries brand. So a more exhaustive internet search might find the Jonard even cheaper.

Ebay has a replacement 22/24 bit for the Jonard listed for $3.95 so maybe could fab a handle for it? A small tap wrench T-handle would probably work just fine.

Terry
K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Hi Joe:
>
> You are correct can seldom ever remove without breaking and if you did you need to cut off the old coiled end and prepare a new straight end for re-wrapping.
>
> The Jonard is model WDUD-2224 for 22 to 24 gauge wire of the Hybrids.
>
> Newark Electronics carries this model for $100.00 (ouch).
>
> I never re-wrap. This was assembly line method used with wire wrap guns. Telephone companies also employed it.
>
> If you are replacing a board easy to remove all the old wire wrap and lightly sand the posts and blow out and vacuum off all the conductive fines and then just solder the new leads back on the post. Of course have to get to clean new wire because if you try to use an unwrapped end very easy to break it.
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> > From: JIM LYNCH <lynchjl@>
> > To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
> > Sent: Tuesday, June 4, 2013 8:41 PM
> > Subject: Re: [TS-520_820_530_830] Advice please, wire wrap vs. other connection methods, 520SE.
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> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Tuesday, June 4, 2013 7:00 PM
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> > Yahoo! Groups Links
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42581. Re: Advice please, wire wrap vs. other connection methods, 520SE.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-05 11:44:21 UTC
From: Terry Wagoner
Topic: 42567 Message: 42581

You might find this primer interesting

http://www.tessco.com/yts/resourcecenter/pdfs/wirewrap.pdf

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
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> > > To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
> > > Sent: Tuesday, June 4, 2013 8:41 PM
> > > Subject: Re: [TS-520_820_530_830] Advice please, wire wrap vs. other connection
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> > > Sent: Tuesday, June 4, 2013 7:00 PM
> > > Subject: [TS-520_820_530_830] Advice please, wire wrap vs. other connection methods,
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> > > N9KDY
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>

42582. Re: Ts-820s with low plate current

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-05 12:14:11 UTC
From: Terry Wagoner
Topic: 42556 Message: 42582

Eric:

The glow of the filaments of the finals wont be brite. These tubes filaments are in series so if one tube had open filament neither would have any glow. So any glow is usually good unless your filament voltage was low for some reason but very unlikely. Driver tube filament has nothing to do with final tube resting plate current. I was just explaining what they meant by the Heater switch.

Did not go in to directly heated and indirectly heated cathodes. Something you can read about in ARRL handbook. By the way you can buy a watered down ARRL handbook off Ebay called Understanding Amateur Radio by ARRL. There was a lot of controversy when ARRL produced this book many years ago as old timers thought it was the beginning of the end of the old hobby. I bought it back then and still have it and nothing wrong with starting with it to learn the fundamentals including how vacuum tubes work. Dont have to build the projects in it just read the theory.

A DMM will be fine for measuring your finals screen grid voltage and control grid operating bias voltage, but I am nervous about directing you to make these measurements.

To have ability to adjust your bias voltage pot to set the resting plate current to 60ma you need:
1. Two good tubes. Good means no open filaments and good emission.
2. Operating DC bias voltage of approx -60vdc on the control grid when you flip to send.
3. Screen grid voltage of approx + 220vdc on the screen grids when you flip to send. (SG switch on)
4. Good cathode meter shunt resistors (approx 5 ohms)
5. Anode voltage of approx +900vdc at the plate caps of the finals

First check the indicated plate voltage using your panel meter HV position. Turn on rig, set panel meter selector switch to HV, flip to Send. Meter should indicate close to 900vdc. If it measures 450vdc you have lost one of the HV filter caps.

If you decide to measure control grid bias voltage and screen grid voltage we can talk some more. Is there a near by experienced Ham who could help you?

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "erics" <selle@...> wrote:
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" wrote:
> >
> > Eric:
> >
> > There is no "heater" in the radio that you will feel any warmth from.
> Heater is a term for the tube filaments. When you turn it on it
> supplies AC voltage to the filaments and they heat the cathodes so the

> tubes will have electron emission. If you had covers off you could see
> the glow of the filaments or heaters inside the glass envelopes of the
> three vacuum tubes (12BY7A driver tube and 6146 final tubes). The tubes
> do get hot but not hot enough for you to feel much heat on the cabinet.
> The cooling fan on rear of rig pulls air thru the PA (power amplifier)
> metal gage to help cool the final tubes.
>
> Pulled the covers off and checked everything out like you said, still
> only ten ma's. Turned the heater on, this time with the finals exposed.
> I only saw two small glowing spots as I looked down on the finals. How
> much glow should there be?
>
> > 3. You should see the 12BY7A tube on the RF board. Make sure it is
> seated in its socket. It should have a black metal shield can on it.
>
> Did this earlier but checked again. It was fine.
> >
>
> > 6. Now that you have 900 vdc B+ discharged it is safe to get a hold of
> each 6146 final tube and make sure they are seated in their sockets and
> that the anode caps are firmly seated on top of the tubes and that the
> parasitic suppressors from top of plate choke to anode caps are soldered
> well. Just give gentle tug on the leads. Sometimes the solder sublimates
> (dull grey looking) and the connections to the anodes are not good.
> While there see what kind of finals you have ie 6146B or 6146W and both
> tubes should be same designator.
>
> Did all this, all seemed to be okay. The finals are "B's"
> >
> > 7.Note the filter caps standing by the Power Transformer. Are they
> tall black original ones?
> Yes, they look like the originals.
> >
> > 8. Flip rig over and look at filter caps rupture vents to see if there
> is any swelling or leakage. May see convex curvature of the rubber vent
> and/or white powdery deposits around the vents. If really bad may see
> some brown/black tar like leakage. If caps have been changed out they
> will be short black or blue units.
> If the vents are the the underside of where the filter caps are
> inserted, they look fine.
> >
> > 9. As to 10 ma resting plate current what test equipment do you have?
> Unfortunately, just a cheap digital meter.
>
> Terry,
> I do thank you for responding. The receive on this radio is fantastic.
> 20 meters was incredible yesterday. Was pulling in Scotland, England,
> Croatia like they were next door and was hearing the people they were
> talking to from the states.
>

> Of course being only a Tech, 10 meters is all I got and unfortunately 10
> has been dead. I really hope I can get this rig up and running so when
> it gets hot again, I'll be ready.
>
> Thanks again for the help,
> Eric
> kd8owb
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "erics" selle@ wrote:
> > >
> > > I just received the above radio in which the mail service was not to
> kind with the shipment. When I unpacked the unit and tried to check the
> receive of the radio, it kept blowing fuses. I checked the fuses and
> plugs and found numerous loose connections. Once I made sure everything
> was seated, the rx was good. Now I am trying to tune the transmitter
> and am checking the plate idling current. The current will not exceed
> 10 ma's and that's with the bias all the way up. I have found numerous
> articles about excessive current and no current but not anything about
> low current.
> > >
> > > I think the heater is kicking on as I see the meter lighting dim a
> little when switching it on. When the heater is on, should I feel
> warmth on the case as I wonder if it is running correctly? Could it be
> something else that might be loose?
> > >
> > > Something a little different, I have read Walt's article on
> discharging the units voltage, I wonder if there is a picture out there
> demonstrating this procedure?
> > >
> > > Thanks in advance and 73 .
> > >
> > > Eric
> > > Kd8owb
> > >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

42583. Re: [TS-520_820_530_830] Advice please, wire wrap vs. other connection methods, 520SE.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-05 06:39:49 UTC
From: Wes Will
Topic: 42567 Message: 42583

On 06/04/2013 11:40 PM, Joseph Stiles wrote:
> Wes,
>
> I got my wrap/unwrap tool from JONARD Industries....
> sorry but can't remember price...$70 comes to mind...

Well. Seventy dollars for a tool that is actually worth at most worth maybe TEN.

I cannot find my old "deluxe" model one, lost some time in the last couple of decades of not needing it, I guess. I think I paid about NINE for it. With the insanity of prices going goofy, make that -maybe- twenty today.

Twenty, I could do. But SEVENTY?? Plus about $12 shipping, which is another rip-off there, so it looks like altogether WAY too close to a C-note!!

If I had THAT kind of cash laying about I'd box the whole thing up and give it to one of the hybrid repair shops which are (rightfully) so well-thought-of here. (Wish I could; someone with that much experience with these beasties will obviously do a MUCH better job of the whole thing than I will, try I ever so hard. Just having all the right gear will make the difference, even if there wasn't an experience curve.)

That rather firmly settles that! Looks like I'll be soldering those wires to the wire-wrap terminals, doesn't it?

Particularly with the business about the wires being both short and somewhat fragile, solder it shall be, then.

--
Wes Will
N9KDY

42584. Re: Ts-820s with low plate current

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-05 14:21:44 UTC
From: erics
Topic: 42556 Message: 42584

Terry:

First off, I really want to thank you for all the help and patience that you have exhibited so far and for not talking down to me and my limited abilites and knowledge. I'm also thankful that you have enough confidence in me not to do something ignorant or put myself in harms way. I know some in the group do not have this type of mindset. So once again, thanks for everything.

I will check the indicated plate voltage using the panel meter when I get home and let you know the results. I am also trying to find a local ham with the abilities to work on this radio when I feel uncomfortable with the process.

Thanks again for making this a enjoyable, educational endevour.

ERic Kd8owb

> Eric:
>
> The glow of the filaments of the finals wont be brite. These tubes filaments are in series so if one tube had open filament neither would have any glow. So any glow is usually good unless your filament voltage was low for some reason but very unlikely. Driver tube filament has nothing to do with final tube resting plate current. I was just explaining what they meant by the Heater switch.
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If it measures 450vdc you have lost one of the HV filter caps.
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> If you decide to measure control grid bias voltage and screen grid voltage we can talk some more. Is there a near by experienced Ham who could help you?
>
> Terry K9TW

42585. Re: [TS-520_820_530_830] Re: Ts-820s with low plate current

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-05 15:54:46 UTC
From: Mike
Topic: 42556 Message: 42585

Eric,

Very good advice from Terry!

If I may add an additional reference book to Terry's reference book suggestions and that is John T. Frye's "BASIC RADIO COURSE". This book unfortunately is out of print. However you may find it at your local public library along with the ARRL publications Terry spoke of, at your local public library and possibly at some used bookstores. I found my hard cover copy of the BASIC RADIO COURSE, 1961 edition, at a used book store for $2.

Amazon.com currently shows they have a few hard copy editions ofthe BASIC RADIO COURSE available on their website with prices between $22 and $25.

There is an eBay seller who is currently John T.Frye'sBASIC RADIO COURSE 1951 edition on CD for $8.99, see eBay ad #200692897318. I bought the CD so I could compare it with my 1961 edition. It contains everything my 1961 edition has except for the chapters on transistors.

This book has an excellent chapter on how a basic receiver works, a subject that all hams who service their own ham gear should fully understand.

The book discusses vacuum tube theory including the "BEAM POWER PENTODE". For those who don't know what a Beam Power Pentode tube is or even looks like, have a look inside the final amplifier of your hybrid, the 2 "6146" final tubesare "Beam Power Pentodes".

A Beam Power Pentode has the same number of elements a normal Pentode tube has(5 elements) except that the beamforming screen grid #2 is different and operates differently than in a typical Pentode tube.

A typical Pentode tube screen grid #2 is a wire mesh and electrons flow "through" the mesh. However, a Beam Power Pentode screen grid #2 is designed differenty, they are arranged in such as manner that electrons flow "Past", not "through", screen grid #2. As the electrons flow "past" the beam forming elements they are "pushed" into a tight beam that is focused at the tube's Anode. The BASIC RADIO COURSE discusses this and includes a drawing of how all this works.

I highly recommend this book for those who wish to learn electronic theory.

I recommend purchasing the earlier editions of the ARRL handbook, 1970 and earlier.I find the earlier editions are easier to read and understand.

73
Mike W5RKL

On 6/5/2013 7:14 AM, Terry Wagoner wrote:
>
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> The glow of the filaments of the finals wont be brite. These tubes
> filaments are in series so if one tube had open filament neither would
> have any glow. So any glow is usually good unless your filament
> voltage was low for some reason but very unlikely. Driver tube
> filament has nothing to do with final tube resting plate current. I
> was just explaining what they meant by the Heater switch.
>
> Did not go in to directly heated and indirectly heated cathodes.
> Something you can read about in ARRL handbook. By the way you can buy
> a watered down ARRL handbook off Ebay called Understanding Amateur
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> To have ability to adjust your bias voltage pot to set the resting
> plate current to 60ma you need:
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> 2. Operating DC bias voltage of approx -60vdc on the control grid when
> you flip to send.
> 3. Screen grid voltage of approx + 220vdc on the screen grids when you
> flip to send. (SG switch on)
> 4. Good cathode meter shunt resistors (approx 5 ohms)
> 5. Anode voltage of approx +900vdc at the plate caps of the finals
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> First check the indicated plate voltage using your panel meter HV
> position. Turn on rig, set panel meter selector switch to HV, flip to
> Send. Meter should indicate close to 900vdc. If it measures 450vdc you
> have lost one of the HV filter caps.
>
> If you decide to measure control grid bias voltage and screen grid
> voltage we can talk some more. Is there a near by experienced Ham who
> could help you?
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "erics" <selle@...> wrote:

> >
> >
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> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Terry Wagoner" wrote:
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> > the glow of the filaments or heaters inside the glass envelopes of the
> > three vacuum tubes (12BY7A driver tube and 6146 final tubes). The tubes
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> > metal gage to help cool the final tubes.
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> > > 3. You should see the 12BY7A tube on the RF board. Make sure it is
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> > > 6. Now that you have 900 vdc B+ discharged it is safe to get a hold of
> > each 6146 final tube and make sure they are seated in their sockets and
> > that the anode caps are firmly seated on top of the tubes and that the
> > parasitic suppressors from top of plate choke to anode caps are soldered
> > well. Just give gentle tug on the leads. Sometimes the solder sublimates
> > (dull grey looking) and the connections to the anodes are not good.
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> > tubes should be same designator.
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> > Did all this, all seemed to be okay. The finals are "B's"
> > >
> > > 7.Note the filter caps standing by the Power Transformer. Are they
> > tall black original ones?
> > Yes, they look like the originals.
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> > is any swelling or leakage. May see convex curvature of the rubber vent
> > and/or white powdery deposits around the vents. If really bad may see
> > some brown/black tar like leakage. If caps have been changed out they
> > will be short black or blue units.
> > If the vents are the the underside of where the filter caps are
> > inserted, they look fine.

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> > > 9. As to 10 ma resting plate current what test equipment do you have?
> > Unfortunately, just a cheap digital meter.
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> > Croatia like they were next door and was hearing the people they were
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> > Of course being only a Tech, 10 meters is all I got and unfortunately 10
> > has been dead. I really hope I can get this rig up and running so when
> > it gets hot again, I'll be ready.
> >
> > Thanks again for the help,
> > Eric
> > kd8owb
> > >
> > > Terry K9TW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "erics" selle@ wrote:
> > > >
> > > > I just received the above radio in which the mail service was not to
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> > [Non-text portions of this message have been removed]
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42586. Re: Ts-820s with low plate current

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-05 17:28:55 UTC
From: Terry Wagoner
Topic: 42556 Message: 42586

Eric/Mike:

We never known for sure what anyones knowledge or experience level is. All we can do is gauge it by how and what they say in their post. I would much rather assume minimal knowledge than otherwise. Never intend to hurt anyones feelings, but feelings can be easily fixed and some injuries and death are a little more permanent.

Mike is correct Fryes book was one of my first and still on my book shelf. He had a unique ability to write for the technician level and as Mike notes the mid 70s ARRL handbook (bible) is better 1st handbook for anyone who owns tube rigs.

Understanding Amateur Radio condenses the entire Handbook fundamentals into under 100 pages, Fryes primer covers it in approx 200 pages while the Handbook devotes chapters to Dc/Ac theory, components,power supplies,oscillators, amplifiers, tubes, transistors,transmitters, receivers and so on.

73s Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> Eric,
>
> Very good advice from Terry!
>
> If I may add an additional reference book to Terry's reference book
> suggestions and that is John T. Frye's "BASIC RADIO COURSE". This book
> unfortunately is out of print. However you may find it at your local
> public library along with the ARRL publications Terry spoke of, at your
> local public library and possibly at some used bookstores. I found my
> hard cover copy of the BASIC RADIO COURSE, 1961 edition, at a used book
> store for $2.
>
> Amazon.com currently shows they have a few hard copy editions ofthe
> BASIC RADIO COURSE available on their website with prices between $22
> and $25.
>
> There is an eBay seller who is currently John T.Frye'sBASIC RADIO COURSE
> 1951 edition on CD for $8.99, see eBay ad #200692897318. I bought the CD
> so I could compare it with my 1961 edition. It contains everything my
> 1961 edition has except for the chapters on transistors.
>
> This book has an excellent chapter on how a basic receiver works, a
> subject that all hams who service their own ham gear should fully
> understand.
>
> The book discusses vacuum tube theory including the "BEAM POWER

> PENTODE". For those who don't know what a Beam Power Pentode tube is or
> even looks like, have a look inside the final amplifier of your hybrid,
> the 2 "6146" final tubesare "Beam Power Pentodes".
>
> A Beam Power Pentode has the same number of elements a normal Pentode
> tube has(5 elements) except that the beamforming screen grid #2 is
> different and operates differently than in a typical Pentode tube.
>
> A typical Pentode tube screen grid #2 is a wire mesh and electrons flow
> "through" the mesh. However, a Beam Power Pentode screen grid #2 is
> designed differenty, they are arranged in such as manner that electrons
> flow "Past", not "through", screen grid #2. As the electrons flow "past"
> the beam forming elements they are "pushed" into a tight beam that is
> focused at the tube's Anode. The BASIC RADIO COURSE discusses this and
> includes a drawing of how all this works.
>
> I highly recommend this book for those who wish to learn electronic theory.
>
> I recommend purchasing the earlier editions of the ARRL handbook, 1970
> and earlier.I find the earlier editions are easier to read and understand.
>
> 73
> Mike W5RKL
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> > > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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42587. Looking to clean my 820 - digital display keeps shifting (but not going out)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-05 19:10:51 UTC
From: Barry
Topic: 42587 Message: 42587

My Great Uncle has been put in a nursing home but sold me his TS-820 with the VFO, MC-50 mic and speaker, and I take my Tech exam a week from Saturday. I'm excited to get the license so I can start talking, but in the meantime I've been playing around listening to the TS-820.

He also sold me a Yaesu FT-757GX with its power supply and FT-757AT automatic antenna tuner, so I'm going back and forth listening to each of them.

I'm really liking the Kenwood, though. I'm tempted to sell the Yaesu and keep the 820! I know very little about them, though - I've never been a ham but have always been interested.

How hard is it to clean contacts on the 820 without getting shocked to high heaven? One of the main things I want to do is get the digital display to quit hopping around like it does. It changes numbers often rapidly, but thankfully it doesn't just completely go off. It's just fairly erratic in changing frequency numbers.

Any help you can give me would be so greatly appreciated! I'm sorry I'm not as up to speed as everybody here, but I'm trying to learn quickly so I can contribute to the group. I am not a complete tech newbie - I do the IT at our church and am very technically oriented, but I've never worked with ham radios.

Thanks to everybody.

Barry

Jeremiah 29:11-13

42588. Re: Advice please, wire wrap vs. other connection methods, 520SE.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-05 20:38:04 UTC
From: k5hfg
Topic: 42567 Message: 42588

Hello group,
Since the topic has come up I have decided to show an experiment I have been working on for several months. It is not complete and not proved out so I do not recommend tearing into your rigs just yet. I am not a fan of wire wrapped terminals. Never was. I do not care to solder to the post. No matter how well I clean them some just will not solder. Besides It does not look very professional. So I have been in search of an efficient and safe connector option. I have finally settled on the sub miniature molex pins. I have set the male posts into the 530's PCB's and solder the female connector onto the wire. Notice I have not done this to the 800V connection yet. I am not sure of the size I want to use. It may not work out so easily and I have not tried any prototypes yet. The PCB holes need to be drilled out to fit the pins and it works fine with the small sizes but may not work with the larger size needed for the 2 wires on the 800V connection. Please take a look at it and give me your comments. Mike and Terry, I am hoping you look at this and let me know if you see any problems here. Maybe something I have missed or not considered. This 530 is my full filtered CW rig and I have been using it with the new connections for about 2 months. So far it has performed well. I have put a lot of work into this rig in the last year to bring it back to life so if you see something you do not like or concerns either of you please tell me. I am a hobbiest not an EE. I build most of my own stuff so I am not a stranger to criticism. I can take it. I have nobody down this way to work with. All appliance ops. HiHi
73, Don

> Well. Seventy dollars for a tool that is actually worth at most worth
> maybe TEN.
>
> I cannot find my old "deluxe" model one, lost some time in the last
> couple of decades of not needing it, I guess. I think I paid about NINE
> for it. With the insanity of prices going goofy, make that -maybe-
> twenty today.
>
> Twenty, I could do. But SEVENTY?? Plus about $12 shipping, which is
> another rip-off there, so it looks like altogether WAY too close to a
> C-note!!
>
> If I had THAT kind of cash laying about I'd box the whole thing up and
> give it to one of the hybrid repair shops which are (rightfully) so
> well-thought-of here. (Wish I could; someone with that much experience
> with these beasties will obviously do a MUCH better job of the whole
> thing than I will, try I ever so hard. Just having all the right gear
> will make the difference, even if there wasn't an experience curve.)
>
> That rather firmly settles that! Looks like I'll be soldering those
> wires to the wire-wrap terminals, doesn't it?
>
> Particularly with the business about the wires being both short and
> somewhat fragile, solder it shall be, then.

>
> --
> Wes Will
> N9KDY
>

42589. Re: Advice please, wire wrap vs. other connection methods, 520SE.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-05 20:40:00 UTC
From: k5hfg
Topic: 42567 Message: 42589

Sorry guys,
I forgot the best part. There are pitures in the photo section.

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42590. Re: [TS-520_820_530_830] Looking to clean my 820 - digital display keeps shifting (but not going out)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-05 20:40:57 UTC
From: Gregory Graham
Topic: 42587 Message: 42590

Barry
Your going to love that TS-820S Radio. Here is a site that will
give you some guidance to repair the VFO problem. I have an TS-820S
with the same problem.
http://www.n6wk.com/kenwood/TS-820-VFO--servicing.pdf My advice
keep the spare radio.

NR6C
Gregory

On 6/5/2013 12:10 PM, Barry wrote:
>
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> with the VFO, MC-50 mic and speaker, and I take my Tech exam a week
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> Jeremiah 29:11-13

>
>

[Non-text portions of this message have been removed]

42591. Re: [TS-520_820_530_830] Looking to clean my 820 - digital display keeps shifting (but not going out)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-05 21:12:56 UTC
From: William Houghton
Topic: 42587 Message: 42591

Barry,

"How hard is it to clean contacts on the 820 without getting shocked to high heaven?"

Don't clean contacts with the power on. There is no reason to ever clean anything on your rig with power applied. Have the rig unplugged from the power and let the caps discharge completely before touching it. You can clean N.O. relay contacts by manually closing the relay with your finger.

73,

Bill

From: Barry <bonnevilleblb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, June 5, 2013 12:50:34 PM
Subject: [TS-520_820_530_830] Looking to clean my 820 - digital display keeps shifting (but not going out)

My Great Uncle has been put in a nursing home but sold me his TS-820 with the VFO, MC-50 mic and speaker, and I take my Tech exam a week from Saturday. I'm excited to get the license so I can start talking, but in the meantime I've been playing around listening to the TS-820.

He also sold me a Yaesu FT-757GX with its power supply and FT-757AT automatic antenna tuner, so I'm going back and forth listening to each of them.

I'm really liking the Kenwood, though. I'm tempted to sell the Yaesu and keep the 820! I know very little about them, though - I've never been a ham but have always been interested.

How hard is it to clean contacts on the 820 without getting shocked to high heaven? One of the main things I want to do is get the digital display to quit hopping around like it does. It changes numbers often rapidly, but thankfully it doesn't just completely go off. It's just fairly erratic in changing frequency numbers.

Any help you can give me would be so greatly appreciated! I'm sorry I'm not as up to speed as everybody here, but I'm trying to learn quickly so I can contribute to the group. I am not a complete tech newbie - I do the IT at our church and am very technically oriented, but I've never worked with ham radios.

Thanks to everybody.

Barry

Jeremiah 29:11-13

[Non-text portions of this message have been removed]

42592. Re: [TS-520_820_530_830] Re: Advice please, wire wrap vs. other connection methods, 520SE.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-05 22:22:57 UTC
From: Jim S
Topic: 42567 Message: 42592

I'll cast my vote to the "don't re-wrap" crowd. I used to work for Western Electric years ago. They pretty much invented the process, and the rule was if you had to re-wrap a post, you should always solder the repair job.

Wire wrapping is a "gas tight" process. The wire bites into the corners of the posts, and once the post and the wire have done that the first time, that gas tight process can never be accomplished 100% effectively again. W/E always recommended soldering if reworking a connection.

Just my recollection.

Jim S.

On 6/5/2013 6:40 AM, Terry Wagoner wrote:
>
> Hi Joe:
>
> You are correct can seldom ever remove without breaking and if you did
> you need to cut off the old coiled end and prepare a new straight end
> for re-wrapping.
>
> The Jonard is model WDUD-2224 for 22 to 24 gauge wire of the Hybrids.
>
> Newark Electronics carries this model for $100.00 (ouch).
>
> I never re-wrap. This was assembly line method used with wire wrap
> guns. Telephone companies also employed it.
>
> If you are replacing a board easy to remove all the old wire wrap and
> lightly sand the posts and blow out and vacuum off all the conductive
> fines and then just solder the new leads back on the post. Of course
> have to get to clean new wire because if you try to use an unwrapped
> end very easy to break it.
>
> Terry K9TW
>
> -
>

[Non-text portions of this message have been removed]

42593. Re: Looking to clean my 820 - digital display keeps shifting (but not going out)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-05 23:08:04 UTC
From: M. J. Synowiec
Topic: 42587 Message: 42593

Barry & all,

I hope this finds you well. Good luck on your test. Keep the next step on your horizon and set your next goal for the General. It will really open up your options in using these 2 radios. I might suggest you follow the thread on this reflector between Terry, MIke, and Eric WD8OWB. Its heading is TS-820 low plate current. The advice Mike & Terry have given to Eric also fits your situation. Build a good foundation of knowledge and Ham radio will give you a lifetime of fun and satisfaction. If money is not an issue I would suggest holding on to the Yaesu gear. There are situations where having a no-tune solid state rig will come in handy and having rigs dedicated to different bands/antennas can also help make operating easier. The other factor is once sold it will be tough to replace it if you miss it. At least keep it until you have a knowledge base that lets you make an informed choice.

Good Luck to you again & Vy73,
Mike K8SYN

[Non-text portions of this message have been removed]

42594. Re: Advice please, wire wrap vs. other connection methods, 520SE.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-05 23:30:22 UTC
From: Terry Wagoner
Topic: 42567 Message: 42594

You are exactly correct how the wire wrap works. I too worked many many moons ago for Western Electric, but did not like the travel away from home.

I always re-solder. Problem is that the exposed end of the post has oxidized over all these years and unless cleaned to almost brite metal can not get the solder to wet very well. So I file clean and hate to do that as you are dropping the conductive fines on the PC board. I have an adapter for my shop vac and my wife helps by vacuuming as I file clean the post. Hate this as never 100% sure have all of this conductive powder removed. So far no problems, but always makes me nervous. Once you have clean metal very easy to make a wrap or two and the solder flows well.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Jim S <jimstan@...> wrote:
>
> I'll cast my vote to the "don't re-wrap" crowd. I used to work for
> Western Electric years ago. They pretty much invented the process, and
> the rule was if you had to re-wrap a post, you should always solder the
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> Just my recollection.
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> > end very easy to break it.
> >
> > Terry K9TW
> >
> > -
> >
>
>
>
> [Non-text portions of this message have been removed]
>

42595. Re: Ts-820s with low plate current

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-05 22:30:26 UTC
From: erics
Topic: 42556 Message: 42595

I checked the indicated plate voltage using the panel meter HV position and read 900vdc.

Eric

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Eric:
>
> The glow of the filaments of the finals wont be brite. These tubes filaments are in series so if one tube had open filament neither would have any glow. So any glow is usually good unless your filament voltage was low for some reason but very unlikely. Driver tube filament has nothing to do with final tube resting plate current. I was just explaining what they meant by the Heater switch.
>
> Did not go in to directly heated and indirectly heated cathodes. Something you can read about in ARRL handbook. By the way you can buy a watered down ARRL handbook off Ebay called Understanding Amateur Radio by ARRL. There was a lot of controversy when ARRL produced this book many years ago as old timers thought it was the beginning of the end of the old hobby. I bought it back then and still have it and nothing wrong with starting with it to learn the fundamentals including how vacuum tubes work. Dont have to build the projects in it just read the theory.
>
> A DMM will be fine for measuring your finals screen grid voltage and control grid operating bias voltage, but I am nervous about directing you to make these measurements.
>
> To have ability to adjust your bias voltage pot to set the resting plate current to 60ma you need:
> 1. Two good tubes. Good means no open filaments and good emission.
> 2. Operating DC bias voltage of approx -60vdc on the control grid when you flip to send.
> 3. Screen grid voltage of approx + 220vdc on the screen grids when you flip to send. (SG switch on)
> 4. Good cathode meter shunt resistors (approx 5 ohms)
> 5. Anode voltage of approx +900vdc at the plate caps of the finals
>
> First check the indicated plate voltage using your panel meter HV position. Turn on rig, set panel meter selector switch to HV, flip to Send. Meter should indicate close to 900vdc. If it measures 450vdc you have lost one of the HV filter caps.
>
> If you decide to measure control grid bias voltage and screen grid voltage we can talk some more. Is there a near by experienced Ham who could help you?
>
> Terry

42596. Re: Advice please, wire wrap vs. other connection methods, 520SE.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-05 23:41:04 UTC
From: Terry Wagoner
Topic: 42567 Message: 42596

Don:

If the Molex connector you are using is a factory matched set see no reason why wont work. I think I would like to measure the resistance across the male/female contact interface. I would think it should be as good or better than a relay contact. Most relays contact specs are a maximum of 100 milliohms with 50 milliohms considered a good contact.

As most hams dont have expensive milliohm meters I would use the standard 6V 1A relay contact test. Apply 6volts dc at 1 ampere across the molex male/female interface and use your DMM to measure the millivolt drop across this contact. With 1A load current flowing whatever MV reading you get will be the Milliohms resistance of the contact ie if you read 50.0mv then the interface resistance is 50.0 milliohms.

Would sure make it easy to change boards and to troubleshoot. Lot of work to remove boards and drill out and mount all the new male post, but when complete should be a nice mod.

Only other question I have is how will the lead wire be connected to the female pin? Will it be a crimp? Have to make sure dont introduce high resistance here. Wait a minute I think you said will be soldered on?

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "k5hfg" <dlbowders@...> wrote:
>
> Hello group,
> Since the topic has come up I have decided to show an experiment I have been working on for several months. It is not complete and not proved out so I do not recommend tearing into your rigs just yet. I am not a fan of wire wrapped terminals. Never was. I do not care to solder to the post. No matter how well I clean them some just will not solder. Besides It does not look very professional. So I have been in search of an efficient and safe connector option. I have finally settled on the sub miniature molex pins. I have set the male posts into the 530's PCB's and solder the female connector onto the wire. Notice I have not done this to the 800V connection yet. I am not sure of the size I want to use. It may not work out so easily and I have not tried any prototypes yet. The PCB holes need to be drilled out to fit the pins and it works fine with the small sizes but may not work with the larger size needed for the 2 wires on the 800V connection. Please take a look at it and give me your comments. Mike and Terry, I am hoping you look at this and let me know if you see any problems here. Maybe something I have missed or not considered. This 530 is my full filtered CW rig and I have been using it with the new connections for about 2 months. So far it has performed well. I have put a lot of work into this rig in the last year to bring it back to life so if you see something you do not like or concerns either of you please tell me. I am a hobbiest not an EE. I build most of my own stuff so I am not a stranger to criticism. I can take it. I have nobody down this way to work with. All appliance ops. HiHi
> 73, Don
>
>

> > Well. Seventy dollars for a tool that is actually worth at most worth
> > maybe TEN.
> >
> > I cannot find my old "deluxe" model one, lost some time in the last
> > couple of decades of not needing it, I guess. I think I paid about NINE
> > for it. With the insanity of prices going goofy, make that -maybe-
> > twenty today.
> >
> > Twenty, I could do. But SEVENTY?? Plus about $12 shipping, which is
> > another rip-off there, so it looks like altogether WAY too close to a
> > C-note!!
> >
> > If I had THAT kind of cash laying about I'd box the whole thing up and
> > give it to one of the hybrid repair shops which are (rightfully) so
> > well-thought-of here. (Wish I could; someone with that much experience
> > with these beasties will obviously do a MUCH better job of the whole
> > thing than I will, try I ever so hard. Just having all the right gear
> > will make the difference, even if there wasn't an experience curve.)
> >
> > That rather firmly settles that! Looks like I'll be soldering those
> > wires to the wire-wrap terminals, doesn't it?
> >
> > Particularly with the business about the wires being both short and
> > somewhat fragile, solder it shall be, then.
> >
> > --
> > Wes Will
> > N9KDY
> >
>

42597. Re: Looking to clean my 820 - digital display keeps shifting (but not going out)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-05 23:52:54 UTC
From: Terry Wagoner
Topic: 42587 Message: 42597

I forgot Gordon had these good close up pictures.

I use a artist brush and apply tri-flow to the bearing. Sometimes you will find some one else has been there before you and applied grease. A little lithium grease doesnt hurt, but dont want any hardened grease on the ball and race. Make sure you exercise VFO several times through complete rotation when you apply the DeOxit to the rotor shaft wiper. Also blow out with canned air.

Whatever you do DO NOT lubricate this wiper. The whole idea is that you want the RF current to flow from rotor to capacitor frame thru a very low resistance contact. Lubrication defeats the purpose. The wiper is made of phosphor bronze which is very high conductivity and self lubricating. Also, NEVER reach in and attempt to bend with a screwdriver or any other tool. Phosphor bronze has spring temper and designed to apply correct pressure to the machined surface on the end of the rotor shaft. Over time it just oxidizes and get blackened and green unless someone else who doesnt understand how it works may have lubed it before you. So good cleaning with DeOxit should remove any grease and oil and any oxidation.

Since you went to all this trouble spray several times and give several full rotation cycles.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Gregory Graham <tbirdgreg@...> wrote:
>
> Barry
> Your going to love that TS-820S Radio. Here is a site that will
> give you some guidance to repair the VFO problem. I have an TS-820S
> with the same problem.
> http://www.n6wk.com/kenwood/TS-820-VFO--servicing.pdf My advice
> keep the spare radio.
>
> NR6C
> Gregory
>
>
> On 6/5/2013 12:10 PM, Barry wrote:
> >
> > My Great Uncle has been put in a nursing home but sold me his TS-820
> > with the VFO, MC-50 mic and speaker, and I take my Tech exam a week
> > from Saturday. I'm excited to get the license so I can start talking,
> > but in the meantime I've been playing around listening to the TS-820.
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> > He also sold me a Yaesu FT-757GX with its power supply and FT-757AT
> > automatic antenna tuner, so I'm going back and forth listening to each

> > of them.
> >
> > I'm really liking the Kenwood, though. I'm tempted to sell the Yaesu
> > and keep the 820! I know very little about them, though - I've never
> > been a ham but have always been interested.
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> > How hard is it to clean contacts on the 820 without getting shocked to
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> > display to quit hopping around like it does. It changes numbers often
> > rapidly, but thankfully it doesn't just completely go off. It's just
> > fairly erratic in changing frequency numbers.
> >
> > Any help you can give me would be so greatly appreciated! I'm sorry
> > I'm not as up to speed as everybody here, but I'm trying to learn
> > quickly so I can contribute to the group. I am not a complete tech
> > newbie - I do the IT at our church and am very technically oriented,
> > but I've never worked with ham radios.
> >
> > Thanks to everybody.
> >
> > Barry
> >
> > ----------
> >
> > Jeremiah 29:11-13
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

42598. Re: Advice please, wire wrap vs. other connection methods, 520SE.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-06 00:09:02 UTC
From: k5hfg
Topic: 42567 Message: 42598

Terry,
I will set up and do the mOhms test. Have to work up a 6V 1A supply. Have to see what I have and will let you know. I did voltage checks after the mod and did not see a difference. All worked same as before. I had thought about the contact points but did not think to run this test and the voltage checks in rx and tx were good. But that is why I put this post out. Good info. Thanks. By the way, the pins are matched sets.
Also, I took the Rigol plunge so keep looking for your commission.

Don K5HFG

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Don:
>
> If the Molex connector you are using is a factory matched set see no reason why wont work. I think I would like to measure the resistance across the male/female contact interface. I would think it should be as good or better than a relay contact. Most relays contact specs are a maximum of 100 milliohms with 50 milliohms considered a good contact.
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> As most hams dont have expensive milliohm meters I would use the standard 6V 1A relay contact test. Apply 6volts dc at 1 ampere across the molex male/female interface and use your DMM to measure the millivolt drop across this contact. With 1A load current flowing whatever MV reading you get will be the Milliohms resistance of the contact ie if you read 50.0mv then the interface resistance is 50.0 milliohms.
>
> Would sure make it easy to change boards and to troubleshoot. Lot of work to remove boards and drill out and mount all the new male post, but when complete should be a nice mod.
>
> Only other question I have is how will the lead wire be connected to the female pin? Will it be a crimp? Have to make sure dont introduce high resistance here. Wait a minute I think you said will be soldered on?
>
> Terry K9TW

42599. Re: Advice please, wire wrap vs. other connection methods, 520SE.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-06 00:16:48 UTC
From: Terry Wagoner
Topic: 42567 Message: 42599

OK Don just a suggestion. If a factory matched set probably just fine.

I suppose weekly you could plug and unplug to wipe the contact area! I suspect no difference than any of the other Molex connector rigs until about 30 years from now. As you know they are not without there problems.

Let me know what you think about the Rigol when you get it.

Will keep eye out for the check!

73s Terry

--- In TS-520_820_530_830@yahoogroups.com, "k5hfg" <dlbowders@...> wrote:
>
> Terry,
> I will set up and do the mOhms test. Have to work up a 6V 1A supply. Have to see what I have and will let you know. I did voltage checks after the mod and did not see a difference. All worked same as before. I had thought about the contact points but did not think to run this test and the voltage checks in rx and tx were good. But that is why I put this post out. Good info. Thanks. By the way, the pins are matched sets.
> Also, I took the Rigol plunge so keep looking for your commission.
>
> Don K5HFG
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
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> > Don:
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> > Terry K9TW
>

42600. TS 820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-05 23:56:02 UTC
From: ke7kpb
Topic: 42600 Message: 42600

I have a dumb question. I am trying to hook up a Ameritron 811a amp the the ts 820s and I used pin 4 for the common ground and pin 5 for the relay and pin 6 for the alc on the remote connector. According to the diagram between pin 4 and pin 5 should be a n/o contact for the keying the amp or am I doing something wrong? The amp will not key.
Robert.

42601. RE: [Bulk] [TS-520_820_530_830] Re: Advice please, wire wrap vs. other connection methods, 520SE.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-06 01:13:02 UTC
From: Brad Allen
Topic: 42567 Message: 42601

Wire wrap is the primary way wires are connected in the telephone and communications industry. It has been that way for many years. In some parts, things are soldered as that was the standard at one time. There is nothing at all wrong with wire wrap. Not even a need to solder it. It produces a good enough connection for just about anything. Wire Wrap guns are reasonable in cost. One can get one from OK tools and there are various tips. They even have ones that are motorized. I think you have a problem that is not a problem at all. If done neat, wire wrap is a good way for connections. I don't see an issue at all. Brad KB2CHY

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
Sent: Wednesday, June 05, 2013 7:41 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [Bulk] [TS-520_820_530_830] Re: Advice please, wire wrap vs. other connection methods, 520SE.

Don:

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Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> , "k5hfg" <dlbowders@...>

wrote:
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> > --
> > Wes Will
> > N9KDY
> >
>

[Non-text portions of this message have been removed]

42602. Re: [Bulk] [TS-520_820_530_830] Re: Advice please, wire wrap vs. other connection methods, 520SE.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-06 01:26:16 UTC
From: Bob Macklin
Topic: 42567 Message: 42602

There are pins available for use with 25mil square posts. But they are designed to be crimped to the wire. You do not want to crimp to a wire wrap wire. You need to solder them.

I have a batch of these pins but I don't have the part number.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Brad Allen
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, June 05, 2013 6:13 PM
Subject: RE: [Bulk] [TS-520_820_530_830] Re: Advice please, wire wrap vs. other connection methods, 520SE.

Wire wrap is the primary way wires are connected in the telephone and communications industry. It has been that way for many years. In some parts, things are soldered as that was the standard at one time. There is nothing at all wrong with wire wrap. Not even a need to solder it. It produces a good enough connection for just about anything. Wire Wrap guns are reasonable in cost. One can get one from OK tools and there are various tips. They even have ones that are motorized. I think you have a problem that is not a problem at all. If done neat, wire wrap is a good way for connections. I don't see an issue at all. Brad KB2CHY

_____

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
Sent: Wednesday, June 05, 2013 7:41 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [Bulk] [TS-520_820_530_830] Re: Advice please, wire wrap vs. other connection methods, 520SE.

Don:

If the Molex connector you are using is a factory matched set see no reason why wont work. I think I would like to measure the resistance across the male/female contact interface. I would think it should be as good or better than a relay contact. Most relays contact specs are a maximum of 100 milliohms with 50 milliohms considered a good contact.

As most hams dont have expensive milliohm meters I would use the standard 6V 1A relay contact test. Apply 6volts dc at 1 ampere across the molex

male/female interface and use your DMM to measure the millivolt drop across this contact. With 1A load current flowing whatever MV reading you get will be the Milliohms resistance of the contact ie if you read 50.0mv then the interface resistance is 50.0 milliohms.

Would sure make it easy to change boards and to troubleshoot. Lot of work to remove boards and drill out and mount all the new male post, but when complete should be a nice mod.

Only other question I have is how will the lead wire be connected to the female pin? Will it be a crimp? Have to make sure dont introduce high resistance here. Wait a minute I think you said will be soldered on?

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> , "k5hfg" <dlbowders@...> wrote:
>
> Hello group,
> Since the topic has come up I have decided to show an experiment I have been working on for several months. It is not complete and not proved out so I do not recommend tearing into your rigs just yet. I am not a fan of wire wrapped terminals. Never was. I do not care to solder to the post. No matter how well I clean them some just will not solder. Besides It does not look very professional. So I have been in search of an efficient and safe connector option. I have finally settled on the sub miniature molex pins. I have set the male posts into the 530's PCB's and solder the female connector onto the wire. Notice I have not done this to the 800V connection yet. I am not sure of the size I want to use. It may not work out so easily and I have not tried any prototypes yet. The PCB holes need to be drilled out to fit the pins and it works fine with the small sizes but may not work with the larger size needed for the 2 wires on the 800V connection. Please take a look at it and give me your comments. Mike and Terry, I am hoping you look at this and let me know if you see any problems here. Maybe something I have missed or not considered. This 530 is my full filtered CW rig and I have been using it with the new connections for about 2 months. So far it has performed well. I have put a lot of work into this rig in the last year to bring it back to life so if you see something you do not like or concerns either of you please tell me. I am a hobbiest not an EE. I build most of my own stuff so I am not a stranger to criticism. I can take it. I have nobody down this way to work with. All appliance ops. HiHi
> 73, Don
>
>
> > Well. Seventy dollars for a tool that is actually worth at most worth
> > maybe TEN.
> >
> > I cannot find my old "deluxe" model one, lost some time in the last
> > couple of decades of not needing it, I guess. I think I paid about NINE
> > for it. With the insanity of prices going goofy, make that -maybe-

> > twenty today.
> >
> > Twenty, I could do. But SEVENTY?? Plus about $12 shipping, which is
> > another rip-off there, so it looks like altogether WAY too close to a
> > C-note!!
> >
> > If I had THAT kind of cash laying about I'd box the whole thing up and
> > give it to one of the hybrid repair shops which are (rightfully) so
> > well-thought-of here. (Wish I could; someone with that much experience
> > with these beasties will obviously do a MUCH better job of the whole
> > thing than I will, try I ever so hard. Just having all the right gear
> > will make the difference, even if there wasn't an experience curve.)
> >
> > That rather firmly settles that! Looks like I'll be soldering those
> > wires to the wire-wrap terminals, doesn't it?
> >
> > Particularly with the business about the wires being both short and
> > somewhat fragile, solder it shall be, then.
> >
> > --
> > Wes Will
> > N9KDY
> >
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

42603. Re: [TS-520_820_530_830] TS 820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-06 02:26:41 UTC
From: Mike
Topic: 42600 Message: 42603

Robert,

Did you forget to flip the amplifier's XMT/STBY switch to XMT? If the wiring is right between the AL-811 and the transceiver's rear accessory socket but the XMT/STBY switch on the amp is in "STBY" then the amp won't key. This is a switch that quite often is not set to XMT which prevents the amp from being keyed. When the wiring between the 820 and the amp's RELAY socket is right AND the XMT/STBY switch is set to XMT, the amp will key and the RED led above the XMT/STBY switch should light.

If you suspect the relay is not working in the amp, simply short the RELAY socket's center connector to the amp's chassis with NO Rf drive applied to the amp and the XMT/STBY switch set to XMT, the relay should energize in the amp.

I use simple stereo interconnecting cables cut to the length I need, leaving one end with an RCA male plug that fits the AL-811 RELAY socket. The center conductor of the stereo cable connects to pon 5 and the shield to pin 4 on the 820's 8 pin socket. ALC is connected using same stereo cables cut to length, center wire is connected to pin 6 and shield to pin 1 or 4 on the 820's accessory octal socket. The amplifier voltage and current is "12VDC at 100ma" so stereo cables can easily handle the voltage and current. I have the AL-811 3 tube amp.

73
Mike W5RKL

On 6/5/2013 6:56 PM, ke7kpb wrote:
>
> I have a dumb question. I am trying to hook up a Ameritron 811a amp
> the the ts 820s and I used pin 4 for the common ground and pin 5 for
> the relay and pin 6 for the alc on the remote connector. According to
> the diagram between pin 4 and pin 5 should be a n/o contact for the
> keying the amp or am I doing something wrong? The amp will not key.
> Robert.
>
>

[Non-text portions of this message have been removed]

42604. Re: [TS-520_820_530_830] Re: Advice please, wire wrap vs. other connection methods, 520SE.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-06 02:28:47 UTC
From: Mike
Topic: 42567 Message: 42604

A quick source of 6VDC is a 6VDC lantern battery. You can get them at
Walmart.

73
Mike W5RKL

On 6/5/2013 7:09 PM, k5hfg wrote:
>
> Terry,
> I will set up and do the mOhms test. Have to work up a 6V 1A supply.
> Have to see what I have and will let you know. I did voltage checks
> after the mod and did not see a difference. All worked same as before.
> I had thought about the contact points but did not think to run this
> test and the voltage checks in rx and tx were good. But that is why I
> put this post out. Good info. Thanks. By the way, the pins are matched
> sets.
> Also, I took the Rigol plunge so keep looking for your commission.
>
> Don K5HFG
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Terry Wagoner"
> <wagstw46@...> wrote:
> >
> > Don:
> >
> > If the Molex connector you are using is a factory matched set see no
> reason why wont work. I think I would like to measure the resistance
> across the male/female contact interface. I would think it should be
> as good or better than a relay contact. Most relays contact specs are
> a maximum of 100 milliohms with 50 milliohms considered a good contact.
> >
> > As most hams dont have expensive milliohm meters I would use the
> standard 6V 1A relay contact test. Apply 6volts dc at 1 ampere across
> the molex male/female interface and use your DMM to measure the
> millivolt drop across this contact. With 1A load current flowing
> whatever MV reading you get will be the Milliohms resistance of the
> contact ie if you read 50.0mv then the interface resistance is 50.0
> milliohms.
> >
> > Would sure make it easy to change boards and to troubleshoot. Lot of
> work to remove boards and drill out and mount all the new male post,
> but when complete should be a nice mod.
> >

> > Only other question I have is how will the lead wire be connected to
> the female pin? Will it be a crimp? Have to make sure dont introduce
> high resistance here. Wait a minute I think you said will be soldered on?
> >
> > Terry K9TW
>
>

[Non-text portions of this message have been removed]

42605. Re: [TS-520_820_530_830] Re: Advice please, wire wrap vs. other connection methods, 520SE.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-06 02:34:22 UTC
From: Mike
Topic: 42567 Message: 42605

I may have misspoke since I don't know if a 6VDC lantern battery can
provide 1 amp of current.

73
Mike W5RKL

On 6/5/2013 9:28 PM, Mike wrote:
>
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> Walmart.
>
> 73
> Mike W5RKL
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> On 6/5/2013 7:09 PM, k5hfg wrote:
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> > sets.
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> >
> > Don K5HFG
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Terry Wagoner"
> > <wagstw46@...> wrote:
> > >
> > > Don:
> > >
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> > reason why wont work. I think I would like to measure the resistance
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> > >
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> > but when complete should be a nice mod.
> > >
> > > Only other question I have is how will the lead wire be connected to
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> soldered on?
> > >
> > > Terry K9TW
> >
> >
>
> [Non-text portions of this message have been removed]
>
>

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42606. Re: [TS-520_820_530_830] Re: Advice please, wire wrap vs. other connection methods, 520SE.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-06 02:38:38 UTC
From: Bob Macklin
Topic: 42567 Message: 42606

It can long enough to make the measurement!

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: Mike
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, June 05, 2013 7:34 PM
Subject: Re: [TS-520_820_530_830] Re: Advice please, wire wrap vs. other connection methods, 520SE.

I may have misspoke since I don't know if a 6VDC lantern battery can
provide 1 amp of current.

73
Mike W5RKL

On 6/5/2013 9:28 PM, Mike wrote:
>
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> Walmart.
>
> 73
> Mike W5RKL
>
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> > I had thought about the contact points but did not think to run this
> > test and the voltage checks in rx and tx were good. But that is why I
> > put this post out. Good info. Thanks. By the way, the pins are matched
> > sets.
> > Also, I took the Rigol plunge so keep looking for your commission.
> >
> > Don K5HFG
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Terry Wagoner"

> > <wagstw46@...> wrote:
> > >
> > > Don:
> > >
> > > If the Molex connector you are using is a factory matched set see no
> > reason why wont work. I think I would like to measure the resistance
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> > contact ie if you read 50.0mv then the interface resistance is 50.0
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> > >
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> > >
> > > Terry K9TW
> >
> >
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

42607. Re: ts-820. CAR control cranked < >

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-06 03:24:48 UTC
From: kd0fds
Topic: 42178 Message: 42607

Thanks for all the help Hybrid Users team!
Got back from vacation and installed an INRAD #98 in place of the used TRIO CW filter.
The radio tunes normally. CAR control is around 4 to get full drive instead of around 8.
Just like it is was when I had no CW filter.

So, the problem was the actual filter itself.

The final measurement came down to looking at the amplitude of the waveform on the oscilloscope before and after the filter and comparing it to Terry's expected loss.

One more success story for the group!
Thanks, Stephen

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> I have a nice audio generator and it is required for some of the alignment, but today I doubt I would buy one. As you used your guitar tuner for audio lots of ways to get accurate audio signal tones and levels today with a lap-top pc and sound card and wide range of tone generator soft ware (some free) available to us.
>
> Yes not likely that switching diodes or bias to turn them on was the problem but needed to check the entire change you made.
>
> O-scope would have shown you filter input and output signals so pretty easy to tell that filter was causing high level of insertion loss requiring higher level of Carrier Oscillator output from Balanced Modulator.
>
> We all take a chance when we buy used part either off internet or hamfesting. Use to be a little more integrity. Very different times.
>
> Take Care
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "kd0fds" <kd0fds@> wrote:
> >
> > Terry.
> >
> > I have read some of the hybrid required test equipment posts. I will search and read up on it more today.
> >
> > Today I use what I have and wish I had more. (I have used my guitar tuner as an AF signal generator for example.)
> >
> > I worked on the TS-820 last night with my oscillospoce and my frequency counter, the Kenwood service manual, a DMM, and my new TS-820s notebook.
> >

> > I slipped up on this project from the start. I didn't ask the universal repair question:
> >
> > "OK. Who worked on this bucket last and what did they do?"
> > Last action: I added the CW filter.
> >
> > After checking/adjusting a bunch of stuff, I still had to tune up with the CAR control cranked last night.
> >
> > I moved the IF1 connector on the RF board to to position "A." Ta-da. No more CW filter in use and no more full clockwise CAR control requirement to get full output. Rig is back to "normal."
> >
> > I got out the schematic and walked along the CW path so I knew what to try to test. There isn't much on that circuit to look. My current guess? The used filter itself is at fault. I'll re-read Mike's testing the filter stuff in this tread. (Loved the "adjust with hammer" comment.) and the INRAD alignment instructions in the "files" section to learn more.
> >
> > THE PLAN:
> >
> > Read up on the INRAD stuff in the files section.
> > Research bench gear for properly maintaining my hybrid.
> > I'll order up parts so I can work on the radio in June.
> >
> > More news in June.
> > Thanks again, Stephen
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > >
> > > Stephen:
> > >
> > > Yes you could remove it and see if rig tunes as it did before and does not require significantly more CAR level. This would tell you that Carrier Oscillator level is close to spec. However, tells you nothing about the CW filter or its switching diodes.
> > >
> > > All of us had to start building test bench slowly over time. I and Mike and others have posted many times on what is needed at a minimum to troubleshoot and maintain a Kenwood Hybrid and in what order to buy each piece. You dont need a lab grade RF bench, but something on order of Heathkit level is needed at a minimum. Sometimes there are alternate methods to accomplish the steps and other times you have to bite the bullet and realize the easiest and best method is to use the service manual prescribed test gear. There is no "only one way" but very often one way is clearly superior to others.
> > >
> > > Filters can be swept manually and the response shapes plotted on graph paper. I bit tedious but was done that way for years. I have notebook full of graphs before I got a decent sweep generator. Now I am lusting for VNA and/or Spectrum Analyzer and Tracking Generator. Even the old manual method requires a rf signal generator and a means to detect

the RF output voltage at the frequency steps you inject.
> > >
> > > I dont know any way to measure the filter insertion loss without a means to measure the RF voltage at the input and at the output of the filter. Can use the rigs internal Carrier Osc signal, but still need a RF millivolt meter or an O-scope. No way around it.
> > >
> > > If you want to test the filter on the bench you can do that but you should terminate the input and output. I wont go into that test procedure here. Once you get correct gear I highly recommend you sweep any used filter on the bench before installing in rig.
> > >
> > > Absent a RF signal generator I think it is best for you to leave filter in the rig and use the Car Oscillator as your signal source. If you have a near by club might ask if someone will loan you an O-scope or RF millivolt meter or let you bring rig to their bench.
> > >
> > > I freely do that for folks who are really trying to help themselves.
> > >
> > > Take Care
> > > Terry K9TW
> > >
> >
>

42608. Re: Ts-820s with low plate current

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-06 10:22:42 UTC
From: Terry Wagoner
Topic: 42556 Message: 42608

Ok as I mentioned this tells you that your HV power supply is working, but not that you have 900vdc on each tube anode. We will safe that for last.

With the rig off you can safely measure the cathode resistors. As I mentioned if they were blown open you would have no plate current at all. With 10 ma resting plate current they cannot be open, but typically they do drift high with age. Measure from Pin 1 of 6146 tube socket on Final board to chassis ground.

Really need to measure operating bias and screen grid voltages. If you are comfortable I would place jumper lead on your negative or black test prod of your DMM and connect it to chassis ground. This gives you only one test prod to handle and control. Now you can touch the positive or red prod to the 6146 tube socket pins to make the voltage checks. You will take two sets of readings. One in receive mode and one with the rig flipped to Send. Again make sure Screen Grid switch is turned on.

You will measure operating bias at the final board 6146 tube socket Pin 5. In receive you will have approx -100vdc and with rig flipped to Send you will have approx -60vdc. You will measure screen grid voltage at Pin 3. In receive you will have approx +260vdc and with rig flipped to Send you will have approx +220vdc.

Make sure your test leads for your DMM are in good shape with no cracked insulation and no conductors exposed at the bananna plug ends at the meter or at the probe/prod ends.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "erics" <selle@...> wrote:
>
> I checked the indicated plate voltage using the panel meter HV position and read 900vdc.
>
> Eric
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Eric:
> >
> > The glow of the filaments of the finals wont be brite. These tubes filaments are in series so if one tube had open filament neither would have any glow. So any glow is usually good unless your filament voltage was low for some reason but very unlikely. Driver tube filament has nothing to do with final tube resting plate current. I was just explaining what they meant by the Heater switch.
> >
> > Did not go in to directly heated and indirectly heated cathodes. Something you can read about in ARRL handbook. By the way you can buy a watered down ARRL handbook off Ebay called Understanding Amateur Radio by ARRL. There was a lot of controversy when ARRL produced this book many years ago as old timers thought it was the beginning of the end of the old hobby. I bought it back then and still have it and nothing wrong with starting with it to learn

the fundamentals including how vacuum tubes work. Dont have to build the projects in it just read the theory.
> >
> > A DMM will be fine for measuring your finals screen grid voltage and control grid operating bias voltage, but I am nervous about directing you to make these measurements.
> >
> > To have ability to adjust your bias voltage pot to set the resting plate current to 60ma you need:
> > 1. Two good tubes. Good means no open filaments and good emission.
> > 2. Operating DC bias voltage of approx -60vdc on the control grid when you flip to send.
> > 3. Screen grid voltage of approx + 220vdc on the screen grids when you flip to send. (SG switch on)
> > 4. Good cathode meter shunt resistors (approx 5 ohms)
> > 5. Anode voltage of approx +900vdc at the plate caps of the finals
> >
> > First check the indicated plate voltage using your panel meter HV position. Turn on rig, set panel meter selector switch to HV, flip to Send. Meter should indicate close to 900vdc. If it measures 450vdc you have lost one of the HV filter caps.
> >
> > If you decide to measure control grid bias voltage and screen grid voltage we can talk some more. Is there a near by experienced Ham who could help you?
> >
> > Terry
>

42609. Re: ts-820. CAR control cranked < >

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-06 10:26:16 UTC
From: Terry Wagoner
Topic: 42178 Message: 42609

Thanks for the closure. Enjoy Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "kd0fds" <kd0fds@...> wrote:
>
> Thanks for all the help Hybrid Users team!
> Got back from vacation and installed an INRAD #98 in place of the used TRIO CW filter.
> The radio tunes normally. CAR control is around 4 to get full drive instead of around 8. Just like it is was when I had no CW filter.
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> So, the problem was the actual filter itself.
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>
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> > > Today I use what I have and wish I had more. (I have used my guitar tuner as an AF signal generator for example.)
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> > >
> > > "OK. Who worked on this bucket last and what did they do?"
> > > Last action: I added the CW filter.
> > >
> > > After checking/adjusting a bunch of stuff, I still had to tune up with the CAR control cranked last night.
> > >
> > > I moved the IF1 connector on the RF board to to position "A." Ta-da. No more CW filter in use and no more full clockwise CAR control requirement to get full output. Rig is back to "normal."
> > >
> > > I got out the schematic and walked along the CW path so I knew what to try to test. There isn't much on that circuit to look. My current guess? The used filter itself is at fault. I'll re-read Mike's testing the filter stuff in this tread. (Loved the "adjust with hammer" comment.) and the INRAD alignment instructions in the "files" section to learn more.
> > >
> > > THE PLAN:
> > >
> > > Read up on the INRAD stuff in the files section.
> > > Research bench gear for properly maintaining my hybrid.
> > > I'll order up parts so I can work on the radio in June.
> > >
> > > More news in June.
> > > Thanks again, Stephen
> > >
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > > >
> > > > Stephen:
> > > >
> > > > Yes you could remove it and see if rig tunes as it did before and does not require significantly more CAR level. This would tell you that Carrier Oscillator level is close to spec. However, tells you nothing about the CW filter or its switching diodes.
> > > >
> > > > All of us had to start building test bench slowly over time. I and Mike and others have posted many times on what is needed at a minimum to troubleshoot and maintain a Kenwood Hybrid and in what order to buy each piece. You dont need a lab grade RF bench, but

something on order of Heathkit level is needed at a minimum. Sometimes there are alternate methods to accomplish the steps and other times you have to bite the bullet and realize the easiest and best method is to use the service manual prescribed test gear. There is no "only one way" but very often one way is clearly superior to others.
> > > >
> > > > Filters can be swept manually and the response shapes plotted on graph paper. I bit tedious but was done that way for years. I have notebook full of graphs before I got a decent sweep generator. Now I am lusting for VNA and/or Spectrum Analyzer and Tracking Generator. Even the old manual method requires a rf signal generator and a means to detect the RF output voltage at the frequency steps you inject.
> > > >
> > > > I dont know any way to measure the filter insertion loss without a means to measure the RF voltage at the input and at the output of the filter. Can use the rigs internal Carrier Osc signal, but still need a RF millivolt meter or an O-scope. No way around it.
> > > >
> > > > If you want to test the filter on the bench you can do that but you should terminate the input and output. I wont go into that test procedure here. Once you get correct gear I highly recommend you sweep any used filter on the bench before installing in rig.
> > > >
> > > > Absent a RF signal generator I think it is best for you to leave filter in the rig and use the Car Oscillator as your signal source. If you have a near by club might ask if someone will loan you an O-scope or RF millivolt meter or let you bring rig to their bench.
> > > >
> > > > I freely do that for folks who are really trying to help themselves.
> > > >
> > > > Take Care
> > > > Terry K9TW
> > > >
> > >
> >
>

42610. [Bulk] [TS-520_820_530_830] Re: Advice please, wire wrap vs. other connection methods, 520SE.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-06 10:49:55 UTC
From: Terry Wagoner
Topic: 42567 Message: 42610

Brad the problem is once you unwrap (people are doing this by just grabbing end of the lead wire and untwisting it off the post) you end up with a brittle coiled end that commonly breaks off and you cannot re-wrap of course without the proper tool and almost always have to cut back to sufficient length of fresh conductor and the lead wire may now be too short. Also, some post have two wraps on them. The density on some boards like the IF board means you have very close quarters to work with and not easy to get a tool in there.

Troubleshooting would be so much easier if you could simply unplug and plug the lead from the terminal post.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Brad Allen" <kb2chy@...> wrote:
>
> Wire wrap is the primary way wires are connected in the telephone and
> communications industry. It has been that way for many years. In some parts,
> things are soldered as that was the standard at one time. There is nothing
> at all wrong with wire wrap. Not even a need to solder it. It produces a
> good enough connection for just about anything. Wire Wrap guns are
> reasonable in cost. One can get one from OK tools and there are various
> tips. They even have ones that are motorized. I think you have a problem
> that is not a problem at all. If done neat, wire wrap is a good way for
> connections. I don't see an issue at all. Brad KB2CHY
>
>
>
> _____
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
> Sent: Wednesday, June 05, 2013 7:41 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [Bulk] [TS-520_820_530_830] Re: Advice please, wire wrap vs. other
> connection methods, 520SE.
>
>
>
>
>
>
> Don:
>
> If the Molex connector you are using is a factory matched set see no reason
> why wont work. I think I would like to measure the resistance across the
> male/female contact interface. I would think it should be as good or better

> than a relay contact. Most relays contact specs are a maximum of 100
> milliohms with 50 milliohms considered a good contact.
>
> As most hams dont have expensive milliohm meters I would use the standard 6V
> 1A relay contact test. Apply 6volts dc at 1 ampere across the molex
> male/female interface and use your DMM to measure the millivolt drop across
> this contact. With 1A load current flowing whatever MV reading you get will
> be the Milliohms resistance of the contact ie if you read 50.0mv then the
> interface resistance is 50.0 milliohms.
>
> Would sure make it easy to change boards and to troubleshoot. Lot of work to
> remove boards and drill out and mount all the new male post, but when
> complete should be a nice mod.
>
> Only other question I have is how will the lead wire be connected to the
> female pin? Will it be a crimp? Have to make sure dont introduce high
> resistance here. Wait a minute I think you said will be soldered on?
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com> , "k5hfg" <dlbowders@>
> wrote:
> >
> > Hello group,
> > Since the topic has come up I have decided to show an experiment I have
> been working on for several months. It is not complete and not proved out so
> I do not recommend tearing into your rigs just yet. I am not a fan of wire
> wrapped terminals. Never was. I do not care to solder to the post. No matter
> how well I clean them some just will not solder. Besides It does not look
> very professional. So I have been in search of an efficient and safe
> connector option. I have finally settled on the sub miniature molex pins. I
> have set the male posts into the 530's PCB's and solder the female connector
> onto the wire. Notice I have not done this to the 800V connection yet. I am
> not sure of the size I want to use. It may not work out so easily and I have
> not tried any prototypes yet. The PCB holes need to be drilled out to fit
> the pins and it works fine with the small sizes but may not work with the
> larger size needed for the 2 wires on the 800V connection. Please take a
> look at it and give me your comments. Mike and Terry, I am hoping you look
> at this and let me know if you see any problems here. Maybe something I have
> missed or not considered. This 530 is my full filtered CW rig and I have
> been using it with the new connections for about 2 months. So far it has
> performed well. I have put a lot of work into this rig in the last year to
> bring it back to life so if you see something you do not like or concerns
> either of you please tell me. I am a hobbiest not an EE. I build most of my
> own stuff so I am not a stranger to criticism. I can take it. I have nobody
> down this way to work with. All appliance ops. HiHi
> > 73, Don
> >
> >

> > > Well. Seventy dollars for a tool that is actually worth at most worth
> > > maybe TEN.
> > >
> > > I cannot find my old "deluxe" model one, lost some time in the last
> > > couple of decades of not needing it, I guess. I think I paid about NINE
> > > for it. With the insanity of prices going goofy, make that -maybe-
> > > twenty today.
> > >
> > > Twenty, I could do. But SEVENTY?? Plus about $12 shipping, which is
> > > another rip-off there, so it looks like altogether WAY too close to a
> > > C-note!!
> > >
> > > If I had THAT kind of cash laying about I'd box the whole thing up and
> > > give it to one of the hybrid repair shops which are (rightfully) so
> > > well-thought-of here. (Wish I could; someone with that much experience
> > > with these beasties will obviously do a MUCH better job of the whole
> > > thing than I will, try I ever so hard. Just having all the right gear
> > > will make the difference, even if there wasn't an experience curve.)
> > >
> > > That rather firmly settles that! Looks like I'll be soldering those
> > > wires to the wire-wrap terminals, doesn't it?
> > >
> > > Particularly with the business about the wires being both short and
> > > somewhat fragile, solder it shall be, then.
> > >
> > > --
> > > Wes Will
> > > N9KDY
> > >
> >
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

42611. Re: Advice please, wire wrap vs. other connection methods, 520SE.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-06 11:30:04 UTC
From: Terry Wagoner
Topic: 42567 Message: 42611

Yes it will work. It does not have to be 6vdc. You could use a 12vdc or 13.8vdc rig power supply. Relay engineers standardized on 6vdc and 1amp as the power level that provides enough heating to puncture the film that develops on relay contacts.

Here is a simple low cost milliohm adapter for your DMM that uses a LM317 to provide constant current source.

How would you use it? Well anytime you suspect bad RL-1 Aux relay or RL-1 Antenna relay contacts you can measure the before and after resistance and the effectiveness of cleaning of the contacts.

www.aeroelectric.com/articles/LowOhmsAdapter_3.pdf□

--- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@...> wrote:
>
> It can long enough to make the measurement!
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
>
>

42612. Re: Advice please, wire wrap vs. other connection methods, 520SE.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-06 12:09:26 UTC
From: Terry Wagoner
Topic: 42567 Message: 42612

This probably doesnt need to be said, but you just dont just place 6vdc or 12vdc power source across low ohm resistance you want to measure. You will have a whole lot more than 1 amp for a short period of time!

I have a bench supply that has adjustable voltage and current output. If you use a 6vdc battery you will need series resistor of 6 ohms to limit current to 1 amp. P= 6 vdc x 1 amp = 6 watts so a 10 watt resistor would be a good value.

6 ohm resistors are commonly available for LED lights for auto application. Check Ebay or just make your own by paralleling resistors.

Sorry if telling you the obvious.

Terry K9TW
--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Yes it will work. It does not have to be 6vdc. You could use a 12vdc or 13.8vdc rig power supply. Relay engineers standardized on 6vdc and 1amp as the power level that provides enough heating to puncture the film that develops on relay contacts.
>
> Here is a simple low cost milliohm adapter for your DMM that uses a LM317 to provide constant current source.
>
> How would you use it? Well anytime you suspect bad RL-1 Aux relay or RL-1 Antenna relay contacts you can measure the before and after resistance and the effectiveness of cleaning of the contacts.
>
> www.aeroelectric.com/articles/LowOhmsAdapter_3.pdf□
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@> wrote:
> >
> > It can long enough to make the measurement!
> >
> > Bob Macklin
> > K5MYJ
> > Seattle, Wa.
> > "Real Radios Glow In The Dark"
> >
> >
>

42613. Re: Advice please, wire wrap vs. other connection methods, 520SE.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-06 12:50:57 UTC
From: Terry Wagoner
Topic: 42567 Message: 42613

A standard carbon-zinc 6 volt lantern battery is rated at approx 7AH so it would supply 1 amp for about 7 hours. I think you can go to Dollar Store and buy a plastic holder for four 1.5vdc "D" cells. Probably cheaper than buying a Lantern battery. OK enough on this subject!

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> This probably doesnt need to be said, but you just dont just place 6vdc or 12vdc power source across low ohm resistance you want to measure. You will have a whole lot more than 1 amp for a short period of time!
>
> I have a bench supply that has adjustable voltage and current output. If you use a 6vdc battery you will need series resistor of 6 ohms to limit current to 1 amp. P= 6 vdc x 1 amp = 6 watts so a 10 watt resistor would be a good value.
>
> 6 ohm resistors are commonly available for LED lights for auto application. Check Ebay or just make your own by paralleling resistors.
>
> Sorry if telling you the obvious.
>
> Terry K9TW
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Yes it will work. It does not have to be 6vdc. You could use a 12vdc or 13.8vdc rig power supply. Relay engineers standardized on 6vdc and 1amp as the power level that provides enough heating to puncture the film that develops on relay contacts.
> >
> > Here is a simple low cost milliohm adapter for your DMM that uses a LM317 to provide constant current source.
> >
> > How would you use it? Well anytime you suspect bad RL-1 Aux relay or RL-1 Antenna relay contacts you can measure the before and after resistance and the effectiveness of cleaning of the contacts.
> >
> > www.aeroelectric.com/articles/LowOhmsAdapter_3.pdf□
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@> wrote:
> > >
> > > It can long enough to make the measurement!
> > >
> > > Bob Macklin
> > > K5MYJ
> > > Seattle, Wa.
> > > "Real Radios Glow In The Dark"
> > >
> > >

> >
>

42614. Re: [TS-520_820_530_830] Re: Advice please, wire wrap vs. other connection methods, 520SE.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-06 13:03:11 UTC
From: Mike
Topic: 42567 Message: 42614

I agree and I should have said that in my response.

Mike W5RKL

On 6/6/2013 7:09 AM, Terry Wagoner wrote:
>
> This probably doesnt need to be said, but you just dont just place
> 6vdc or 12vdc power source across low ohm resistance you want to
> measure. You will have a whole lot more than 1 amp for a short period
> of time!
>
> I have a bench supply that has adjustable voltage and current output.
> If you use a 6vdc battery you will need series resistor of 6 ohms to
> limit current to 1 amp. P= 6 vdc x 1 amp = 6 watts so a 10 watt
> resistor would be a good value.
>
> 6 ohm resistors are commonly available for LED lights for auto
> application. Check Ebay or just make your own by paralleling resistors.
>
> Sorry if telling you the obvious.
>
> Terry K9TW
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Terry Wagoner"
> <wagstw46@...> wrote:
> >
> > Yes it will work. It does not have to be 6vdc. You could use a 12vdc
> or 13.8vdc rig power supply. Relay engineers standardized on 6vdc and
> 1amp as the power level that provides enough heating to puncture the
> film that develops on relay contacts.
> >
> > Here is a simple low cost milliohm adapter for your DMM that uses a
> LM317 to provide constant current source.
> >
> > How would you use it? Well anytime you suspect bad RL-1 Aux relay or
> RL-1 Antenna relay contacts you can measure the before and after
> resistance and the effectiveness of cleaning of the contacts.
> >
> > www.aeroelectric.com/articles/LowOhmsAdapter_3.pdf?
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Bob Macklin"

> <macklinbob@> wrote:
> > >
> > > It can long enough to make the measurement!
> > >
> > > Bob Macklin
> > > K5MYJ
> > > Seattle, Wa.
> > > "Real Radios Glow In The Dark"
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> >
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42615. Re: Advice please, wire wrap vs. other connection methods, 520SE.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-06 13:30:49 UTC
From: Terry Wagoner
Topic: 42567 Message: 42615

Certainly not directed to you Mike. I know you fully understand. Just never know how far you have to take any of this stuff anymore. I guess better to give more detail than to assume anything?

Would probably be "Good Enough" to just measure contact resistance with DMM, but like all things in electronics there is a wide definition of good enough and then there are "Standard and Good Engineering Practices". Test equipment and measuring have always interested me. Problem is good test gear is so expensive. This is why I am interested in watching the development of USB based test gear for the lap top. Prices are coming down on things like RF Power millivolt meters and VNAs.

I think if I had a kid in EE school I would coach him/her to major in Measurement & Control Instrumentation and not RF or Telecommunications. I think more job opportunities.

Take Care
Terry

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> I agree and I should have said that in my response.
>
> Mike W5RKL
>
> On 6/6/2013 7:09 AM, Terry Wagoner wrote:
> >
> > This probably doesnt need to be said, but you just dont just place
> > 6vdc or 12vdc power source across low ohm resistance you want to
> > measure. You will have a whole lot more than 1 amp for a short period
> > of time!
> >
> > I have a bench supply that has adjustable voltage and current output.
> > If you use a 6vdc battery you will need series resistor of 6 ohms to
> > limit current to 1 amp. P= 6 vdc x 1 amp = 6 watts so a 10 watt
> > resistor would be a good value.
> >
> > 6 ohm resistors are commonly available for LED lights for auto
> > application. Check Ebay or just make your own by paralleling resistors.
> >
> > Sorry if telling you the obvious.
> >
> > Terry K9TW
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Terry Wagoner"
> > <wagstw46@> wrote:
> > >
> > > Yes it will work. It does not have to be 6vdc. You could use a 12vdc

> > or 13.8vdc rig power supply. Relay engineers standardized on 6vdc and
> > 1amp as the power level that provides enough heating to puncture the
> > film that develops on relay contacts.
> > >
> > > Here is a simple low cost milliohm adapter for your DMM that uses a
> > LM317 to provide constant current source.
> > >
> > > How would you use it? Well anytime you suspect bad RL-1 Aux relay or
> > RL-1 Antenna relay contacts you can measure the before and after
> > resistance and the effectiveness of cleaning of the contacts.
> > >
> > > www.aeroelectric.com/articles/LowOhmsAdapter_3.pdf?
> > >
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Bob Macklin"
> > <macklinbob@> wrote:
> > > >
> > > > It can long enough to make the measurement!
> > > >
> > > > Bob Macklin
> > > > K5MYJ
> > > > Seattle, Wa.
> > > > "Real Radios Glow In The Dark"
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> [Non-text portions of this message have been removed]
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42616. Re: Advice please, wire wrap vs. other connection methods, 520SE.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-06 14:03:50 UTC
From: k5hfg
Topic: 42567 Message: 42616

Sorry for the delayed response. At work. I did not want to use battery but I could not get my variable supply down past 9V. It was getting late, got to get up at 4AM, so I went to bed. I will get back to it on the weekend. May have to repair or replace my variable supply. I did check the resistance across the connection. I just put male a nd female together and measured .2 ohms on a fluke 27 but did not continue any further. ran out of time. I appreciate the responses and do not mind extended instructions. Will let you know what I find.
Thanks guys, Don K5HFG

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Certainly not directed to you Mike. I know you fully understand. Just never know how far you have to take any of this stuff anymore. I guess better to give more detail than to assume anything?
>
> Would probably be "Good Enough" to just measure contact resistance with DMM, but like all things in electronics there is a wide definition of good enough and then there are "Standard and Good Engineering Practices". Test equipment and measuring have always interested me. Problem is good test gear is so expensive. This is why I am interested in watching the development of USB based test gear for the lap top. Prices are coming down on things like RF Power millivolt meters and VNAs.
>
> I think if I had a kid in EE school I would coach him/her to major in Measurement & Control Instrumentation and not RF or Telecommunications. I think more job opportunities.
>
> Take Care
> Terry

42617. Re: Looking to clean my 820 - digital display keeps shifting (but not going out)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-06 12:56:45 UTC
From: Barry
Topic: 42587 Message: 42617

Thanks so much to everybody for the incredibly helpful advice and for being so considerate. I'd never work on anything plugged in, for sure - I wanted to make sure that it was safe to open it up while unplugged and work on whatever I need to work on without doing something that I'd regret. I mainly wanted to know what wouldn't bite me when working on it.

I'll read some of the other posts that were recommended, and I printed the PDF file of the VFO work. I was hoping to work on it last night but church went a little late and I got busy afterwards, so it'll be better to work on it Saturday when I can take more time anyway.

I notice the knob controls are a little scratchy when I rotate them as well. What is the process to cleaning them out? Is it very hard to do?

I bought some good contact cleaner last night and also have a full can of compressed air that I'll use.

Barry

Jeremiah 29:11-13

42618. Re: Looking to clean my 820 - digital display keeps shifting (but not going out)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-06 15:08:33 UTC
From: Terry Wagoner
Topic: 42587 Message: 42618

Barry:

One more thing I would do with the VFO out is to lubricate the entire gear train. This means all the brass gears including anti-backlash, pinions, and the shaft bushings.

I recommend using Tri-Flow with an artist brush. I spray a little in a solo cup or old pill bottle and then dip the brush tip in and apply a very lite coat of Tri-Flow and then run VFO knob stop to stop couple of times to distribute the lube.

Your VFO will run silky smooth.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@...> wrote:
>
> Thanks so much to everybody for the incredibly helpful advice and for being so considerate. I'd never work on anything plugged in, for sure - I wanted to make sure that it was safe to open it up while unplugged and work on whatever I need to work on without doing something that I'd regret. I mainly wanted to know what wouldn't bite me when working on it.
>
> I'll read some of the other posts that were recommended, and I printed the PDF file of the VFO work. I was hoping to work on it last night but church went a little late and I got busy afterwards, so it'll be better to work on it Saturday when I can take more time anyway.
>
> I notice the knob controls are a little scratchy when I rotate them as well. What is the process to cleaning them out? Is it very hard to do?
>
> I bought some good contact cleaner last night and also have a full can of compressed air that I'll use.
>
> Barry
>
> -----------------
>
> Jeremiah 29:11-13
>

42619. Re: Looking to clean my 820 - digital display keeps shifting (but not going out)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-06 17:49:32 UTC
From: Barry
Topic: 42587 Message: 42619

I'll do that, Terry. I think I can get some Tri-Flow at Grainger nearby.

How hard is it and what is the process to take the knobs off and to clean the switches since they're scratchy sounding when I move them around?

Barry

Jeremiah 29:11-13

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Barry:
>
> One more thing I would do with the VFO out is to lubricate the entire gear train. This means all the brass gears including anti-backlash, pinions, and the shaft bushings.
>
> I recommend using Tri-Flow with an artist brush. I spray a little in a solo cup or old pill bottle and then dip the brush tip in and apply a very lite coat of Tri-Flow and then run VFO knob stop to stop couple of times to distribute the lube.
>
> Your VFO will run silky smooth.
>
> Terry K9TW

42620. Re: [TS-520_820_530_830] Re: Looking to clean my 820 - digital display keeps shifting (but not going out)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-06 18:59:16 UTC
From: William Houghton
Topic: 42587 Message: 42620

Barry,

Most of my work has been on Drakes and not Kenwoods. Most of the Drake guys will only use the DeoxIT line of contact cleaners. Some of the contact cleaners will cause the phenolic material of the wafer switches to swell. If that happens you have turned your restoration project into a "parts" rig.

DeoxIT is made by Caig Labs. I have found it online directly from Caig, on ebay, and on Amazon.

Another DeoxIT product is FaderLube which works wonders for pots and shaft bushings.

73,

Bill

From: Barry <bonnevilleblb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, June 6, 2013 10:56:50 AM
Subject: [TS-520_820_530_830] Re: Looking to clean my 820 - digital display keeps shifting (but not going out)

I'll do that, Terry. I think I can get some Tri-Flow at Grainger nearby.

How hard is it and what is the process to take the knobs off and to clean the switches since they're scratchy sounding when I move them around?

Barry

Jeremiah 29:11-13

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Barry:
>
> One more thing I would do with the VFO out is to lubricate the entire gear
>train. This means all the brass gears including anti-backlash, pinions, and the
>shaft bushings.
>
> I recommend using Tri-Flow with an artist brush. I spray a little in a solo cup
>or old pill bottle and then dip the brush tip in and apply a very lite coat of
>Tri-Flow and then run VFO knob stop to stop couple of times to distribute the

>lube.
>
>
> Your VFO will run silky smooth.
>
> Terry K9TW

[Non-text portions of this message have been removed]

42621. Re: [TS-520_820_530_830] Re: Looking to clean my 820 - digital display keeps shifting (but not going out)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-06 19:02:16 UTC
From: W LEWIS
Topic: 42587 Message: 42621

Tri-Flow is also available in bicycle shops.
Butch Lewis
KØPSA

--- On Thu, 6/6/13, Barry <bonnevilleblb@...> wrote:

From: Barry <bonnevilleblb@...>
Subject: [TS-520_820_530_830] Re: Looking to clean my 820 - digital display keeps shifting (but not going out)
To: TS-520_820_530_830@yahoogroups.com
Date: Thursday, June 6, 2013, 12:49 PM

I'll do that, Terry. I think I can get some Tri-Flow at Grainger nearby.

How hard is it and what is the process to take the knobs off and to clean the switches since they're scratchy sounding when I move them around?

Barry

Jeremiah 29:11-13

--- In TS-520_820_530_830@...m, "Terry Wagoner" <wagstw46@...> wrote:
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> Barry:
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> Your VFO will run silky smooth.
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> Terry K9TW

[Non-text portions of this message have been removed]

42622. Re: [TS-520_820_530_830] Re: Looking to clean my 820 - digital display keeps shifting (but not going out)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-06 19:22:54 UTC
From: Mike
Topic: 42587 Message: 42622

I use only DeoXit D5 for switches and relay contacts and DeoXit F5 for pots. I have been using these products for years and never had a problem.

When using DeoXit and canned air from Walmart, always follow the safety precautions printed on the cans! Some contact cleaners are flammable and it only takes a small spark to ignite the cleaner. Use only enough cleaner to accomplish the job. Never use excess amounts of cleaner and always ensure all the cleaner residue is removed with what ever source of force air you use. This is especially important in areas where the cleaner can form a "pool" around components. I found this out when cleaning a variable capacitor in a Heathkit SB-303 LMO. I "thought" I removed all the cleaner residue. The symptoms were the LMO drifted excessively. Only when I was able to remove all the cleaner residue that had pooled in the LMO did the LMO settle down and not drift. Never assume you got rid of all the cleaner. If necessary, perform a thorough visual inspection to ensure the cleaner residue is gone.

Canned air from Walmart or other sources for canned air, will, if not used properly, result in the propellent being sprayed onto the component and/or your hands/fingers. Always keep the canned air can upright, never sideways or upside down when using! The propellent is very cold and can cause burns to your hands/fingers if you do not follow the instructions on the can!!! It's normal for the canned air can to feel cold during use.

73
Mike W5RKL

On 6/6/2013 1:59 PM, William Houghton wrote:
>
> Barry,
>
> Most of my work has been on Drakes and not Kenwoods. Most of the Drake
> guys will
> only use the DeoxIT line of contact cleaners. Some of the contact
> cleaners will
> cause the phenolic material of the wafer switches to swell. If that
> happens you
> have turned your restoration project into a "parts" rig.
>
> DeoxIT is made by Caig Labs. I have found it online directly from
> Caig, on ebay,
> and on Amazon.
>
> Another DeoxIT product is FaderLube which works wonders for pots and
> shaft

> bushings.
>
> 73,
>
> Bill
>
> _____
> From: Barry <bonnevilleblb@...m <mailto:bonnevilleblb%40yahoo.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Thu, June 6, 2013 10:56:50 AM
> Subject: [TS-520_820_530_830] Re: Looking to clean my 820 - digital
> display
> keeps shifting (but not going out)
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> clean the
> switches since they're scratchy sounding when I move them around?
>
> Barry
>
> -----------------
>
> Jeremiah 29:11-13
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Terry Wagoner"
> <wagstw46@...> wrote:
> >
> > Barry:
> >
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> distribute the
> >lube.
> >
> >
> > Your VFO will run silky smooth.

> >
> > Terry K9TW
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

42623. Re: Looking to clean my 820 - digital display keeps shifting (but not going out)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-06 21:11:07 UTC
From: Terry Wagoner
Topic: 42587 Message: 42623

It is not easy to get contact cleaner in all the pots and switches. I think the TS520 is about the easiest. When you look at a pot it has 3 terminal leads that come out of it. Some are two pots on concentric shaft. Ideally need to shoot the contact cleaner into that access window where the leads enter and run pot thru its range and then blow out with canned air. I like to apply Deoxit Fader Lube after that as it is made for carbon trace pots.

I have tried using the hard extension nozzle and different flexible nozzles without 100% success on all pots and switches. Push buttons and slide switches also present a challenge.

Maybe some other have better success at cleaning the pots and controls than I do. I did not respond originally hoping that they would answer you and I could learn from them.

I tell customers I lube and clean those controls that are accessible. Some folks dont even know there are DIN switches on aux sockets on rear panel.

I think some people believe they are getting cleaner in when really not getting very much to be very effective. Some talk about sitting rig on back panel and running cleaner on the shafts and hope it gets past the shaft grease and leaches into the pot body. I dont think that works.

You will tell if you got it in the pot window and did any good if you exercise it and the scratchy sound is eliminated. AF and RF gain usually worse offenders for scratchy sound in speaker.

Lack of regular use and exercising of the controls will very quickly result in noise returning.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@...> wrote:
>
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>
> How hard is it and what is the process to take the knobs off and to clean the switches since they're scratchy sounding when I move them around?
>
> Barry
>
> ----------
>
> Jeremiah 29:11-13
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >

> > Barry:
> >
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> > I recommend using Tri-Flow with an artist brush. I spray a little in a solo cup or old pill bottle and then dip the brush tip in and apply a very lite coat of Tri-Flow and then run VFO knob stop to stop couple of times to distribute the lube.
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> > Terry K9TW
>

42624. Re: Looking to clean my 820 - digital display keeps shifting (but not going out)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-06 23:55:09 UTC
From: Terry Wagoner
Topic: 42587 Message: 42624

My local Ace Hardware also has it. Terry

--- In TS-520_820_530_830@yahoogroups.com, W LEWIS <nscb56a@...> wrote:
>
> Tri-Flow is also available in bicycle shops.
> Butch Lewis
> KÃ□PSA
>
> --- On Thu, 6/6/13, Barry <bonnevilleblb@...> wrote:
>
>
> From: Barry <bonnevilleblb@...>
> Subject: [TS-520_820_530_830] Re: Looking to clean my 820 - digital display keeps shifting (but not going out)
> To: TS-520_820_530_830@yahoogroups.com
> Date: Thursday, June 6, 2013, 12:49 PM
>
>
>
> Â
>
>
>
> I'll do that, Terry. I think I can get some Tri-Flow at Grainger nearby.
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> How hard is it and what is the process to take the knobs off and to clean the switches since they're scratchy sounding when I move them around?
>
> Barry
>
> ----------
>
> Jeremiah 29:11-13
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Barry:
> >
> > One more thing I would do with the VFO out is to lubricate the entire gear train. This means all the brass gears including anti-backlash, pinions, and the shaft bushings.
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> >

> > Your VFO will run silky smooth.
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> > Terry K9TW
>
>
>
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

42625. re eico 324

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-07 01:26:56 UTC
From: Jerry Barr
Topic: 42587 Message: 42625

hi terry and the group well got the 1n4007 in and installed my voltage went up to 152 as predicted so tried an 80 ohm didnt hardly make a diff so mwent to 820 ohm
and that dropped the voltage to 128/on the tube v1 i am reading pin 1= 127.3,pin2= 47.6,pin 3 =49.6, pin 6 is 73.8, 7 is -2.7/ 8-9 are 0. and it seems to be working near freq shud i keep bringing it (voltage down) or just change the other wax caps and call it good
Jerry KJ6NTL

> >
> >

[Non-text portions of this message have been removed]

42626. Re: Coil board conundrum

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-07 03:34:50 UTC
From: w7jpg
Topic: 42159 Message: 42626

Robert, you said, "Best source of such slugs are old CB radios,".
Is there a particular brand of CB radios, model, manufacturer that is a likely donor? (just in case my 830S needs a slug or two)
Thanks,
Chris W7JPG

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> Okay, first do your mean that the coil slug is cracked?
>
> Second, what you you mean that the "band switch shaft goes right through it?"
>
> If it is a slug, in some cases I have used a drop of superglue and a jeweler's screwdriver to extract the broken slug. Then you can replace it with a similar one taken from another coil. Best source of such slugs are old CB radios, but places such as All Electronics do sell new IF coils that might have slugs that would work.
>
> You need to get some small wooden dowels and make yourself some tuning tools that will fit the slugs and will not crack them.
>
> Good Luck!
>
> Robert
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> >
> > On Ken K4EAA's site he discusses rewinding coils if a ferrite slug gets stuck/broken and new formeri s needed.
> >
> > Was pleased to find only one of my 520SE coils is cracked (3.5 mhz osc), but when I was looking at the board I saw the band switch shaft goes right through it!
> >
> > So how would anyone be able to desolder any of the coils, without major surgery? Are you meant to desolder former while board is still in place? That looks extremely tricky given narrow space between each of the coil boards.
> >
> > Has anyone here ever removed and replaced one of these coils, and if so how?
> >
> > 73 Adrian G4IQW
> >
>

42627. Re: re eico 324

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-07 10:31:34 UTC
From: Terry Wagoner
Topic: 42587 Message: 42627

I think now some of what you are looking at may be due to the difference in line voltage from then to now. I would probably leave it alone. If you have 200wvdc caps 128vdc wont hurt them. I would monitor 820 ohm series resistor to make sure not getting too hot. Of course pretty easy to increase series resistor and dial it in to voltage noted on the original schematic. Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Jerry Barr <kj6ntl@...> wrote:
>
>
>
> Â hi terry and the group well got the 1n4007 in and installed my voltage went up to 152 as predictedÂ so tried an 80 ohmÂ didnt hardly make a diff so mwent to 820 ohm
> and that dropped the voltage to 128/on the tube v1 i am readingÂ pin 1= 127.3,pin2= 47.6,pin 3 =49.6, pin 6 is 73.8, 7 is -2.7/ 8-9 are 0. and it seems to be working near freq shud i keep bringing it (voltage down) or just change the other wax caps and call it good
> Jerry KJ6NTL
>
> > >
> > >
>
>
>
>
> [Non-text portions of this message have been removed]
>

42628. Re: Looking to clean my 820 - digital display keeps shifting (but not going out)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-07 11:09:57 UTC
From: Terry Wagoner
Topic: 42587 Message: 42628

Barry:

I am not trying to discourage you. Just trying to be honest. The real truth is the best fix is to replace noisy rotary pots and switches and slide switches with new ones. Unfortunately not possible and a lot of work.

Years ago I unsoldered pots off PC boards and unfolded the metal tabs on the pot body and used pencil eraser and cleaned the carbon ring and cleaned the spring metal contact and maybe applied "blue stuff" TV rotary tuner contact cleaner (very popular and effective cleaner). I soon realized this was silliness when should have just installed a new pot.

Look at all the hybrid restorers websites and read carefully their refurb/repair procedures and you will see "weasel words" like clean all accessible controls or clean as necessary. Call and discuss this aspect of refurb with them on phone. Reputable ones should tell you what they really do.

I have had several of these radios appear on my bench 2 to 3 years after complete refurb and not unusual for them to have a noisy AF gain pot.

Some folks report success with use of Corrosion X or WD-40. I have never used either one. In my opinion most of us are doing more spraying at than spraying in these controls.

I discussed this one time with Ken K4EAA and he admitted not an easy task and no magic cleaner or method short of removal and dissassembly of the pot or switch. Not many are going to do that and if you did, sure would want to investigate availability of a new or NOS control.

I really would love to meet someone who tells me they can effectively clean and lube ALL the pots and switches in a hybrid. I want to apprentice under that person. If they are doing it need to share with us. Should not be a trade secret.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> It is not easy to get contact cleaner in all the pots and switches.
> >
>

42629. Re: Coil board conundrum

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-07 13:37:55 UTC
From: roberteleazer@rocketmail.com
Topic: 42159 Message: 42629

No, nothing in particular. I have not done a comprehensive survey. I would try and stick to a quality brand name such as Hygain, Pace, Midland. I do think the Hygain coils look similar but it's pretty much a catch as catch can, cut and try situation.

Don't ignore old AM/FM radios of similar vintage, either.

Good Luck!

Robert
--- In TS-520_820_530_830@yahoogroups.com, "w7jpg" <ckepus@...> wrote:
>
> Robert, you said, "Best source of such slugs are old CB radios,".
> Is there a particular brand of CB radios, model, manufacturer that is a likely donor? (just in case my 830S needs a slug or two)
> Thanks,
> Chris W7JPG
>
> --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
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> > Okay, first do your mean that the coil slug is cracked?
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> > If it is a slug, in some cases I have used a drop of superglue and a jeweler's screwdriver to extract the broken slug. Then you can replace it with a similar one taken from another coil. Best source of such slugs are old CB radios, but places such as All Electronics do sell new IF coils that might have slugs that would work.
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> > You need to get some small wooden dowels and make yourself some tuning tools that will fit the slugs and will not crack them.
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> > > So how would anyone be able to desolder any of the coils, without major surgery? Are

you meant to desolder former while board is still in place? That looks extremely tricky given narrow space between each of the coil boards.
> > >
> > > Has anyone here ever removed and replaced one of these coils, and if so how?
> > >
> > > 73 Adrian G4IQW
> > >
> >
>

42630. Re: Ts-820s with low plate current

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-07 17:07:16 UTC
From: erics
Topic: 42556 Message: 42630

Well Terry for as much as I hate to say it, it's time for me to seek some local help. It's getting over my head now I believe. I will make sure to let you know what was wrong with it when I find out. It sounds to me there is a local gentleman who cut his teeth on radios like this one. So once again, thanks for your expertize and your patience....

Eric,
kd8owb

820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Ok as I mentioned this tells you that your HV power supply is working, but not that you have 900vdc on each tube anode. We will safe that for last.
>
> With the rig off you can safely measure the cathode resistors. As I mentioned if they were blown open you would have no plate current at all. With 10 ma resting plate current they cannot be open, but typically they do drift high with age. Measure from Pin 1 of 6146 tube socket on Final board to chassis ground.
>
> Really need to measure operating bias and screen grid voltages. If you are comfortable I would place jumper lead on your negative or black test prod of your DMM and connect it to chassis ground. This gives you only one test prod to handle and control. Now you can touch the positive or red prod to the 6146 tube socket pins to make the voltage checks. You will take two sets of readings. One in receive mode and one with the rig flipped to Send. Again make sure Screen Grid switch is turned on.
>
> You will measure operating bias at the final board 6146 tube socket Pin 5. In receive you will have approx -100vdc and with rig flipped to Send you will have approx -60vdc. You will measure screen grid voltage at Pin 3. In receive you will have approx +260vdc and with rig flipped to Send you will have approx +220vdc.
>
> Make sure your test leads for your DMM are in good shape with no cracked insulation and no conductors exposed at the bananna plug ends at the meter or at the probe/prod ends.
>
> Terry K9TW
>

42631. Re: Ts-820s with low plate current

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-07 17:19:46 UTC
From: Terry Wagoner
Topic: 42556 Message: 42631

OK no shame in that.

As teacher you have to know that Telling is not the best medium. Telling and Showing much more powerful assuming the one showing isnt teaching bad practices. Pretty hard for a trainee to recognize that. Just have to place trust. Sometimes it is easy to tell a cowboy.

Would appreciate you letting us all know what you find.

I hope you came to this conclusion based on your confidence to safely measure final tube operating bias and screen grid voltage and not to spray contact cleaner on pots and switches.

73s Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "erics" <selle@...> wrote:
>
> Well Terry for as much as I hate to say it, it's time for me to seek some local help. It's getting over my head now I believe. I will make sure to let you know what was wrong with it when I find out. It sounds to me there is a local gentleman who cut his teeth on radios like this one. So once again, thanks for your expertize and your patience....
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> Eric,
> kd8owb
>
>
> 820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Ok as I mentioned this tells you that your HV power supply is working, but not that you have 900vdc on each tube anode. We will safe that for last.
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> > Really need to measure operating bias and screen grid voltages. If you are comfortable I would place jumper lead on your negative or black test prod of your DMM and connect it to chassis ground. This gives you only one test prod to handle and control. Now you can touch the positive or red prod to the 6146 tube socket pins to make the voltage checks. You will take two sets of readings. One in receive mode and one with the rig flipped to Send. Again make sure Screen Grid switch is turned on.
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> > Make sure your test leads for your DMM are in good shape with no cracked insulation and no conductors exposed at the bananna plug ends at the meter or at the probe/prod ends.
> >
> > Terry K9TW
> >
>

42632. Re: [TS-520_820_530_830] Re: Looking to clean my 820 - digital display keeps shifting (but not going out)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-07 20:40:26 UTC
From: Gregory Graham
Topic: 42587 Message: 42632

Terry
I think you made some comments somewhere else but when I looked for "Deoxit" it was like looking for Loctite. There are so many types, uses and numbers. I have some Deoxit D100 that I would like to use to restore the VFO wiper. Do you think that will OK, followed by a good wiping and blowing off of the remaining Deoxit?

Gregory
NR5C

On 6/5/2013 4:52 PM, Terry Wagoner wrote:
>
> I forgot Gordon had these good close up pictures.
>
> I use a artist brush and apply tri-flow to the bearing. Sometimes you
> will find some one else has been there before you and applied grease.
> A little lithium grease doesnt hurt, but dont want any hardened grease
> on the ball and race. Make sure you exercise VFO several times through
> complete rotation when you apply the DeOxit to the rotor shaft wiper.
> Also blow out with canned air.
>
> Whatever you do DO NOT lubricate this wiper. The whole idea is that
> you want the RF current to flow from rotor to capacitor frame thru a
> very low resistance contact. Lubrication defeats the purpose. The
> wiper is made of phosphor bronze which is very high conductivity and
> self lubricating. Also, NEVER reach in and attempt to bend with a
> screwdriver or any other tool. Phosphor bronze has spring temper and
> designed to apply correct pressure to the machined surface on the end
> of the rotor shaft. Over time it just oxidizes and get blackened and
> green unless someone else who doesnt understand how it works may have
> lubed it before you. So good cleaning with DeOxit should remove any
> grease and oil and any oxidation.
>
> Since you went to all this trouble spray several times and give
> several full rotation cycles.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Gregory Graham
> <tbirdgreg@...> wrote:
> >
> > Barry
> > Your going to love that TS-820S Radio. Here is a site that will

> > give you some guidance to repair the VFO problem. I have an TS-820S
> > with the same problem.
> > http://www.n6wk.com/kenwood/TS-820-VFO--servicing.pdf My advice
> > keep the spare radio.
> >
> > NR6C
> > Gregory
> >
> >
> > On 6/5/2013 12:10 PM, Barry wrote:
> > >
> > > My Great Uncle has been put in a nursing home but sold me his TS-820
> > > with the VFO, MC-50 mic and speaker, and I take my Tech exam a week
> > > from Saturday. I'm excited to get the license so I can start talking,
> > > but in the meantime I've been playing around listening to the TS-820.
> > >
> > > He also sold me a Yaesu FT-757GX with its power supply and FT-757AT
> > > automatic antenna tuner, so I'm going back and forth listening to
> each
> > > of them.
> > >
> > > I'm really liking the Kenwood, though. I'm tempted to sell the Yaesu
> > > and keep the 820! I know very little about them, though - I've never
> > > been a ham but have always been interested.
> > >
> > > How hard is it to clean contacts on the 820 without getting
> shocked to
> > > high heaven? One of the main things I want to do is get the digital
> > > display to quit hopping around like it does. It changes numbers often
> > > rapidly, but thankfully it doesn't just completely go off. It's just
> > > fairly erratic in changing frequency numbers.
> > >
> > > Any help you can give me would be so greatly appreciated! I'm sorry
> > > I'm not as up to speed as everybody here, but I'm trying to learn
> > > quickly so I can contribute to the group. I am not a complete tech
> > > newbie - I do the IT at our church and am very technically oriented,
> > > but I've never worked with ham radios.
> > >
> > > Thanks to everybody.
> > >
> > > Barry
> > >
> > > ----------
> > >
> > > Jeremiah 29:11-13
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> > >
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> > [Non-text portions of this message have been removed]
> >
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42633. Re: Looking to clean my 820 - digital display keeps shifting (but not going out)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-07 21:54:23 UTC
From: Terry Wagoner
Topic: 42587 Message: 42633

Gregory:

Most of us use D5. If you go to Caig site you can read the formulation and recommended uses. D5 has 5% active ingredient and some naptha (solvent) in the formulation for degreasing/cleaning. D100 has 20% active ingredient and no solvent. I think the D100 is recommended where there is concern for sensitive plastics. It also states the dispenser gives short metered shots.

I am not a Caig expert. However, I dont think you would have any problem using D100 to clean the rotor shaft wiper as you note you will blow put with canned air.

People use a wide variety of favorite contact cleaners in these rigs ranging from CRC, LPS, MG Chemical, Chemtronics, Radio Shack brand, on and on and on.

I dont like any that are oily.

Just dont use any lubrication on this contact. As I mentioned in my first response to you the wiper is phosphor bronze which is self-lubricating and you are trying to get a high conductive path for the RF current from Rotor to Frame. Non-conductive grease or oil will defeat this.

Many Many years ago Cardwell sold a conductive grease for their capacitors. I have heard of people buying conductive grease (silver and carbon impregnated) and using it to lube air variable capacitors bearings. I would never put any conductive grease in any of the Hybrid air variable capacitors where it could migrate and cause a short circuit or conductive path to ground.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Gregory Graham <tbirdgreg@...> wrote:
>
> Terry
> I think you made some comments somewhere else but when I looked for
> "Deoxit" it was like looking for Loctite. There are so many types, uses
> and numbers. I have some Deoxit D100 that I would like to use to
> restore the VFO wiper. Do you think that will OK, followed by a good
> wiping and blowing off of the remaining Deoxit?
>
> Gregory
> NR5C
>
>
> On 6/5/2013 4:52 PM, Terry Wagoner wrote:
> >
> > I forgot Gordon had these good close up pictures.

> >
> > I use a artist brush and apply tri-flow to the bearing. Sometimes you
> > will find some one else has been there before you and applied grease.
> > A little lithium grease doesnt hurt, but dont want any hardened grease
> > on the ball and race. Make sure you exercise VFO several times through
> > complete rotation when you apply the DeOxit to the rotor shaft wiper.
> > Also blow out with canned air.
> >
> > Whatever you do DO NOT lubricate this wiper. The whole idea is that
> > you want the RF current to flow from rotor to capacitor frame thru a
> > very low resistance contact. Lubrication defeats the purpose. The
> > wiper is made of phosphor bronze which is very high conductivity and
> > self lubricating. Also, NEVER reach in and attempt to bend with a
> > screwdriver or any other tool. Phosphor bronze has spring temper and
> > designed to apply correct pressure to the machined surface on the end
> > of the rotor shaft. Over time it just oxidizes and get blackened and
> > green unless someone else who doesnt understand how it works may have
> > lubed it before you. So good cleaning with DeOxit should remove any
> > grease and oil and any oxidation.
> >
> > Since you went to all this trouble spray several times and give
> > several full rotation cycles.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Gregory Graham
> > <tbirdgreg@> wrote:
> > >
> > > Barry
> > > Your going to love that TS-820S Radio. Here is a site that will
> > > give you some guidance to repair the VFO problem. I have an TS-820S
> > > with the same problem.
> > > http://www.n6wk.com/kenwood/TS-820-VFO--servicing.pdf My advice
> > > keep the spare radio.
> > >
> > > NR6C
> > > Gregory
> > >
> > >
> > > On 6/5/2013 12:10 PM, Barry wrote:
> > > >
> > > > My Great Uncle has been put in a nursing home but sold me his TS-820
> > > > with the VFO, MC-50 mic and speaker, and I take my Tech exam a week
> > > > from Saturday. I'm excited to get the license so I can start talking,
> > > > but in the meantime I've been playing around listening to the TS-820.
> > > >
> > > > He also sold me a Yaesu FT-757GX with its power supply and FT-757AT
> > > > automatic antenna tuner, so I'm going back and forth listening to
> > > each

> > > > of them.
> > > >
> > > > I'm really liking the Kenwood, though. I'm tempted to sell the Yaesu
> > > > and keep the 820! I know very little about them, though - I've never
> > > > been a ham but have always been interested.
> > > >
> > > > How hard is it to clean contacts on the 820 without getting
> > shocked to
> > > > high heaven? One of the main things I want to do is get the digital
> > > > display to quit hopping around like it does. It changes numbers often
> > > > rapidly, but thankfully it doesn't just completely go off. It's just
> > > > fairly erratic in changing frequency numbers.
> > > >
> > > > Any help you can give me would be so greatly appreciated! I'm sorry
> > > > I'm not as up to speed as everybody here, but I'm trying to learn
> > > > quickly so I can contribute to the group. I am not a complete tech
> > > > newbie - I do the IT at our church and am very technically oriented,
> > > > but I've never worked with ham radios.
> > > >
> > > > Thanks to everybody.
> > > >
> > > > Barry
> > > >
> > > > ----------
> > > >
> > > > Jeremiah 29:11-13
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> > > [Non-text portions of this message have been removed]
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42634. Re: [TS-520_820_530_830] Re: Looking to clean my 820 - digital display keeps shifting (but not going out)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-07 23:22:33 UTC
From: M. J. Synowiec
Topic: 42587 Message: 42634

Good day to all & I hope you are well,

If you follow this link it will take you to the Caig products site and you can view/print a PDF with product selector information. : store.caig.com select the learning center tab and about half way down the page is a link to the product selector pdf

My personal preference is D5 as cleaner/restorer and fader lube follow-up in controls as I've seen others mention here. D100 is pretty much pure cleaner with no flushing action with a non-metered valve. It will work in your application but you may have to work more to get it in and out of the pot. I find it useful to use a piece of stiff wire or wooden toothpick to guide the cleaner into the control or contact area. I've also used 50cc insulin syringes to get cleaner into a tight spot or under a rubber switch pad. These have a very fine needle and will get into places that look sealed. Also they have no over-spray. If you un-bend a paper-clip you can use it by placing one end at the control opening and after spraying some cleaner into a small container(pill bottle cap or such) you can then trickle the fluid down the wire and into the device to be cleaned. If you use the syringe it is pretty much a one-shot as the cleaner will destroy
the rubber piston on the syringe in a couple of days. Try to always use the minimum cleaner to accomplish your task and I try to never spray directly into the device as it usually means a clean-up job after it gets on everything on the board. Probably the most important tool in your arsenal on these type repairs is patience. Better to go slowly and meticulously than to have to finish up your initial repair and then have to fix the stuff you broke fixing the first part.

As a source for Caig products I use MCM electronics. They have sales on these products a couple of times a year and have reasonable prices and quick delivery. In short; Deoxit and Tri-Flow are must haves on my bench. I would avoid having WD-40 anywhere near electronics. It will do more harm than good.

In closing I would like to take a line to remember and thank the men who stormed the beaches on D-Day. June 6th was a hard day for them but they faced it and did what had to be done. God bless them and every other soldier that walks into harms way so we can live free.

I hope this ramble gives you a little help. I just wanted to add my 2 cents to the good advice you've already been given.

Vy 73,
Mike
K8SYN

[Non-text portions of this message have been removed]

42635. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-07 23:39:20 UTC
From: adrian.langford@ymail.com
Topic: 42105 Message: 42635

The ferrite core adjustment tool was there when I got home this weekend, so I was able to try an alignment to see if that would help my problem of no ALC on 28MHz.

I put a little drop of penetrant on the slugs first, but didn't have brush so not sure if the oil penetrated the threads as opposed to going straight through!

Anyway I went in the order of the manual. Aligning ANT and MIX coils first of 1.8 and 28.5.

Got another s-point from the 1.8 coils, and 28.8 up from S6 to S8.

But the 21MHz slugs wouldn't shift so I had to stop there. I will get a brush tomorrow and see if that helps get penetrant into right place to free them. They are not cracked.

I moved onto Drive coils. 1.8MHz could be peaked, but as I didn't have any ALC indication whatsoever I couldn't peak the 28 coil!

Moved onto some another receiver alignment operations detailed in manual. I peaked the IF board but it was pretty much peaked anyway.

Zeroed the S-meter, and checked AVR 9V which was 9.08V. I set to 9 exactly. Also set AGC voltage on the avr board which showed 3.08V so I set to 3.3V.

I found a really strange thing when going through the manual. When I tried to peak WWV frequency I couldn't, as though I could hear the calibrator signal I had no s-meter deflection on that band switch position. On 14MHz position I don't get s-meter deflection unless I peak with Drive control, but the Drive control is not operative on WWV so it may be same thing on WWV. I don't want to mess with T4, T5 and T3 on the RF board with no s-meter to guide me. Any suggestions?

So that's where I am for now, but at least I had a couple of QSOs last weekend (special stations Slovenia and Switzerland).

73 Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@..." <adrian@...> wrote:
>
>
> Thanks Terry for pointers. I will work way back and study level diagram alongside your instructions.
>
> Oh I also tried to improve the VFO tracking but even going backband forth many times I couldn't get it really accurate at both ends 0 and 600. It's a slight improvement on how it was tracking before, and if Inuse calibrator again at 600 end then it's spot on. Without recalibrating against marker I can get it to 5.5000 at 0 end and 4.9004 at 600 end which will do for me.
>
> 73 Adrian G4IQW
>

> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Just remember a 50mhz BW scope on 28 mhz will read P-P voltage approx 8% to 9% low.
> >
> > As far as where to go next. Well with your scope you can measure all the key TX Level Diagram test points for RF drive. Just multiply the Rms values listed by 2.828 for P-P that your scope will display.
> >
> > Probably easiest is to take a look at Transmit Mixer output at the MD terminal or I believe you also have a TP-1 on the RF board. Should see something close to 2 rms volts or 6 volts P-P. If low there take a look at your Het Osc input. Het Osc serves as the LO for the Mixer and TIF as the RF input. TIF seldom problem but it could be. Output at MD is the actual transmit frequency which will be Het minus TIF. Should have about 1 volt of Het at TP-3. If low try adjusting the Het Osc coil. Make sure you peak it on slow side of the response curve and back off a little.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> > >
> > > Well I've spent a happy hour probing my 520SE to measure the readings you suggested taking to diagnose my "no ALC on 10m". I can see why I'm not getting any ALC...
> > >
> > > - On 28MHz I get no ALC, and only 5W indicated on external power meter when I tune the Plate and Load for max output.
> > >
> > > - Loaded on 28MHz using peak receive noise, I have -84.5vdc cutoff bias in RX at pin 5 control grid
> > >
> > > - In TX mode I have -53.2vdc operating bias
> > >
> > > - RF drive voltage (measured with Tektronix 50MHz scope)is 36.0 peak rf volts
> > >
> > > So using your workings I have 36-53.2 = -17.2V delta in TX mode, whereas I need a decent positive delta!
> > >
> > > Please advise on next place to look for why the rf volts are too low (you were getting 60.8V peak rf compared with my 36V).
> > >
> > > I haven't done any alignment yet as I'm waiting for correct tool to arrive, and don't want to crack any slugs through impatience.
> > >
> > > Oh while I had the rig open I looked in the finals cage. Was interested to see the original Japanese valves had been replaced at some stage by 6146Ws.
> > >
> > > 73s from Adrian G4IQW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > > >
> > > > Here are my readings from my personal TS-520 serial number 040234:

> > > >
> > > > 1. Full load on 28.500 Mhz = 85 watts output @200 ma into 50 ohm dummy load.
> > > > 2. ALC indication is full scale deflection(FSD)ie the needle is far right at "350 ma" with Car Level Pot at position "8" and Drive Control peaked at 1230.
> > > > 3. DC bias voltage at 6146 control grid Pin 5 = -85.6vdc cutoff bias in RX mode and -51.4 vdc operating bias in TX mode.
> > > > 4. RF drive voltage at 6146 control grid Pin 5 = 43.0 rms volts measured with a Boonton 92E RF millivolt meter.
> > > >
> > > > 43 x 1.414 = 60.8 peak rf volts
> > > > 60.8 - 51.4 vdc bias = 9.4 volts difference. This is reason why I have FSD ALC indication. It is normal to require more Car Level voltage on 10 meters. If unsure just set it Full CW to start with.
> > > >
> > > > -51.4/1.414 = 36.0 rf volts. You must have greater than 36.0 rf volts at -51.4vdc operating bias to get any ALC indication. The Rf drive signal must make the 6146 control grid positive with respect to the cathode so that ua grid current flows to produce any ALC indication. The greater the delta between dc bias and RF drive voltage on positive swing of the RF envelope the higher the ALC deflection will be.
> > > >
> > > > So you need to load your rig on 10 meters into dummy load. Since you have no ALC indication use a workaround like peaking the Drive Control on receiver back ground noise or use the Marker. After loading to full load flip the SG switch off and make the RF drive and DC bias voltage measurements on the 6146 control grid as I did above.
> > > >
> > > > You will need a 3 diode RF probe and VTVM, or an O-scope, or an RF Millivolt meter to make the RF drive measurements.
> > > >
> > > > Report back the RF output level, the operating bias voltage, and RF drive voltage and based on those I can point you to next place to look.
> > > >
> > > > Terry
> > > > K9TW
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> > > > >
> > > > > Well I popped in "new" 12BY7A driver.
> > > > >
> > > > > Rewarded with much healthier ALC on 15m (before had been unstable on that band) but still no ALC whatsoever on 10m. I also used switch cleaner on band switch and worked it in, in case of contact problem on 10m.
> > > > >
> > > > > Next I will check the grid volatfes and cathode resistors as Terry suggested.
> > > > >
> > > > > I also wondered if coil alignment may be part of answer so alsomtook off bottom of case.
> > > > >
> > > > > The bad news is that the nylon hex toool I got on ebay was too big for the cores (have ordered one from Ken K4EAA).
> > > > >

> > > > > The good news is that I examined all the slugs very carefully under bright light. Only one appears crackdd - the 3.5MHz oscillator coil. So when proper tool arrives I can align rig properly.
> > > > >
> > > > > 73 Adrian G4IQW
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> > > > > >
> > > > > >
> > > > > > Many thanks for valuable info Terry.
> > > > > >
> > > > > > Different views from similarly experienced owners, so what I'll do is test whether a new driver valve - after checking voltages described here - makes any difference to 10m ALC.
> > > > > >
> > > > > > Plenty of time anyway till 10m shows signs of life!
> > > > > >
> > > > > > 73 Adrian G4IQW
> > > > > >
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > > > > > >
> > > > > > > Robert:
> > > > > > >
> > > > > > > I will probably regret wading in to this pond!
> > > > > > >
> > > > > > > I do not doubt that you have no ALC indication on 10 meters on your TS-520. In my experience it is "common", but not "normal". I would also be very careful citing and observing any of these "service bulletins". I am very skeptical of most of these as some are just flat wrong. Putting star lock washers on circuit board to cure VFO drift isnt first thing I will ever reach for! They appear to me to be nothing more than a list of one line anecdotal entries submitted by owners and perhaps Kenwood service center bench techs? One line entries with no details, no basis, no explanations are not what I would expect from a factory authorized service bulletin.
> > > > > > >
> > > > > > > I have worked on probably 30 or so TS520s in a 10 year period. Not an exhaustive number, but enough to know that all but one left my bench with adequate ALC indication on 10 meters. That one would get approx 1/4 scale deflection and was very touchy and owner was in a hurry to get it back. In my experience can typically get at least 1/2 scale deflection with Car Level pot at 1400 to 1500 position. My own personal TS-520 ALC indication on 10 meters is a little bit better than 1/2 scale deflection. It had none when I got it.
> > > > > > >
> > > > > > > I once had a fellow call me(some how got my home phone) and he was mad as hell. He told me he saw where I responded on some forum just as I am to you and that he had purchased his TS520 new from big west coast dealer and it had no ALC on 10 meters out of the box and he called Kenwood and they told him it was "normal". Now I dont want to call anyone a liar, but I suggested that I doubted he had actually called Kenwood factory design engineer in Japan. If so what did that engineer say was the reason? Would there not have been a discussion and some additional probing questions? I suggested that perhaps he had

called the dealer and maybe even talked to a dealer bench tech who said something like " I see that all the time". Very different from a design engineer explaining why it was "normal". I then suggested that had it been me I would have taken the rig back to dealer and told them when they can sell me a new in the box one that has ALC indication on all bands I will take it. He was fuming by time conversation ended.
> > > > > > >
> > > > > > > > I closed the conversation this way. The compelling question you need to ask yourself is....."IF ONE OR MORE TS-520 HAVE SOME LEVEL OF ALC INDICATION ON 10 METERS WHY CANNOT ALL"? If later serial number production runs did not have this problem, wouldnt a mod have been issued? I know of no such Kenwood fix.
> > > > > > >
> > > > > > > > Would Ford make a car that the speed-o-meter worked in 1st, 2nd, and 3rd gear, but in 4th gear you had to use some kind of work around to tell how fast your were going (maybe timing mile marker post with your wrist watch)? Would customers really live with that and call it normal? I dont think so.
> > > > > > >
> > > > > > > > Also the manual does not say it is normal. I get that thrown at me. The operating manual clearly states that "Note: If there is no ALC reading indicated, increase the CAR control until there is an ALC reading" There is no disclaimer that follows that says "with the exception of on 10 meters". I think what confuses people is the statement later under the CW loading that says at 200 ma of Ip there may be no ALC indication. Too bad Kenwood had to make that statement, but apparently people were loading rig for max RF output using the RF detector position and for some odd reason then flipping meter back to ALC position instead of back to Ip. Maybe old timers who were use to loading the old Class C CW grid leak bias transmitters? Maybe they thought they needed to check and re-peak grid current? A Class AB1 Kenwood doesnt operate that way. We have essentially no grid current and no reason to keep checking ALC indication in the loading procedure. I dont understand it. Kenwood even followed this note by adding a chart that shows the preferred meter positions and it clearly shows that you should use Ip position when loading in CW. At 200 ma you are done and no reason to see if ALC has fallen off.
> > > > > > >
> > > > > > > > There is a reason that you may have no ALC indication in CW Mode at 200 ma Ip and it has to do with degenerative RF feedback, but I wont go into it in this response.
> > > > > > > >
> > > > > > > > Sorry so long, but this is not easy subject to cover briefly.
> > > > > > > >
> > > > > > > > If you want to work on your no ALC indication on 10 meters start with a fresh 12BY7A and make sure you have spec DC voltages and make sure your cathode resistors are all at design value.
> > > > > > > >
> > > > > > > > Then in order to have ALC indication you need two key voltages. Start by checking your 6146 control grid Pin 5 operating DC bias voltage with 60 ma resting plate current. Also measure your RF drive voltage. If one or both of these are not to spec on 10 meters you will have no ALC indication. Need to be able to accurately measure these with a calibrated RF millivolt meter or O-scope. If you have -55vdc operating bias then you will need greater than 55/1.414 = 38.89 rms or 110.4 P-P rf drive volts. At 39 rf volts you will have just barely overcome the DC bias offset. The control grid of the 6146 must go positive on the positive half of the RF drive envelope in order for Ua grid current to flow. If 6146 control grid never goes positive relative to the cathode then there will be no Ua grid current. No Ua grid current means no ALC indication. This is the first place to start.
> > > > > > >

> > > > > > > Not just my experience. You might contact Jimmy Lamanteer WB2KNR who still operates his original dealer purchased new TS520 as his main rig and collects them and has 8 or 10 at all times and he reports to me that they all have some level of ALC indication on 10 meters.
> > > > > > >
> > > > > > > > Not being critical of you Robert. Just trying to help.
> > > > > > > >
> > > > > > > > 73s Terry K9TW
> > > > > > > >
> > > > > > > >
> > > > > > > > >
> > > > > > > > > According to the TS-520 service bulletins, no ALC indication on 10M is "normal." And that is the way it is with my 520. I assume the 520SE is the same, although there are 520 owners who say they do get ALC on 10M.
> > > > > > > > >
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42636. Re: [TS-520_820_530_830] Re: Looking to clean my 820 - digital display keeps shifting (but not going out)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-07 23:33:06 UTC
From: Jim
Topic: 42587 Message: 42636

You can also get DeOxit products at most Guitar Center stores in the ProAudio section. The one here in Nashua, NH carries D5, F5 and G5.

Jim, KC1RM

On 6/7/2013 7:22 PM, M. J. Synowiec wrote:
> As a source for Caig products I use MCM electronics. They have sales
> on these products a couple of times a year and have reasonable prices
> and quick delivery.

42637. Re: [TS-520_820_530_830] Re: Looking to clean my 820 - digital display keeps shifting (but not going out)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-08 00:13:07 UTC
From: Joe - W7RKN
Topic: 42587 Message: 42637

Amazon.com carries all the Caig products, for a lot less than anywhere else, unless Caig has something on sale. (Which they do occasionally!)

Joe - W7RKN

----- Original Message -----
From: "Jim" <kc1rm@...>
Subject: Re: [TS-520_820_530_830] Re: Looking to clean my 820 - digital display keeps shifting (but not going out)

> You can also get DeOxit products at most Guitar Center stores in the
> ProAudio section. The one here in Nashua, NH carries D5, F5 and G5.

42638. Re: [TS-520_820_530_830] Re: Looking to clean my 820 - digital display keeps shifting (but not going out)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-08 00:15:13 UTC
From: Mark Gilger
Topic: 42587 Message: 42638

Amazon also carries it.
Mark

At 07:33 PM 6/7/2013, Jim wrote:
>
>
>You can also get DeOxit products at most Guitar Center stores in the
>ProAudio section. The one here in Nashua, NH carries D5, F5 and G5.
>
>Jim, KC1RM
>
>On 6/7/2013 7:22 PM, M. J. Synowiec wrote:
> > As a source for Caig products I use MCM electronics. They have sales
> > on these products a couple of times a year and have reasonable prices
> > and quick delivery.
>
>

[Non-text portions of this message have been removed]

42639. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-08 00:48:54 UTC
From: Terry Wagoner
Topic: 42105 Message: 42639

Hi Adrian:

1. You dont need any ALC indication to adjust the 10 meter drive coil. Set the Drive Control to 1200 then use an RF probe/VTVM/DMM, O-scope, or RF Millivolt meter to peak the RF drive at the Plate of Driver Tube or at the Control Grids of the 6146 finals. If you have a single diode RF probe best to just monitor the RF voltage at the finals control grid. Just set Car Level pot to full CW to ensure you have good TIF level.

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Terry K9TW

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> > > > > > > >
> > > > > > > > I once had a fellow call me(some how got my home phone) and he was mad as hell. He told me he saw where I responded on some forum just as I am to you and that he had purchased his TS520 new from big west coast dealer and it had no ALC on 10 meters out of

the box and he called Kenwood and they told him it was "normal". Now I dont want to call anyone a liar, but I suggested that I doubted he had actually called Kenwood factory design engineer in Japan. If so what did that engineer say was the reason? Would there not have been a discussion and some additional probing questions? I suggested that perhaps he had called the dealer and maybe even talked to a dealer bench tech who said something like " I see that all the time". Very different from a design engineer explaining why it was "normal". I then suggested that had it been me I would have taken the rig back to dealer and told them when they can sell me a new in the box one that has ALC indication on all bands I will take it. He was fuming by time conversation ended.
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> > > > > > > > > I closed the conversation this way. The compelling question you need to ask yourself is....."IF ONE OR MORE TS-520 HAVE SOME LEVEL OF ALC INDICATION ON 10 METERS WHY CANNOT ALL"? If later serial number production runs did not have this problem, wouldnt a mod have been issued? I know of no such Kenwood fix.
> > > > > > > >
> > > > > > > > > Would Ford make a car that the speed-o-meter worked in 1st, 2nd, and 3rd gear, but in 4th gear you had to use some kind of work around to tell how fast your were going (maybe timing mile marker post with your wrist watch)? Would customers really live with that and call it normal? I dont think so.
> > > > > > > >
> > > > > > > > > Also the manual does not say it is normal. I get that thrown at me. The operating manual clearly states that "Note: If there is no ALC reading indicated, increase the CAR control until there is an ALC reading" There is no disclaimer that follows that says "with the exception of on 10 meters". I think what confuses people is the statement later under the CW loading that says at 200 ma of Ip there may be no ALC indication. Too bad Kenwood had to make that statement, but apparently people were loading rig for max RF output using the RF detector position and for some odd reason then flipping meter back to ALC position instead of back to Ip. Maybe old timers who were use to loading the old Class C CW grid leak bias transmitters? Maybe they thought they needed to check and re-peak grid current? A Class AB1 Kenwood doesnt operate that way. We have essentially no grid current and no reason to keep checking ALC indication in the loading procedure. I dont understand it. Kenwood even followed this note by adding a chart that shows the preferred meter positions and it clearly shows that you should use Ip position when loading in CW. At 200 ma you are done and no reason to see if ALC has fallen off.
> > > > > > > >
> > > > > > > > > There is a reason that you may have no ALC indication in CW Mode at 200 ma Ip and it has to do with degenerative RF feedback, but I wont go into it in this response.
> > > > > > > > >
> > > > > > > > > Sorry so long, but this is not easy subject to cover briefly.
> > > > > > > > >
> > > > > > > > > If you want to work on your no ALC indication on 10 meters start with a fresh 12BY7A and make sure you have spec DC voltages and make sure your cathode resistors are all at design value.
> > > > > > > >
> > > > > > > > > Then in order to have ALC indication you need two key voltages. Start by checking your 6146 control grid Pin 5 operating DC bias voltage with 60 ma resting plate current. Also measure your RF drive voltage. If one or both of these are not to spec on 10 meters you will have no ALC indication. Need to be able to accurately measure these with a calibrated RF millivolt meter or O-scope. If you have -55vdc operating bias then you will need greater than 55/1.414 = 38.89 rms or 110.4 P-P rf drive volts. At 39 rf volts you will have just barely overcome the DC bias offset. The control grid of the 6146 must go positive

on the positive half of the RF drive envelope in order for Ua grid current to flow. If 6146 control grid never goes positive relative to the cathode then there will be no Ua grid current. No Ua grid current means no ALC indication. This is the first place to start.
> > > > > > > >
> > > > > > > > > Not just my experience. You might contact Jimmy Lamanteer WB2KNR who still operates his original dealer purchased new TS520 as his main rig and collects them and has 8 or 10 at all times and he reports to me that they all have some level of ALC indication on 10 meters.
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> > > > > > > > > Not being critical of you Robert. Just trying to help.
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> > > > > > > > > > According to the TS-520 service bulletins, no ALC indication on 10M is "normal." And that is the way it is with my 520. I assume the 520SE is the same, although there are 520 owners who say they do get ALC on 10M.
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42640. RE: [TS-520_820_530_830] Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-08 12:26:59 UTC
From: fpath fpath
Topic: 42105 Message: 42640

Adrian,

Another good way of loosening the slug is to get nice clean soler iron and place hot tip onto slug and allow to heat, then turn immediately the iron has been removed from slug, sorks everytime for me.

73s

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: wagstw46@yahoo.com
Date: Sat, 8 Jun 2013 00:48:54 +0000
Subject: [TS-520_820_530_830] Re: Progress report new 520SE acquisition

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> > > > > > > > > I closed the conversation this way. The compelling question you need to ask yourself is....."IF ONE OR MORE TS-520 HAVE SOME LEVEL OF ALC INDICATION ON 10 METERS WHY CANNOT ALL"? If later serial number production runs did not have this problem, wouldnt a mod have been issued? I know of no such Kenwood fix.
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> > > > > > > > > Would Ford make a car that the speed-o-meter worked in 1st, 2nd, and 3rd gear, but in 4th gear you had to use some kind of work around to tell how fast your were going (maybe timing mile marker post with your wrist watch)? Would customers really live with that and call it normal? I dont think so.
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> > > > > > > > > Also the manual does not say it is normal. I get that thrown at me. The operating manual clearly states that "Note: If there is no ALC reading indicated, increase the CAR control until there is an ALC reading" There is no disclaimer that follows that says "with the exception of on 10 meters". I think what confuses people is the statement later under the CW loading that says at 200 ma of Ip there may be no ALC indication. Too bad Kenwood had to make that statement, but apparently people were loading rig for max RF output using the RF detector position and for some odd reason then flipping meter back to ALC position instead of back to Ip. Maybe old timers who were use to loading the old Class C CW grid leak bias transmitters? Maybe they thought they needed to check and re-peak grid current? A Class AB1 Kenwood doesnt operate that way. We have essentially no grid current and no reason to keep checking ALC indication in the loading procedure. I dont understand it. Kenwood even followed this note by adding a chart that shows the preferred meter positions and it clearly shows that you should use Ip position when loading in CW. At 200 ma you are done and no reason to see if ALC has fallen off.
> > > > > > > >

> > > > > > > > There is a reason that you may have no ALC indication in CW Mode at 200 ma Ip and it has to do with degenerative RF feedback, but I wont go into it in this response.
> > > > > > > >
> > > > > > > > Sorry so long, but this is not easy subject to cover briefly.
> > > > > > > > >
> > > > > > > > > If you want to work on your no ALC indication on 10 meters start with a fresh 12BY7A and make sure you have spec DC voltages and make sure your cathode resistors are all at design value.
> > > > > > > > >
> > > > > > > > > Then in order to have ALC indication you need two key voltages. Start by checking your 6146 control grid Pin 5 operating DC bias voltage with 60 ma resting plate current. Also measure your RF drive voltage. If one or both of these are not to spec on 10 meters you will have no ALC indication. Need to be able to accurately measure these with a calibrated RF millivolt meter or O-scope. If you have -55vdc operating bias then you will need greater than 55/1.414 = 38.89 rms or 110.4 P-P rf drive volts. At 39 rf volts you will have just barely overcome the DC bias offset. The control grid of the 6146 must go positive on the positive half of the RF drive envelope in order for Ua grid current to flow. If 6146 control grid never goes positive relative to the cathode then there will be no Ua grid current. No Ua grid current means no ALC indication. This is the first place to start.
> > > > > > > >
> > > > > > > > > Not just my experience. You might contact Jimmy Lamanteer WB2KNR who still operates his original dealer purchased new TS520 as his main rig and collects them and has 8 or 10 at all times and he reports to me that they all have some level of ALC indication on 10 meters.
> > > > > > > >
> > > > > > > > > Not being critical of you Robert. Just trying to help.
> > > > > > > > >
> > > > > > > > > 73s Terry K9TW
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > According to the TS-520 service bulletins, no ALC indication on 10M is "normal." And that is the way it is with my 520. I assume the 520SE is the same, although there are 520 owners who say they do get ALC on 10M.
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[Non-text portions of this message have been removed]

42641. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-08 13:37:16 UTC
From: adrian.langford@ymail.com
Topic: 42105 Message: 42641

Hi Terry,

Thanks for suggestions - I've had a really productive morning here working on the rig!

Took your idea of measuring th DP voltage, but I was finding that e scope was detuning the driver - with the probe off the ALC peak position (for Drive control) was way off what it was when peaking drive coil using scope.

But I still worked through bands and peaked using scope trace (all slugs moving on Drive coil board). I noticed that on some bands I could get a healthy p-p voltage but with probe off see no alc unless I moved Drive a long way off 12 o'clock. So I tried peaking again from start in correct sequence but using alc meter. This time when I moved the 28MHz slug way up towards top of former I got a really healthy ALC! In fact I realised that the slug had been almost at bottom of former (normal position for 1.8 Drive slug) but manual says otherbslugs should be near top end. Anyway I can now get full scale ALC on 10m with carrier at about 1 o'clock, and indicated 80 W out on a pretty accurate Welz meter I have. Brilliant!

As I had slugs moving nicely I peaked all the receive circuits. Got another couple or so s points on each band, but the best thing is the Drive control is now aligned from Rx to Tx - peaking alc with drive is where peak receive noise is for that frequency. Also everything is happening around the 12 o'clock position, whereas before I had to move a long way off centre, and 14MHz was actually running out of room before alc peak.

I still get no s reading in WWV position but can hear calibrator (but not strongly). The manual is a bit confusing on WWV circuit descriptions - I'm sure some of the transistors numbers they reference do not match block diagram. I put scope on collector of Q8 on RF which I think is wwv oscillator, and just get a messy very low amplitude signal. But when I hook up to antenna the s meter moves a bit (S5 or so) if I tune up from 15MHz and hit a broadcast station, so does that mean the WWV oscillator is running? Adjusting wwv coils on rf board makes no diffence to zero S meter reading, but tweaking T4 and T5 peaks the faint calibrator noise.

WWV receive is a minor thing - delighted to have proper ALC on 10m and properly aligned rig.

Thanks again for getting me this far and convincing me that the "no alc is normal" is a myth!

73 Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Hi Adrian:
>
> 1. You dont need any ALC indication to adjust the 10 meter drive coil. Set the Drive Control to 1200 then use an RF probe/VTVM/DMM, O-scope, or RF Millivolt meter to peak the

RF drive at the Plate of Driver Tube or at the Control Grids of the 6146 finals. If you have a single diode RF probe best to just monitor the RF voltage at the finals control grid. Just set Car Level pot to full CW to ensure you have good TIF level.
>
> 2. Did you set the VFO dial to zero (15.0mhz) to see the Marker signal on the S-meter to peak the WWV coils? Tune the VFO for max S-meter indication. You then peak signal with T4 and T5 for max S-meter indication and then adjust T3 for max S-meter indication and then back off T3 1/4 turn CCW. A better way is to use a RF sig generator and inject a 15 mhz signal into the SO-239 connector. I usually start with a -73dBm or 50.0 uv signal level and reduce the sig gen level as I get the tuned circuits peaked.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> >
> >
> > I moved onto Drive coils. 1.8MHz could be peaked, but as I didn't have any ALC indication whatsoever I couldn't peak the 28 coil!
> >
> >
> >
> > I found a really strange thing when going through the manual. When I tried to peak WWV frequency I couldn't, as though I could hear the calibrator signal I had no s-meter deflection on that band switch position. On 14MHz position I don't get s-meter deflection unless I peak with Drive control, but the Drive control is not operative on WWV so it may be same thing on WWV. I don't want to mess with T4, T5 and T3 on the RF board with no s-meter to guide me. Any suggestions?
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> > > Thanks Terry for pointers. I will work way back and study level diagram alongside your instructions.
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> > > Oh I also tried to improve the VFO tracking but even going backband forth many times I couldn't get it really accurate at both ends 0 and 600. It's a slight improvement on how it was tracking before, and if Inuse calibrator again at 600 end then it's spot on. Without recalibrating against marker I can get it to 5.5000 at 0 end and 4.9004 at 600 end which will do for me.
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> > > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > > >
> > > > Just remember a 50mhz BW scope on 28 mhz will read P-P voltage approx 8% to 9% low.
> > > >

> > > > As far as where to go next. Well with your scope you can measure all the key TX Level Diagram test points for RF drive. Just multiply the Rms values listed by 2.828 for P-P that your scope will display.
> > > >
> > > > Probably easiest is to take a look at Transmit Mixer output at the MD terminal or I believe you also have a TP-1 on the RF board. Should see something close to 2 rms volts or 6 volts P-P. If low there take a look at your Het Osc input. Het Osc serves as the LO for the Mixer and TIF as the RF input. TIF seldom problem but it could be. Output at MD is the actual transmit frequency which will be Het minus TIF. Should have about 1 volt of Het at TP-3. If low try adjusting the Het Osc coil. Make sure you peak it on slow side of the response curve and back off a little.
> > > >
> > > > Terry K9TW
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> > > > >
> > > > > Well I've spent a happy hour probing my 520SE to measure the readings you suggested taking to diagnose my "no ALC on 10m". I can see why I'm not getting any ALC...
> > > > >
> > > > > - On 28MHz I get no ALC, and only 5W indicated on external power meter when I tune the Plate and Load for max output.
> > > > >
> > > > > - Loaded on 28MHz using peak receive noise, I have -84.5vdc cutoff bias in RX at pin 5 control grid
> > > > >
> > > > > - In TX mode I have -53.2vdc operating bias
> > > > >
> > > > > - RF drive voltage (measured with Tektronix 50MHz scope)is 36.0 peak rf volts
> > > > >
> > > > > So using your workings I have 36-53.2 = -17.2V delta in TX mode, whereas I need a decent positive delta!
> > > > >
> > > > > Please advise on next place to look for why the rf volts are too low (you were getting 60.8V peak rf compared with my 36V).
> > > > >
> > > > > I haven't done any alignment yet as I'm waiting for correct tool to arrive, and don't want to crack any slugs through impatience.
> > > > >
> > > > > Oh while I had the rig open I looked in the finals cage. Was interested to see the original Japanese valves had been replaced at some stage by 6146Ws.
> > > > >
> > > > > 73s from Adrian G4IQW
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > > > > >
> > > > > > Here are my readings from my personal TS-520 serial number 040234:
> > > > > >
> > > > > > 1. Full load on 28.500 Mhz = 85 watts output @200 ma into 50 ohm dummy load.
> > > > > > 2. ALC indication is full scale deflection(FSD)ie the needle is far right at "350 ma" with Car Level Pot at position "8" and Drive Control peaked at 1230.

> > > > > > 3. DC bias voltage at 6146 control grid Pin 5 = -85.6vdc cutoff bias in RX mode and -51.4 vdc operating bias in TX mode.
> > > > > > 4. RF drive voltage at 6146 control grid Pin 5 = 43.0 rms volts measured with a Boonton 92E RF millivolt meter.
> > > > > >
> > > > > > > 43 x 1.414 = 60.8 peak rf volts
> > > > > > > 60.8 - 51.4 vdc bias = 9.4 volts difference. This is reason why I have FSD ALC indication. It is normal to require more Car Level voltage on 10 meters. If unsure just set it Full CW to start with.
> > > > > > >
> > > > > > > -51.4/1.414 = 36.0 rf volts. You must have greater than 36.0 rf volts at -51.4vdc operating bias to get any ALC indication. The Rf drive signal must make the 6146 control grid positive with respect to the cathode so that ua grid current flows to produce any ALC indication. The greater the delta between dc bias and RF drive voltage on positive swing of the RF envelope the higher the ALC deflection will be.
> > > > > > >
> > > > > > > So you need to load your rig on 10 meters into dummy load. Since you have no ALC indication use a workaround like peaking the Drive Control on receiver back ground noise or use the Marker. After loading to full load flip the SG switch off and make the RF drive and DC bias voltage measurements on the 6146 control grid as I did above.
> > > > > > >
> > > > > > > You will need a 3 diode RF probe and VTVM, or an O-scope, or an RF Millivolt meter to make the RF drive measurements.
> > > > > > >
> > > > > > > Report back the RF output level, the operating bias voltage, and RF drive voltage and based on those I can point you to next place to look.
> > > > > > >
> > > > > > > Terry
> > > > > > > K9TW
> > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> > > > > > > >
> > > > > > > > Well I popped in "new" 12BY7A driver.
> > > > > > > >
> > > > > > > > Rewarded with much healthier ALC on 15m (before had been unstable on that band) but still no ALC whatsoever on 10m. I also used switch cleaner on band switch and worked it in, in case of contact problem on 10m.
> > > > > > > >
> > > > > > > > Next I will check the grid volatfes and cathode resistors as Terry suggested.
> > > > > > > >
> > > > > > > > I also wondered if coil alignment may be part of answer so alsomtook off bottom of case.
> > > > > > > >
> > > > > > > > The bad news is that the nylon hex toool I got on ebay was too big for the cores (have ordered one from Ken K4EAA).
> > > > > > > >
> > > > > > > > The good news is that I examined all the slugs very carefully under bright light. Only one appears crackdd - the 3.5MHz oscillator coil. So when proper tool arrives I can align rig properly.
> > > > > > > >

> > > > > > > 73 Adrian G4IQW
> > > > > > > >
> > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@>
wrote:
> > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > Many thanks for valuable info Terry.
> > > > > > > > > >
> > > > > > > > > > Different views from similarly experienced owners, so what I'll do is test
whether a new driver valve - after checking voltages described here - makes any difference
to 10m ALC.
> > > > > > > > >
> > > > > > > > > > Plenty of time anyway till 10m shows signs of life!
> > > > > > > > > >
> > > > > > > > > > 73 Adrian G4IQW
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> > > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@>
wrote:
> > > > > > > > > >
> > > > > > > > > > Robert:
> > > > > > > > > >
> > > > > > > > > > I will probably regret wading in to this pond!
> > > > > > > > > >
> > > > > > > > > > I do not doubt that you have no ALC indication on 10 meters on your
TS-520. In my experience it is "common", but not "normal". I would also be very careful
citing and observing any of these "service bulletins". I am very skeptical of most of these
as some are just flat wrong. Putting star lock washers on circuit board to cure VFO drift
isnt first thing I will ever reach for! They appear to me to be nothing more than a list of
one line anecdotal entries submitted by owners and perhaps Kenwood service center bench
techs? One line entries with no details, no basis, no explanations are not what I would
expect from a factory authorized service bulletin.
> > > > > > > > >
> > > > > > > > > > I have worked on probably 30 or so TS520s in a 10 year period. Not an
exhaustive number, but enough to know that all but one left my bench with adequate ALC
indication on 10 meters. That one would get approx 1/4 scale deflection and was very touchy
and owner was in a hurry to get it back. In my experience can typically get at least 1/2
scale deflection with Car Level pot at 1400 to 1500 position. My own personal TS-520 ALC
indication on 10 meters is a little bit better than 1/2 scale deflection. It had none when
I got it.
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> > > > > > > > > > I once had a fellow call me(some how got my home phone) and he was mad as
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42642. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-08 13:42:12 UTC
From: adrian.langford@ymail.com
Topic: 42105 Message: 42642

Thanks Dave I was trying this (Keith Hutt also gave me this tip) but had no luck. Maybe I wasn't quick enough moving slug after removing iron tip? Didn't realise had to try to move it immediately.

Penetrant (tri-flo equivalent from model shop) did trick once I applied with brush round outside of slug, and allowed it to work its way down threads. All my coils on all oards moving except for the one cracked one I had on 3.5MHz het coil.

73 Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
> Adrian,
>
>
>
> Another good way of loosening the slug is to get nice clean soler iron and place hot tip onto slug and allow to heat, then turn immediately the iron has been removed from slug, sorks everytime for me.
>
>
>
> 73s
>
> Dave
>
> VK5PDL
>
>
>
>
> To: TS-520_820_530_830@yahoogroups.com
> From: wagstw46@...
> Date: Sat, 8 Jun 2013 00:48:54 +0000
> Subject: [TS-520_820_530_830] Re: Progress report new 520SE acquisition
>
>
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>
>
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> > > >
> > > > Just remember a 50mhz BW scope on 28 mhz will read P-P voltage approx 8% to 9% low.
> > > >
> > > > As far as where to go next. Well with your scope you can measure all the key TX Level Diagram test points for RF drive. Just multiply the Rms values listed by 2.828 for

P-P that your scope will display.
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> > > > Probably easiest is to take a look at Transmit Mixer output at the MD terminal or I believe you also have a TP-1 on the RF board. Should see something close to 2 rms volts or 6 volts P-P. If low there take a look at your Het Osc input. Het Osc serves as the LO for the Mixer and TIF as the RF input. TIF seldom problem but it could be. Output at MD is the actual transmit frequency which will be Het minus TIF. Should have about 1 volt of Het at TP-3. If low try adjusting the Het Osc coil. Make sure you peak it on slow side of the response curve and back off a little.
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> > > > > - On 28MHz I get no ALC, and only 5W indicated on external power meter when I tune the Plate and Load for max output.
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> > > > > > > > >
> > > > > > > > > I once had a fellow call me(some how got my home phone) and he was mad as hell. He told me he saw where I responded on some forum just as I am to you and that he had purchased his TS520 new from big west coast dealer and it had no ALC on 10 meters out of the box and he called Kenwood and they told him it was "normal". Now I dont want to call anyone a liar, but I suggested that I doubted he had actually called Kenwood factory design engineer in Japan. If so what did that engineer say was the reason? Would there not have been a discussion and some additional probing questions? I suggested that perhaps he had called the dealer and maybe even talked to a dealer bench tech who said something like " I see that all the time". Very different from a design engineer explaining why it was "normal". I then suggested that had it been me I would have taken the rig back to dealer and told them when they can sell me a new in the box one that has ALC indication on all bands I will take it. He was fuming by time conversation ended.
> > > > > > > > >

> > > > > > > > > I closed the conversation this way. The compelling question you need to ask yourself is....."IF ONE OR MORE TS-520 HAVE SOME LEVEL OF ALC INDICATION ON 10 METERS WHY CANNOT ALL"? If later serial number production runs did not have this problem, wouldnt a mod have been issued? I know of no such Kenwood fix.
> > > > > > > > >
> > > > > > > > > > Would Ford make a car that the speed-o-meter worked in 1st, 2nd, and 3rd gear, but in 4th gear you had to use some kind of work around to tell how fast your were going (maybe timing mile marker post with your wrist watch)? Would customers really live with that and call it normal? I dont think so.
> > > > > > > > >
> > > > > > > > > > Also the manual does not say it is normal. I get that thrown at me. The operating manual clearly states that "Note: If there is no ALC reading indicated, increase the CAR control until there is an ALC reading" There is no disclaimer that follows that says "with the exception of on 10 meters". I think what confuses people is the statement later under the CW loading that says at 200 ma of Ip there may be no ALC indication. Too bad Kenwood had to make that statement, but apparently people were loading rig for max RF output using the RF detector position and for some odd reason then flipping meter back to ALC position instead of back to Ip. Maybe old timers who were use to loading the old Class C CW grid leak bias transmitters? Maybe they thought they needed to check and re-peak grid current? A Class AB1 Kenwood doesnt operate that way. We have essentially no grid current and no reason to keep checking ALC indication in the loading procedure. I dont understand it. Kenwood even followed this note by adding a chart that shows the preferred meter positions and it clearly shows that you should use Ip position when loading in CW. At 200 ma you are done and no reason to see if ALC has fallen off.
> > > > > > > > >
> > > > > > > > > > There is a reason that you may have no ALC indication in CW Mode at 200 ma Ip and it has to do with degenerative RF feedback, but I wont go into it in this response.
> > > > > > > > > >
> > > > > > > > > > Sorry so long, but this is not easy subject to cover briefly.
> > > > > > > > > >
> > > > > > > > > > If you want to work on your no ALC indication on 10 meters start with a fresh 12BY7A and make sure you have spec DC voltages and make sure your cathode resistors are all at design value.
> > > > > > > > > >
> > > > > > > > > > Then in order to have ALC indication you need two key voltages. Start by checking your 6146 control grid Pin 5 operating DC bias voltage with 60 ma resting plate current. Also measure your RF drive voltage. If one or both of these are not to spec on 10 meters you will have no ALC indication. Need to be able to accurately measure these with a calibrated RF millivolt meter or O-scope. If you have -55vdc operating bias then you will need greater than 55/1.414 = 38.89 rms or 110.4 P-P rf drive volts. At 39 rf volts you will have just barely overcome the DC bias offset. The control grid of the 6146 must go positive on the positive half of the RF drive envelope in order for Ua grid current to flow. If 6146 control grid never goes positive relative to the cathode then there will be no Ua grid current. No Ua grid current means no ALC indication. This is the first place to start.
> > > > > > > > >
> > > > > > > > > > Not just my experience. You might contact Jimmy Lamanteer WB2KNR who still operates his original dealer purchased new TS520 as his main rig and collects them and has 8 or 10 at all times and he reports to me that they all have some level of ALC indication on 10 meters.

> > > > > > > > >
> > > > > > > > > > Not being critical of you Robert. Just trying to help.
> > > > > > > > > >
> > > > > > > > > > 73s Terry K9TW
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > According to the TS-520 service bulletins, no ALC indication on 10M is "normal." And that is the way it is with my 520. I assume the 520SE is the same, although there are 520 owners who say they do get ALC on 10M.
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >

42643. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-08 14:24:02 UTC
From: Terry Wagoner
Topic: 42105 Message: 42643

Adrian: Good Job!

I am glad you have good ALC indication on 10 meters now. As I told you this business about it being "Normal" is a tribal myth. It is far too "Common" and generally can be corrected in my experience. I am working on a "white paper" that addresses the 10 meter TX and RX design compromises and things you can do. When done will talk to Gordon about placing in the Files section for all to use.

Yes the scope can de-tune when you are measuring RF drive levels. Most scopes are 1 meg input and the input capacitance is the thing that gets you so you need to use a low capacitance probe and it is normal to have to repeak the Drive control as you found it will not peak at 1200. This is one of reasons I use a Boonton RF Millivolt meter. Its input Z has far less loading affect and just easier and faster to use.

Regards WWV you are not adjusting anything to zero the S meter. You are adjusting to peak the S meter indication. I would not get on Q8 oscillator collector. Too easy to pull the oscillator. The output of Q8 Het Osc is the emitter and they use a 5pf cap to couple this output to Mixer Q4. I have never measured the Het Osc level at input of Q4 so cant tell you what normal level is. Most mixers require high level LO signal so would not be surprised to find approx 1.0 rf volts. There is no tank circuit that you can peak the oscillator level. You might try looking at the RIF Terminal post with your scope and peak T5, T4, and T3 for maximum P-P level with bandswitch at 15mhz with Marker on or 15 mhz injected into SO-239 as I previously noted.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@..." <adrian@...> wrote:
>
> Hi Terry,
>
> Thanks for suggestions - I've had a really productive morning here working on the rig!
>
> Anyway I can now get full scale ALC on 10m with carrier at about 1 o'clock, and indicated 80 W out on a pretty accurate Welz meter I have. Brilliant!
>
>
>
> I still get no s reading in WWV position but can hear calibrator (but not strongly). The manual is a bit confusing on WWV circuit descriptions - I'm sure some of the transistors numbers they reference do not match block diagram. I put scope on collector of Q8 on RF which I think is wwv oscillator, and just get a messy very low amplitude signal. But when I hook up to antenna the s meter moves a bit (S5 or so) if I tune up from 15MHz and hit a broadcast station, so does that mean the WWV oscillator is running? Adjusting wwv coils on rf board makes no diffence to zero S meter reading, but tweaking T4 and T5 peaks the faint calibrator noise.
>

> WWV receive is a minor thing - delighted to have proper ALC on 10m and properly aligned rig.
>
> Thanks again for getting me this far and convincing me that the "no alc is normal" is a myth!
>
> 73 Adrian G4IQW
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Hi Adrian:
> >
> > 1. You dont need any ALC indication to adjust the 10 meter drive coil. Set the Drive Control to 1200 then use an RF probe/VTVM/DMM, O-scope, or RF Millivolt meter to peak the RF drive at the Plate of Driver Tube or at the Control Grids of the 6146 finals. If you have a single diode RF probe best to just monitor the RF voltage at the finals control grid. Just set Car Level pot to full CW to ensure you have good TIF level.
> >
> > 2. Did you set the VFO dial to zero (15.0mhz) to see the Marker signal on the S-meter to peak the WWV coils? Tune the VFO for max S-meter indication. You then peak signal with T4 and T5 for max S-meter indication and then adjust T3 for max S-meter indication and then back off T3 1/4 turn CCW. A better way is to use a RF sig generator and inject a 15 mhz signal into the SO-239 connector. I usually start with a -73dBm or 50.0 uv signal level and reduce the sig gen level as I get the tuned circuits peaked.
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> > --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> > >
> > >
> > > I moved onto Drive coils. 1.8MHz could be peaked, but as I didn't have any ALC indication whatsoever I couldn't peak the 28 coil!
> > >
> > >
> > >
> > > I found a really strange thing when going through the manual. When I tried to peak WWV frequency I couldn't, as though I could hear the calibrator signal I had no s-meter deflection on that band switch position. On 14MHz position I don't get s-meter deflection unless I peak with Drive control, but the Drive control is not operative on WWV so it may be same thing on WWV. I don't want to mess with T4, T5 and T3 on the RF board with no s-meter to guide me. Any suggestions?
> > >
> > > So that's where I am for now, but at least I had a couple of QSOs last weekend (special stations Slovenia and Switzerland).
> > >
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> > > > Thanks Terry for pointers. I will work way back and study level diagram alongside your instructions.
> > > >
> > > > Oh I also tried to improve the VFO tracking but even going backband forth many times I couldn't get it really accurate at both ends 0 and 600. It's a slight improvement on how it was tracking before, and if Inuse calibrator again at 600 end then it's spot on. Without recalibrating against marker I can get it to 5.5000 at 0 end and 4.9004 at 600 end which will do for me.
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> > > > > > > > > > > There is a reason that you may have no ALC indication in CW Mode at 200 ma Ip and it has to do with degenerative RF feedback, but I wont go into it in this response.

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> > > > > > > > > > > Sorry so long, but this is not easy subject to cover briefly.
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> > > > > > > > > > > If you want to work on your no ALC indication on 10 meters start with a fresh 12BY7A and make sure you have spec DC voltages and make sure your cathode resistors are all at design value.
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> > > > > > > > > > > Then in order to have ALC indication you need two key voltages. Start by checking your 6146 control grid Pin 5 operating DC bias voltage with 60 ma resting plate current. Also measure your RF drive voltage. If one or both of these are not to spec on 10 meters you will have no ALC indication. Need to be able to accurately measure these with a calibrated RF millivolt meter or O-scope. If you have -55vdc operating bias then you will need greater than 55/1.414 = 38.89 rms or 110.4 P-P rf drive volts. At 39 rf volts you will have just barely overcome the DC bias offset. The control grid of the 6146 must go positive on the positive half of the RF drive envelope in order for Ua grid current to flow. If 6146 control grid never goes positive relative to the cathode then there will be no Ua grid current. No Ua grid current means no ALC indication. This is the first place to start.
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> > > > > > > > > > > Not being critical of you Robert. Just trying to help.
> > > > > > > > > > >
> > > > > > > > > > > 73s Terry K9TW
> > > > > > > > > > >
> > > > > > > > > > >
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42644. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-08 14:35:03 UTC
From: adrian.langford@ymail.com
Topic: 42105 Message: 42644

Hi Terry

Sorry I wasn't clear - was trying to say tweaking those transformers made no difference to s meter reading zero with audible calibrator signal beat, not that I was aiming to zero meter!

Thanks for pointers on wwv oscillator. I'll check those het readings and look at RIF signal.

The scope probe I was trying to use has 12pf capacitance in x10 position, and is described ad a probe for up to 50 MHz. Maybe that 12pf just too much? Not an issue now I have good ALC!

73 Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Adrian: Good Job!
>
> I am glad you have good ALC indication on 10 meters now. As I told you this business about it being "Normal" is a tribal myth. It is far too "Common" and generally can be corrected in my experience. I am working on a "white paper" that addresses the 10 meter TX and RX design compromises and things you can do. When done will talk to Gordon about placing in the Files section for all to use.
>
> Yes the scope can de-tune when you are measuring RF drive levels. Most scopes are 1 meg input and the input capacitance is the thing that gets you so you need to use a low capacitance probe and it is normal to have to repeak the Drive control as you found it will not peak at 1200. This is one of reasons I use a Boonton RF Millivolt meter. Its input Z has far less loading affect and just easier and faster to use.
>
> Regards WWV you are not adjusting anything to zero the S meter. You are adjusting to peak the S meter indication. I would not get on Q8 oscillator collector. Too easy to pull the oscillator. The output of Q8 Het Osc is the emitter and they use a 5pf cap to couple this output to Mixer Q4. I have never measured the Het Osc level at input of Q4 so cant tell you what normal level is. Most mixers require high level LO signal so would not be surprised to find approx 1.0 rf volts. There is no tank circuit that you can peak the oscillator level. You might try looking at the RIF Terminal post with your scope and peak T5, T4, and T3 for maximum P-P level with bandswitch at 15mhz with Marker on or 15 mhz injected into SO-239 as I previously noted.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> >
> > Hi Terry,

> >
> > Thanks for suggestions - I've had a really productive morning here working on the rig!
> >
> > Anyway I can now get full scale ALC on 10m with carrier at about 1 o'clock, and indicated 80 W out on a pretty accurate Welz meter I have. Brilliant!
> >
> >
> >
> > I still get no s reading in WWV position but can hear calibrator (but not strongly). The manual is a bit confusing on WWV circuit descriptions - I'm sure some of the transistors numbers they reference do not match block diagram. I put scope on collector of Q8 on RF which I think is wwv oscillator, and just get a messy very low amplitude signal. But when I hook up to antenna the s meter moves a bit (S5 or so) if I tune up from 15MHz and hit a broadcast station, so does that mean the WWV oscillator is running? Adjusting wwv coils on rf board makes no diffence to zero S meter reading, but tweaking T4 and T5 peaks the faint calibrator noise.
> >
> > WWV receive is a minor thing - delighted to have proper ALC on 10m and properly aligned rig.
> >
> > Thanks again for getting me this far and convincing me that the "no alc is normal" is a myth!
> >
> > 73 Adrian G4IQW
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > >
> > > Hi Adrian:
> > >
> > > 1. You dont need any ALC indication to adjust the 10 meter drive coil. Set the Drive Control to 1200 then use an RF probe/VTVM/DMM, O-scope, or RF Millivolt meter to peak the RF drive at the Plate of Driver Tube or at the Control Grids of the 6146 finals. If you have a single diode RF probe best to just monitor the RF voltage at the finals control grid. Just set Car Level pot to full CW to ensure you have good TIF level.
> > >
> > > 2. Did you set the VFO dial to zero (15.0mhz) to see the Marker signal on the S-meter to peak the WWV coils? Tune the VFO for max S-meter indication. You then peak signal with T4 and T5 for max S-meter indication and then adjust T3 for max S-meter indication and then back off T3 1/4 turn CCW. A better way is to use a RF sig generator and inject a 15 mhz signal into the SO-239 connector. I usually start with a -73dBm or 50.0 uv signal level and reduce the sig gen level as I get the tuned circuits peaked.
> > >
> > > Terry K9TW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> > > >
> > > >
> > > > I moved onto Drive coils. 1.8MHz could be peaked, but as I didn't have any ALC indication whatsoever I couldn't peak the 28 coil!

> > > >
> > > >
> > > >
> > > > I found a really strange thing when going through the manual. When I tried to peak WWV frequency I couldn't, as though I could hear the calibrator signal I had no s-meter deflection on that band switch position. On 14MHz position I don't get s-meter deflection unless I peak with Drive control, but the Drive control is not operative on WWV so it may be same thing on WWV. I don't want to mess with T4, T5 and T3 on the RF board with no s-meter to guide me. Any suggestions?
> > > >
> > > > So that's where I am for now, but at least I had a couple of QSOs last weekend (special stations Slovenia and Switzerland).
> > > >
> > > > 73 Adrian G4IQW
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> > > > >
> > > > >
> > > > > Thanks Terry for pointers. I will work way back and study level diagram alongside your instructions.
> > > > >
> > > > > Oh I also tried to improve the VFO tracking but even going backband forth many times I couldn't get it really accurate at both ends 0 and 600. It's a slight improvement on how it was tracking before, and if Inuse calibrator again at 600 end then it's spot on. Without recalibrating against marker I can get it to 5.5000 at 0 end and 4.9004 at 600 end which will do for me.
> > > > >
> > > > > 73 Adrian G4IQW
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > > > > >
> > > > > > Just remember a 50mhz BW scope on 28 mhz will read P-P voltage approx 8% to 9% low.
> > > > > >
> > > > > > As far as where to go next. Well with your scope you can measure all the key TX Level Diagram test points for RF drive. Just multiply the Rms values listed by 2.828 for P-P that your scope will display.
> > > > > >
> > > > > > Probably easiest is to take a look at Transmit Mixer output at the MD terminal or I believe you also have a TP-1 on the RF board. Should see something close to 2 rms volts or 6 volts P-P. If low there take a look at your Het Osc input. Het Osc serves as the LO for the Mixer and TIF as the RF input. TIF seldom problem but it could be. Output at MD is the actual transmit frequency which will be Het minus TIF. Should have about 1 volt of Het at TP-3. If low try adjusting the Het Osc coil. Make sure you peak it on slow side of the response curve and back off a little.
> > > > > >
> > > > > > Terry K9TW
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> > > > > > >

> > > > > > > Well I've spent a happy hour probing my 520SE to measure the readings you suggested taking to diagnose my "no ALC on 10m". I can see why I'm not getting any ALC...
> > > > > > >
> > > > > > > > - On 28MHz I get no ALC, and only 5W indicated on external power meter when I tune the Plate and Load for max output.
> > > > > > > >
> > > > > > > > - Loaded on 28MHz using peak receive noise, I have -84.5vdc cutoff bias in RX at pin 5 control grid
> > > > > > > >
> > > > > > > > - In TX mode I have -53.2vdc operating bias
> > > > > > > >
> > > > > > > > - RF drive voltage (measured with Tektronix 50MHz scope)is 36.0 peak rf volts
> > > > > > > >
> > > > > > > > So using your workings I have 36-53.2 = -17.2V delta in TX mode, whereas I need a decent positive delta!
> > > > > > > >
> > > > > > > > Please advise on next place to look for why the rf volts are too low (you were getting 60.8V peak rf compared with my 36V).
> > > > > > > >
> > > > > > > > I haven't done any alignment yet as I'm waiting for correct tool to arrive, and don't want to crack any slugs through impatience.
> > > > > > > >
> > > > > > > > Oh while I had the rig open I looked in the finals cage. Was interested to see the original Japanese valves had been replaced at some stage by 6146Ws.
> > > > > > > >
> > > > > > > > 73s from Adrian G4IQW
> > > > > > > >
> > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > > > > > > >
> > > > > > > > Here are my readings from my personal TS-520 serial number 040234:
> > > > > > > >
> > > > > > > > 1. Full load on 28.500 Mhz = 85 watts output @200 ma into 50 ohm dummy load.
> > > > > > > > 2. ALC indication is full scale deflection(FSD)ie the needle is far right at "350 ma" with Car Level Pot at position "8" and Drive Control peaked at 1230.
> > > > > > > > 3. DC bias voltage at 6146 control grid Pin 5 = -85.6vdc cutoff bias in RX mode and -51.4 vdc operating bias in TX mode.
> > > > > > > > 4. RF drive voltage at 6146 control grid Pin 5 = 43.0 rms volts measured with a Boonton 92E RF millivolt meter.
> > > > > > > >
> > > > > > > > 43 x 1.414 = 60.8 peak rf volts
> > > > > > > > 60.8 - 51.4 vdc bias = 9.4 volts difference. This is reason why I have FSD ALC indication. It is normal to require more Car Level voltage on 10 meters. If unsure just set it Full CW to start with.
> > > > > > > >
> > > > > > > > -51.4/1.414 = 36.0 rf volts. You must have greater than 36.0 rf volts at -51.4vdc operating bias to get any ALC indication. The Rf drive signal must make the 6146 control grid positive with respect to the cathode so that ua grid current flows to produce any ALC indication. The greater the delta between dc bias and RF drive voltage on positive swing of the RF envelope the higher the ALC deflection will be.

> > > > > > > >
> > > > > > > > > So you need to load your rig on 10 meters into dummy load. Since you have no ALC indication use a workaround like peaking the Drive Control on receiver back ground noise or use the Marker. After loading to full load flip the SG switch off and make the RF drive and DC bias voltage measurements on the 6146 control grid as I did above.
> > > > > > > > >
> > > > > > > > > > You will need a 3 diode RF probe and VTVM, or an O-scope, or an RF Millivolt meter to make the RF drive measurements.
> > > > > > > > >
> > > > > > > > > > Report back the RF output level, the operating bias voltage, and RF drive voltage and based on those I can point you to next place to look.
> > > > > > > > >
> > > > > > > > > > Terry
> > > > > > > > > > K9TW
> > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> > > > > > > > >
> > > > > > > > > > > Well I popped in "new" 12BY7A driver.
> > > > > > > > >
> > > > > > > > > > > Rewarded with much healthier ALC on 15m (before had been unstable on that band) but still no ALC whatsoever on 10m. I also used switch cleaner on band switch and worked it in, in case of contact problem on 10m.
> > > > > > > > >
> > > > > > > > > > > Next I will check the grid volatfes and cathode resistors as Terry suggested.
> > > > > > > > >
> > > > > > > > > > > I also wondered if coil alignment may be part of answer so alsomtook off bottom of case.
> > > > > > > > >
> > > > > > > > > > > The bad news is that the nylon hex toool I got on ebay was too big for the cores (have ordered one from Ken K4EAA).
> > > > > > > > >
> > > > > > > > > > > The good news is that I examined all the slugs very carefully under bright light. Only one appears crackdd - the 3.5MHz oscillator coil. So when proper tool arrives I can align rig properly.
> > > > > > > > >
> > > > > > > > > > > 73 Adrian G4IQW
> > > > > > > > >
> > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> > > > > > > > > >
> > > > > > > > > > > > Many thanks for valuable info Terry.
> > > > > > > > > >
> > > > > > > > > > > > Different views from similarly experienced owners, so what I'll do is test whether a new driver valve - after checking voltages described here - makes any difference to 10m ALC.
> > > > > > > > > >
> > > > > > > > > > > > Plenty of time anyway till 10m shows signs of life!

> > > > > > > > > >
> > > > > > > > > > > 73 Adrian G4IQW
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > > > > > > > > > > >
> > > > > > > > > > > > Robert:
> > > > > > > > > > > >
> > > > > > > > > > > > I will probably regret wading in to this pond!
> > > > > > > > > > > >
> > > > > > > > > > > > I do not doubt that you have no ALC indication on 10 meters on your TS-520. In my experience it is "common", but not "normal". I would also be very careful citing and observing any of these "service bulletins". I am very skeptical of most of these as some are just flat wrong. Putting star lock washers on circuit board to cure VFO drift isnt first thing I will ever reach for! They appear to me to be nothing more than a list of one line anecdotal entries submitted by owners and perhaps Kenwood service center bench techs? One line entries with no details, no basis, no explanations are not what I would expect from a factory authorized service bulletin.
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> > > > > > > > > > > > I have worked on probably 30 or so TS520s in a 10 year period. Not an exhaustive number, but enough to know that all but one left my bench with adequate ALC indication on 10 meters. That one would get approx 1/4 scale deflection and was very touchy and owner was in a hurry to get it back. In my experience can typically get at least 1/2 scale deflection with Car Level pot at 1400 to 1500 position. My own personal TS-520 ALC indication on 10 meters is a little bit better than 1/2 scale deflection. It had none when I got it.
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> > > > > > > > > > > > Sorry so long, but this is not easy subject to cover briefly.
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> > > > > > > > > > > > >
> > > > > > > > > > > > > Not being critical of you Robert. Just trying to help.
> > > > > > > > > > > > >
> > > > > > > > > > > > > 73s Terry K9TW
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > >
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although there are 520 owners who say they do get ALC on 10M.

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42645. Re: Progress report new 520SE acquisition

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-08 14:45:59 UTC
From: Terry Wagoner
Topic: 42105 Message: 42645

OK Understood. Yes 12 pf is a bunch at 10 meters. That is part of design challenge for all 10 meter transmit and receive circuit design. The minimum fixed "parasitic" or stray capacitance prevents the engineers from using optimum tuned circuit LC ratios and optimum loaded Q. In the TX circuits they have to use the combination of the Driver tube internal electrode capacitance and the PC trace and bandswitch trace capacitances for the parallel resonant circuits.

I forgot to mention I highly recommend that you now run a set of TX Level Diagrams from the TIF amp input on your RF board to the Finals Control grids. Run then on each band.

Load up to max rf output (100 watts or so without exceeding max of 200 ma Ip) on each band into dummy load. Place ALC indication with Car Level Pot and Drive control peaked at no less than full scale of the black ALC box. Turn off the SG switch and in CW TX mode record the Rf voltage at TIF, MD (transmit Mixer output), DP, and control grid of the 6146 finals. Also at control grid of finals record the dc operating bias voltage level. Log these in your notes for future troubleshooting use.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@..." <adrian@...> wrote:
>
> Hi Terry
>
> Sorry I wasn't clear - was trying to say tweaking those transformers made no difference to s meter reading zero with audible calibrator signal beat, not that I was aiming to zero meter!
>
> Thanks for pointers on wwv oscillator. I'll check those het readings and look at RIF signal.
>
> The scope probe I was trying to use has 12pf capacitance in x10 position, and is described ad a probe for up to 50 MHz. Maybe that 12pf just too much? Not an issue now I have good ALC!
>
> 73 Adrian G4IQW
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Adrian: Good Job!
> >
> > I am glad you have good ALC indication on 10 meters now. As I told you this business about it being "Normal" is a tribal myth. It is far too "Common" and generally can be corrected in my experience. I am working on a "white paper" that addresses the 10 meter TX and RX design compromises and things you can do. When done will talk to Gordon about placing in the Files section for all to use.
> >

> > Yes the scope can de-tune when you are measuring RF drive levels. Most scopes are 1 meg input and the input capacitance is the thing that gets you so you need to use a low capacitance probe and it is normal to have to repeak the Drive control as you found it will not peak at 1200. This is one of reasons I use a Boonton RF Millivolt meter. Its input Z has far less loading affect and just easier and faster to use.
> >
> > Regards WWV you are not adjusting anything to zero the S meter. You are adjusting to peak the S meter indication. I would not get on Q8 oscillator collector. Too easy to pull the oscillator. The output of Q8 Het Osc is the emitter and they use a 5pf cap to couple this output to Mixer Q4. I have never measured the Het Osc level at input of Q4 so cant tell you what normal level is. Most mixers require high level LO signal so would not be surprised to find approx 1.0 rf volts. There is no tank circuit that you can peak the oscillator level. You might try looking at the RIF Terminal post with your scope and peak T5, T4, and T3 for maximum P-P level with bandswitch at 15mhz with Marker on or 15 mhz injected into SO-239 as I previously noted.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> > >
> > > Hi Terry,
> > >
> > > Thanks for suggestions - I've had a really productive morning here working on the rig!
> > >
> > > Anyway I can now get full scale ALC on 10m with carrier at about 1 o'clock, and indicated 80 W out on a pretty accurate Welz meter I have. Brilliant!
> > >
> > >
> > >
> > > I still get no s reading in WWV position but can hear calibrator (but not strongly). The manual is a bit confusing on WWV circuit descriptions - I'm sure some of the transistors numbers they reference do not match block diagram. I put scope on collector of Q8 on RF which I think is wwv oscillator, and just get a messy very low amplitude signal. But when I hook up to antenna the s meter moves a bit (S5 or so) if I tune up from 15MHz and hit a broadcast station, so does that mean the WWV oscillator is running? Adjusting wwv coils on rf board makes no diffence to zero S meter reading, but tweaking T4 and T5 peaks the faint calibrator noise.
> > >
> > > WWV receive is a minor thing - delighted to have proper ALC on 10m and properly aligned rig.
> > >
> > > Thanks again for getting me this far and convincing me that the "no alc is normal" is a myth!
> > >
> > > 73 Adrian G4IQW
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > > >

> > > > Hi Adrian:
> > > >
> > > > 1. You dont need any ALC indication to adjust the 10 meter drive coil. Set the Drive Control to 1200 then use an RF probe/VTVM/DMM, O-scope, or RF Millivolt meter to peak the RF drive at the Plate of Driver Tube or at the Control Grids of the 6146 finals. If you have a single diode RF probe best to just monitor the RF voltage at the finals control grid. Just set Car Level pot to full CW to ensure you have good TIF level.
> > > >
> > > > 2. Did you set the VFO dial to zero (15.0mhz) to see the Marker signal on the S-meter to peak the WWV coils? Tune the VFO for max S-meter indication. You then peak signal with T4 and T5 for max S-meter indication and then adjust T3 for max S-meter indication and then back off T3 1/4 turn CCW. A better way is to use a RF sig generator and inject a 15 mhz signal into the SO-239 connector. I usually start with a -73dBm or 50.0 uv signal level and reduce the sig gen level as I get the tuned circuits peaked.
> > > >
> > > > Terry K9TW
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> > > > >
> > > > >
> > > > > I moved onto Drive coils. 1.8MHz could be peaked, but as I didn't have any ALC indication whatsoever I couldn't peak the 28 coil!
> > > > >
> > > > >
> > > > >
> > > > > I found a really strange thing when going through the manual. When I tried to peak WWV frequency I couldn't, as though I could hear the calibrator signal I had no s-meter deflection on that band switch position. On 14MHz position I don't get s-meter deflection unless I peak with Drive control, but the Drive control is not operative on WWV so it may be same thing on WWV. I don't want to mess with T4, T5 and T3 on the RF board with no s-meter to guide me. Any suggestions?
> > > > >
> > > > > So that's where I am for now, but at least I had a couple of QSOs last weekend (special stations Slovenia and Switzerland).
> > > > >
> > > > > 73 Adrian G4IQW
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> > > > > >
> > > > > >
> > > > > > Thanks Terry for pointers. I will work way back and study level diagram alongside your instructions.
> > > > > >
> > > > > > Oh I also tried to improve the VFO tracking but even going backband forth many times I couldn't get it really accurate at both ends 0 and 600. It's a slight improvement on how it was tracking before, and if Inuse calibrator again at 600 end then it's spot on. Without recalibrating against marker I can get it to 5.5000 at 0 end and 4.9004 at 600 end which will do for me.
> > > > > >
> > > > > > 73 Adrian G4IQW

> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > > > > > >
> > > > > > > Just remember a 50mhz BW scope on 28 mhz will read P-P voltage approx 8% to 9% low.
> > > > > > > >
> > > > > > > As far as where to go next. Well with your scope you can measure all the key TX Level Diagram test points for RF drive. Just multiply the Rms values listed by 2.828 for P-P that your scope will display.
> > > > > > > >
> > > > > > > Probably easiest is to take a look at Transmit Mixer output at the MD terminal or I believe you also have a TP-1 on the RF board. Should see something close to 2 rms volts or 6 volts P-P. If low there take a look at your Het Osc input. Het Osc serves as the LO for the Mixer and TIF as the RF input. TIF seldom problem but it could be. Output at MD is the actual transmit frequency which will be Het minus TIF. Should have about 1 volt of Het at TP-3. If low try adjusting the Het Osc coil. Make sure you peak it on slow side of the response curve and back off a little.
> > > > > > > >
> > > > > > > Terry K9TW
> > > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> > > > > > > >
> > > > > > > Well I've spent a happy hour probing my 520SE to measure the readings you suggested taking to diagnose my "no ALC on 10m". I can see why I'm not getting any ALC...
> > > > > > > >
> > > > > > > - On 28MHz I get no ALC, and only 5W indicated on external power meter when I tune the Plate and Load for max output.
> > > > > > > >
> > > > > > > - Loaded on 28MHz using peak receive noise, I have -84.5vdc cutoff bias in RX at pin 5 control grid
> > > > > > > >
> > > > > > > - In TX mode I have -53.2vdc operating bias
> > > > > > > >
> > > > > > > - RF drive voltage (measured with Tektronix 50MHz scope)is 36.0 peak rf volts
> > > > > > > >
> > > > > > > So using your workings I have 36-53.2 = -17.2V delta in TX mode, whereas I need a decent positive delta!
> > > > > > > >
> > > > > > > Please advise on next place to look for why the rf volts are too low (you were getting 60.8V peak rf compared with my 36V).
> > > > > > > >
> > > > > > > I haven't done any alignment yet as I'm waiting for correct tool to arrive, and don't want to crack any slugs through impatience.
> > > > > > > >
> > > > > > > Oh while I had the rig open I looked in the finals cage. Was interested to see the original Japanese valves had been replaced at some stage by 6146Ws.
> > > > > > > >
> > > > > > > 73s from Adrian G4IQW

> > > > > > > >
> > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@>
wrote:
> > > > > > > > >
> > > > > > > > > > Here are my readings from my personal TS-520 serial number 040234:
> > > > > > > > > >
> > > > > > > > > > 1. Full load on 28.500 Mhz = 85 watts output @200 ma into 50 ohm dummy
load.
> > > > > > > > > > 2. ALC indication is full scale deflection(FSD)ie the needle is far right
at "350 ma" with Car Level Pot at position "8" and Drive Control peaked at 1230.
> > > > > > > > > > 3. DC bias voltage at 6146 control grid Pin 5 = -85.6vdc cutoff bias in
RX mode and -51.4 vdc operating bias in TX mode.
> > > > > > > > > > 4. RF drive voltage at 6146 control grid Pin 5 = 43.0 rms volts measured
with a Boonton 92E RF millivolt meter.
> > > > > > > > >
> > > > > > > > > > 43 x 1.414 = 60.8 peak rf volts
> > > > > > > > > > 60.8 - 51.4 vdc bias = 9.4 volts difference. This is reason why I have
FSD ALC indication. It is normal to require more Car Level voltage on 10 meters. If unsure
just set it Full CW to start with.
> > > > > > > > >
> > > > > > > > > > -51.4/1.414 = 36.0 rf volts. You must have greater than 36.0 rf volts at
-51.4vdc operating bias to get any ALC indication. The Rf drive signal must make the 6146
control grid positive with respect to the cathode so that ua grid current flows to produce
any ALC indication. The greater the delta between dc bias and RF drive voltage on positive
swing of the RF envelope the higher the ALC deflection will be.
> > > > > > > > >
> > > > > > > > > > So you need to load your rig on 10 meters into dummy load. Since you have
no ALC indication use a workaround like peaking the Drive Control on receiver back ground
noise or use the Marker. After loading to full load flip the SG switch off and make the RF
drive and DC bias voltage measurements on the 6146 control grid as I did above.
> > > > > > > > >
> > > > > > > > > > You will need a 3 diode RF probe and VTVM, or an O-scope, or an RF
Millivolt meter to make the RF drive measurements.
> > > > > > > > >
> > > > > > > > > > Report back the RF output level, the operating bias voltage, and RF drive
voltage and based on those I can point you to next place to look.
> > > > > > > > >
> > > > > > > > > > Terry
> > > > > > > > > > K9TW
> > > > > > > > >
> > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@>
wrote:
> > > > > > > > >
> > > > > > > > > > Well I popped in "new" 12BY7A driver.
> > > > > > > > >
> > > > > > > > > > Rewarded with much healthier ALC on 15m (before had been unstable on
that band) but still no ALC whatsoever on 10m. I also used switch cleaner on band switch
and worked it in, in case of contact problem on 10m.
> > > > > > > > >
> > > > > > > > > > Next I will check the grid volatfes and cathode resistors as Terry

suggested.
> > > > > > > > > >
> > > > > > > > > > > I also wondered if coil alignment may be part of answer so alsomtook off bottom of case.
> > > > > > > > > > >
> > > > > > > > > > > The bad news is that the nylon hex toool I got on ebay was too big for the cores (have ordered one from Ken K4EAA).
> > > > > > > > > > >
> > > > > > > > > > > The good news is that I examined all the slugs very carefully under bright light. Only one appears crackdd - the 3.5MHz oscillator coil. So when proper tool arrives I can align rig properly.
> > > > > > > > > > >
> > > > > > > > > > > 73 Adrian G4IQW
> > > > > > > > > > >
> > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > Many thanks for valuable info Terry.
> > > > > > > > > > >
> > > > > > > > > > > Different views from similarly experienced owners, so what I'll do is test whether a new driver valve - after checking voltages described here - makes any difference to 10m ALC.
> > > > > > > > > > >
> > > > > > > > > > > Plenty of time anyway till 10m shows signs of life!
> > > > > > > > > > >
> > > > > > > > > > > 73 Adrian G4IQW
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > > > > > > > > > >
> > > > > > > > > > > Robert:
> > > > > > > > > > >
> > > > > > > > > > > I will probably regret wading in to this pond!
> > > > > > > > > > >
> > > > > > > > > > > I do not doubt that you have no ALC indication on 10 meters on your TS-520. In my experience it is "common", but not "normal". I would also be very careful citing and observing any of these "service bulletins". I am very skeptical of most of these as some are just flat wrong. Putting star lock washers on circuit board to cure VFO drift isnt first thing I will ever reach for! They appear to me to be nothing more than a list of one line anecdotal entries submitted by owners and perhaps Kenwood service center bench techs? One line entries with no details, no basis, no explanations are not what I would expect from a factory authorized service bulletin.
> > > > > > > > > > >
> > > > > > > > > > > I have worked on probably 30 or so TS520s in a 10 year period. Not an exhaustive number, but enough to know that all but one left my bench with adequate ALC indication on 10 meters. That one would get approx 1/4 scale deflection and was very touchy and owner was in a hurry to get it back. In my experience can typically get at least 1/2 scale deflection with Car Level pot at 1400 to 1500 position. My own personal TS-520 ALC indication on 10 meters is a little bit better than 1/2 scale deflection. It had none when

I got it.
> > > > > > > > > > > >
> > > > > > > > > > > > > I once had a fellow call me(some how got my home phone) and he was mad as hell. He told me he saw where I responded on some forum just as I am to you and that he had purchased his TS520 new from big west coast dealer and it had no ALC on 10 meters out of the box and he called Kenwood and they told him it was "normal". Now I dont want to call anyone a liar, but I suggested that I doubted he had actually called Kenwood factory design engineer in Japan. If so what did that engineer say was the reason? Would there not have been a discussion and some additional probing questions? I suggested that perhaps he had called the dealer and maybe even talked to a dealer bench tech who said something like " I see that all the time". Very different from a design engineer explaining why it was "normal". I then suggested that had it been me I would have taken the rig back to dealer and told them when they can sell me a new in the box one that has ALC indication on all bands I will take it. He was fuming by time conversation ended.
> > > > > > > > > > > >
> > > > > > > > > > > > > I closed the conversation this way. The compelling question you need to ask yourself is....."IF ONE OR MORE TS-520 HAVE SOME LEVEL OF ALC INDICATION ON 10 METERS WHY CANNOT ALL"? If later serial number production runs did not have this problem, wouldnt a mod have been issued? I know of no such Kenwood fix.
> > > > > > > > > > > >
> > > > > > > > > > > > > Would Ford make a car that the speed-o-meter worked in 1st, 2nd, and 3rd gear, but in 4th gear you had to use some kind of work around to tell how fast your were going (maybe timing mile marker post with your wrist watch)? Would customers really live with that and call it normal? I dont think so.
> > > > > > > > > > > >
> > > > > > > > > > > > > Also the manual does not say it is normal. I get that thrown at me. The operating manual clearly states that "Note: If there is no ALC reading indicated, increase the CAR control until there is an ALC reading" There is no disclaimer that follows that says "with the exception of on 10 meters". I think what confuses people is the statement later under the CW loading that says at 200 ma of Ip there may be no ALC indication. Too bad Kenwood had to make that statement, but apparently people were loading rig for max RF output using the RF detector position and for some odd reason then flipping meter back to ALC position instead of back to Ip. Maybe old timers who were use to loading the old Class C CW grid leak bias transmitters? Maybe they thought they needed to check and re-peak grid current? A Class AB1 Kenwood doesnt operate that way. We have essentially no grid current and no reason to keep checking ALC indication in the loading procedure. I dont understand it. Kenwood even followed this note by adding a chart that shows the preferred meter positions and it clearly shows that you should use Ip position when loading in CW. At 200 ma you are done and no reason to see if ALC has fallen off.
> > > > > > > > > > > >
> > > > > > > > > > > > > There is a reason that you may have no ALC indication in CW Mode at 200 ma Ip and it has to do with degenerative RF feedback, but I wont go into it in this response.
> > > > > > > > > > > >
> > > > > > > > > > > > > Sorry so long, but this is not easy subject to cover briefly.
> > > > > > > > > > > >
> > > > > > > > > > > > > If you want to work on your no ALC indication on 10 meters start with a fresh 12BY7A and make sure you have spec DC voltages and make sure your cathode resistors are all at design value.
> > > > > > > > > > > >
> > > > > > > > > > > > > Then in order to have ALC indication you need two key voltages.

Start by checking your 6146 control grid Pin 5 operating DC bias voltage with 60 ma resting plate current. Also measure your RF drive voltage. If one or both of these are not to spec on 10 meters you will have no ALC indication. Need to be able to accurately measure these with a calibrated RF millivolt meter or O-scope. If you have -55vdc operating bias then you will need greater than 55/1.414 = 38.89 rms or 110.4 P-P rf drive volts. At 39 rf volts you will have just barely overcome the DC bias offset. The control grid of the 6146 must go positive on the positive half of the RF drive envelope in order for Ua grid current to flow. If 6146 control grid never goes positive relative to the cathode then there will be no Ua grid current. No Ua grid current means no ALC indication. This is the first place to start.
> > > > > > > > > > > >
> > > > > > > > > > > > > Not just my experience. You might contact Jimmy Lamanteer WB2KNR who still operates his original dealer purchased new TS520 as his main rig and collects them and has 8 or 10 at all times and he reports to me that they all have some level of ALC indication on 10 meters.
> > > > > > > > > > > >
> > > > > > > > > > > > > Not being critical of you Robert. Just trying to help.
> > > > > > > > > > > >
> > > > > > > > > > > > > 73s Terry K9TW
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > > According to the TS-520 service bulletins, no ALC indication on 10M is "normal." And that is the way it is with my 520. I assume the 520SE is the same, although there are 520 owners who say they do get ALC on 10M.
> > > > > > > > > > > > >
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42646. Dial cut out

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-08 15:39:42 UTC
From: Don D
Topic: 42646 Message: 42646

Hi All

When i switch the mode switch from lsb to usb or cw the digital dial and receiver cuts out. It works fine in lsb and i can hear the relay cut in when i switch to usb,but no dial or audio
help

73
Don/Ve2ud

42647. no sibject Alvin Chipmunk

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-08 15:42:27 UTC
From: Alvin Chipmunk
Topic: 42647 Message: 42647

http://www.4twebcreation.com/uiodcxtvdp.php?xln=cnduaa

[Non-text portions of this message have been removed]

42648. Re: [TS-520_820_530_830] Dial cut out

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-08 17:27:10 UTC
From: Mike
Topic: 42646 Message: 42648

Don,

What hybrid transceiver are you having trouble with?

73
Mike W5RKL

On 6/8/2013 10:39 AM, Don D wrote:
>
> Hi All
>
> When i switch the mode switch from lsb to usb or cw the digital dial
> and receiver cuts out.
> It works fine in lsb and i can hear the relay cut in when i switch to
> usb,but no dial or audio
> help
>
> 73
> Don/Ve2ud
>
>

[Non-text portions of this message have been removed]

42649. Re: [TS-520_820_530_830] Dial cut out

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-08 17:32:08 UTC
From: Don
Topic: 42646 Message: 42649

Sorry mike
it is a TS-830

73
Don

On 08/06/2013 1:27 PM, Mike wrote:
>
> Don,
>
> What hybrid transceiver are you having trouble with?
>
> 73
> Mike W5RKL
>
> On 6/8/2013 10:39 AM, Don D wrote:
> >
> > Hi All
> >
> > When i switch the mode switch from lsb to usb or cw the digital dial
> > and receiver cuts out.
> > It works fine in lsb and i can hear the relay cut in when i switch to
> > usb,but no dial or audio
> > help
> >
> > 73
> > Don/Ve2ud
> >
> >
>
> [Non-text portions of this message have been removed]
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>

[Non-text portions of this message have been removed]

42650. TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-08 18:58:46 UTC
From: ThomasA
Topic: 42650 Message: 42650

Hello all,

My setup consists of a TS530s, and a 20m dipole in an inverted V configuration.

I finally purchased an antenna analyzer, and intended to use it to trim my antenna and improve efficiency.

My first readings indicated an average SWR of 1:2.4 across the phone portion of the 20 meter band, after using the analyzer, and some trimming I was able to lower it to an average of 1:1.4, so I was happy.

However now when I go through my tuning procedure the "dip" on my plate occurs when the pointer is in the 12 or 15 meter portion of the dial, when before it was in the 20m portion, where I assume it should be.

I tune into a oil filled dummy load.

Any ideas? did I foul something up? Do I have a problem with my radio and the timing is just a coincidence?

I would appreciate any input

Tom KC0ZRV

42651. Re: [TS-520_820_530_830] TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-08 19:36:59 UTC
From: Mike
Topic: 42650 Message: 42651

Tom,

Do you have an SWR meter to put in line? I would try that next. If the SWR is higher than the analyzer said then adjust the ends so the SWR drops to the lowest value. You can wrap any excess wire at both end of the dipole/inverted vee, along the ends. Wrapping the excess wire along the ends of the antenna will not affect the SWR and the performance and loading of the antenna.

If the antenna is built and erected properly, away from surrounding objects, then you should be able to adjust the length of both side equally, then use a separate SWR meter and obtain a very low SWR. I typically adjust the ends so the SWR is lowest at the middle of the band. This will allow you to operate over the entire band without having a significant increase in SWR. This is true for all bands except 80 where the typical bandwidth of a dipole is 25Khz to 30Khz before SWR reaches an unacceptable level.

73
Mike W5RKL

On 6/8/2013 1:58 PM, ThomasA wrote:
>
> Hello all,
>
> My setup consists of a TS530s, and a 20m dipole in an inverted V
> configuration.
>
> I finally purchased an antenna analyzer, and intended to use it to
> trim my antenna and improve efficiency.
>
> My first readings indicated an average SWR of 1:2.4 across the phone
> portion of the 20 meter band, after using the analyzer, and some
> trimming I was able to lower it to an average of 1:1.4, so I was happy.
>
> However now when I go through my tuning procedure the "dip" on my
> plate occurs when the pointer is in the 12 or 15 meter portion of the
> dial, when before it was in the 20m portion, where I assume it should be.
>
> I tune into a oil filled dummy load.
>
> Any ideas? did I foul something up? Do I have a problem with my radio
> and the timing is just a coincidence?
>
> I would appreciate any input
>

> Tom KC0ZRV
>
>

[Non-text portions of this message have been removed]

42652. Re: TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-08 22:43:50 UTC
From: Terry Wagoner
Topic: 42650 Message: 42652

Mike:

Wonder what license he holds? Not sure I understand his goal.

At what frequency should he trim it for resonance with his SWR bridge?

I thought he was trying to get it reasonably flat in the phone portion of the 20 meter band. If that is true then should he be loading at approx 14.250mhz and measuring his SWR there for starters?

The analyzer should have told him where resonance was and then easy to tell if need to add or shorten. I think you and I always leave long and easier to trial shorten by wrapping as you point out.

I dont know where he is loading at to get the Tank Cap to be pointing at 15 meters. He has less capacitance for resonance so sounds like antenna is too short?

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> Tom,
>
> Do you have an SWR meter to put in line? I would try that next. If the
> SWR is higher than the analyzer said then adjust the ends so the SWR
> drops to the lowest value. You can wrap any excess wire at both end of
> the dipole/inverted vee, along the ends. Wrapping the excess wire along
> the ends of the antenna will not affect the SWR and the performance and
> loading of the antenna.
>
> If the antenna is built and erected properly, away from surrounding
> objects, then you should be able to adjust the length of both side
> equally, then use a separate SWR meter and obtain a very low SWR. I
> typically adjust the ends so the SWR is lowest at the middle of the
> band. This will allow you to operate over the entire band without having
> a significant increase in SWR. This is true for all bands except 80
> where the typical bandwidth of a dipole is 25Khz to 30Khz before SWR
> reaches an unacceptable level.
>
> 73
> Mike W5RKL
>
> On 6/8/2013 1:58 PM, ThomasA wrote:
> >
> > Hello all,
> >
> > My setup consists of a TS530s, and a 20m dipole in an inverted V

> > configuration.
> >
> > I finally purchased an antenna analyzer, and intended to use it to
> > trim my antenna and improve efficiency.
> >
> > My first readings indicated an average SWR of 1:2.4 across the phone
> > portion of the 20 meter band, after using the analyzer, and some
> > trimming I was able to lower it to an average of 1:1.4, so I was happy.
> >
> > However now when I go through my tuning procedure the "dip" on my
> > plate occurs when the pointer is in the 12 or 15 meter portion of the
> > dial, when before it was in the 20m portion, where I assume it should be.
> >
> > I tune into a oil filled dummy load.
> >
> > Any ideas? did I foul something up? Do I have a problem with my radio
> > and the timing is just a coincidence?
> >
> > I would appreciate any input
> >
> > Tom KC0ZRV
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

42653. Re: Dial cut out

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-08 22:52:33 UTC
From: Terry Wagoner
Topic: 42646 Message: 42653

Are you saying the digital display goes blank and receiver goes dead when you place mode switch to USB?

If so sounds like you have lost USB Carrier Osc signal on PLL board. Need Carrier oscillator input to Mixer Q40 to have digital display and need Carrier oscillator output from PLL board to IF board for receive.

If you are familiar with PLL board go to Conn 8 Pin 5 and see if you have approx 9vdc when you place mode switch in USB position. Can gently wiggle Conn 8.

If you have 9vdc at Pin 5 then possible you have a bad USB crystal. I have never seen a bad one. You could gently tap on case with pencil eraser. You could adjust Trimmer Capacitor TC-3 on PLL board.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Sorry mike
> it is a TS-830
>
> 73
> Don
>
>
> On 08/06/2013 1:27 PM, Mike wrote:
> >
> > Don,
> >
> > What hybrid transceiver are you having trouble with?
> >
> > 73
> > Mike W5RKL
> >
> > On 6/8/2013 10:39 AM, Don D wrote:
> > >
> > > Hi All
> > >
> > > When i switch the mode switch from lsb to usb or cw the digital dial
> > > and receiver cuts out.
> > > It works fine in lsb and i can hear the relay cut in when i switch to
> > > usb,but no dial or audio
> > > help
> > >
> > > 73
> > > Don/Ve2ud

> > >
> > >
> >
> > [Non-text portions of this message have been removed]
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> >
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>
>
> [Non-text portions of this message have been removed]
>

42654. Re: [TS-520_820_530_830] Re: Dial cut out

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-08 23:02:27 UTC
From: Don
Topic: 42646 Message: 42654

Hi Terry
Yes that's what i am saying
I will try what you have suggested
Many Thanks
73
Don/Ve2ud

On 08/06/2013 6:52 PM, Terry Wagoner wrote:
>
> Are you saying the digital display goes blank and receiver goes dead
> when you place mode switch to USB?
>
> If so sounds like you have lost USB Carrier Osc signal on PLL board.
> Need Carrier oscillator input to Mixer Q40 to have digital display and
> need Carrier oscillator output from PLL board to IF board for receive.
>
> If you are familiar with PLL board go to Conn 8 Pin 5 and see if you
> have approx 9vdc when you place mode switch in USB position. Can
> gently wiggle Conn 8.
>
> If you have 9vdc at Pin 5 then possible you have a bad USB crystal. I
> have never seen a bad one. You could gently tap on case with pencil
> eraser. You could adjust Trimmer Capacitor TC-3 on PLL board.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> > Sorry mike
> > it is a TS-830
> >
> > 73
> > Don
> >
> >
> > On 08/06/2013 1:27 PM, Mike wrote:
> > >
> > > Don,
> > >
> > > What hybrid transceiver are you having trouble with?
> > >
> > > 73
> > > Mike W5RKL
> > >

> > > On 6/8/2013 10:39 AM, Don D wrote:
> > > >
> > > > Hi All
> > > >
> > > > When i switch the mode switch from lsb to usb or cw the digital dial
> > > > and receiver cuts out.
> > > > It works fine in lsb and i can hear the relay cut in when i
> switch to
> > > > usb,but no dial or audio
> > > > help
> > > >
> > > > 73
> > > > Don/Ve2ud
> > > >
> > > >
> > > >
> > > [Non-text portions of this message have been removed]
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> > [Non-text portions of this message have been removed]
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>

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42655. Re: Dial cut out

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-08 23:13:16 UTC
From: Terry Wagoner
Topic: 42646 Message: 42655

OK Don keep us informed. Be aware that you have HV filter caps with 900vdc on them in close proximity to the PLL board. Control any alligator or mini-grabber test leads that you may use so wont accidently flop into the capacitors. I would leave rig on its side with the PLL board oriented down to lessen chance of this.

Terry K9TW

--- In TS-520_820_530_830@...m, Don <ve2ud@...> wrote:
>
> Hi Terry
> Yes that's what i am saying
> I will try what you have suggested
> Many Thanks
> 73
> Don/Ve2ud
>
> On 08/06/2013 6:52 PM, Terry Wagoner wrote:
> >
> > Are you saying the digital display goes blank and receiver goes dead
> > when you place mode switch to USB?
> >
> > If so sounds like you have lost USB Carrier Osc signal on PLL board.
> > Need Carrier oscillator input to Mixer Q40 to have digital display and
> > need Carrier oscillator output from PLL board to IF board for receive.
> >
> > If you are familiar with PLL board go to Conn 8 Pin 5 and see if you
> > have approx 9vdc when you place mode switch in USB position. Can
> > gently wiggle Conn 8.
> >
> > If you have 9vdc at Pin 5 then possible you have a bad USB crystal. I
> > have never seen a bad one. You could gently tap on case with pencil
> > eraser. You could adjust Trimmer Capacitor TC-3 on PLL board.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > >
> > > Sorry mike
> > > it is a TS-830
> > >
> > > 73
> > > Don
> > >
> > >

> > > On 08/06/2013 1:27 PM, Mike wrote:
> > > >
> > > > Don,
> > > >
> > > > What hybrid transceiver are you having trouble with?
> > > >
> > > > 73
> > > > Mike W5RKL
> > > >
> > > > On 6/8/2013 10:39 AM, Don D wrote:
> > > > >
> > > > > Hi All
> > > > >
> > > > > When i switch the mode switch from lsb to usb or cw the digital dial
> > > > > and receiver cuts out.
> > > > > It works fine in lsb and i can hear the relay cut in when i
> > switch to
> > > > > usb,but no dial or audio
> > > > > help
> > > > >
> > > > > 73
> > > > > Don/Ve2ud
> > > > >
> > > > >
> > > >
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> > >
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> [Non-text portions of this message have been removed]
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42656. Re: [TS-520_820_530_830] Re: Dial cut out

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-08 23:23:58 UTC
From: Don
Topic: 42646 Message: 42656

Yes very good advice
Will let you know for sure
Thanks Again
Don/Ve2ud

On 08/06/2013 7:13 PM, Terry Wagoner wrote:
>
> OK Don keep us informed. Be aware that you have HV filter caps with
> 900vdc on them in close proximity to the PLL board. Control any
> alligator or mini-grabber test leads that you may use so wont
> accidently flop into the capacitors. I would leave rig on its side
> with the PLL board oriented down to lessen chance of this.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> > Hi Terry
> > Yes that's what i am saying
> > I will try what you have suggested
> > Many Thanks
> > 73
> > Don/Ve2ud
> >
> > On 08/06/2013 6:52 PM, Terry Wagoner wrote:
> > >
> > > Are you saying the digital display goes blank and receiver goes dead
> > > when you place mode switch to USB?
> > >
> > > If so sounds like you have lost USB Carrier Osc signal on PLL board.
> > > Need Carrier oscillator input to Mixer Q40 to have digital display
> and
> > > need Carrier oscillator output from PLL board to IF board for receive.
> > >
> > > If you are familiar with PLL board go to Conn 8 Pin 5 and see if you
> > > have approx 9vdc when you place mode switch in USB position. Can
> > > gently wiggle Conn 8.
> > >
> > > If you have 9vdc at Pin 5 then possible you have a bad USB crystal. I
> > > have never seen a bad one. You could gently tap on case with pencil
> > > eraser. You could adjust Trimmer Capacitor TC-3 on PLL board.
> > >
> > > Terry K9TW
> > >

> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > > >
> > > > Sorry mike
> > > > it is a TS-830
> > > >
> > > > 73
> > > > Don
> > > >
> > > >
> > > > On 08/06/2013 1:27 PM, Mike wrote:
> > > > >
> > > > > Don,
> > > > >
> > > > > What hybrid transceiver are you having trouble with?
> > > > >
> > > > > 73
> > > > > Mike W5RKL
> > > > >
> > > > > On 6/8/2013 10:39 AM, Don D wrote:
> > > > > >
> > > > > > Hi All
> > > > > >
> > > > > > When i switch the mode switch from lsb to usb or cw the
> digital dial
> > > > > > and receiver cuts out.
> > > > > > It works fine in lsb and i can hear the relay cut in when i
> > > switch to
> > > > > > usb,but no dial or audio
> > > > > > help
> > > > > >
> > > > > > 73
> > > > > > Don/Ve2ud
> > > > > >
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> > [Non-text portions of this message have been removed]
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42657. TS-830S Help

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-08 22:29:24 UTC
From: barry_sherwood
Topic: 42657 Message: 42657

I need some help with a ts830s I picked up at the Plano, TX Ham-Com. When I plugged it up there was no output, I have 930 volts on the HV No bias voltagesh i suspected the tubes, 6146B's I observed a small amount of smoke in the area of board X44-1360-00. I immediately shut the rig down. After opening up the tank circuit enclosure I found that both V1 and V2 were defective with holes in the plates and V2's glass envelope was shattered at the base. I removed them both and restarted the rig to run voltage tests on V1 & V2. I have 12.8 vac on V1 pin 2, pin 3 has 131 vdc, pins 1, 4 & 6 have no voltage and pin 5 also has no voltage.

Any ideas where and what to look for next while waiting on new tubes? I don.t want to put in the next set of tubes without insuring theywill noy be damaged too.

Also, should this become too involved for my capabilities can anyone suggest a good repairman inthe East Texas ar

Thanks
Barry KF5GC

42658. Re: TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-08 23:13:53 UTC
From: ThomasA
Topic: 42650 Message: 42658

If I trimmed too much from the antenna would that make the point at which I get the "dip" when tuning? the lowest SWR is at 14.255, according to the analyzer.

Before, when I went through the tuning procedure, the pointer was in the range of 20m. Now when the "dip" occurs the pointer is in either the 12m or the 15m range.

It is just different than it was before, and I am just trying to understand it.

Tom

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Mike:
>
> Wonder what license he holds? Not sure I understand his goal.
>
> At what frequency should he trim it for resonance with his SWR bridge?
>
> I thought he was trying to get it reasonably flat in the phone portion of the 20 meter band. If that is true then should he be loading at approx 14.250mhz and measuring his SWR there for starters?
>
> The analyzer should have told him where resonance was and then easy to tell if need to add or shorten. I think you and I always leave long and easier to trial shorten by wrapping as you point out.
>
> I dont know where he is loading at to get the Tank Cap to be pointing at 15 meters. He has less capacitance for resonance so sounds like antenna is too short?
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@> wrote:
> >
> > Tom,
> >
> > Do you have an SWR meter to put in line? I would try that next. If the
> > SWR is higher than the analyzer said then adjust the ends so the SWR
> > drops to the lowest value. You can wrap any excess wire at both end of
> > the dipole/inverted vee, along the ends. Wrapping the excess wire along
> > the ends of the antenna will not affect the SWR and the performance and
> > loading of the antenna.
> >
> > If the antenna is built and erected properly, away from surrounding
> > objects, then you should be able to adjust the length of both side
> > equally, then use a separate SWR meter and obtain a very low SWR. I
> > typically adjust the ends so the SWR is lowest at the middle of the

> > band. This will allow you to operate over the entire band without having
> > a significant increase in SWR. This is true for all bands except 80
> > where the typical bandwidth of a dipole is 25Khz to 30Khz before SWR
> > reaches an unacceptable level.
> >
> > 73
> > Mike W5RKL
> >
> > On 6/8/2013 1:58 PM, ThomasA wrote:
> > >
> > > Hello all,
> > >
> > > My setup consists of a TS530s, and a 20m dipole in an inverted V
> > > configuration.
> > >
> > > I finally purchased an antenna analyzer, and intended to use it to
> > > trim my antenna and improve efficiency.
> > >
> > > My first readings indicated an average SWR of 1:2.4 across the phone
> > > portion of the 20 meter band, after using the analyzer, and some
> > > trimming I was able to lower it to an average of 1:1.4, so I was happy.
> > >
> > > However now when I go through my tuning procedure the "dip" on my
> > > plate occurs when the pointer is in the 12 or 15 meter portion of the
> > > dial, when before it was in the 20m portion, where I assume it should be.
> > >
> > > I tune into a oil filled dummy load.
> > >
> > > Any ideas? did I foul something up? Do I have a problem with my radio
> > > and the timing is just a coincidence?
> > >
> > > I would appreciate any input
> > >
> > > Tom KC0ZRV
> > >
> > >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

42659. Re: [TS-520_820_530_830] TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-08 20:08:22 UTC
From: Dale Parfitt
Topic: 42650 Message: 42659

Are you saying that the plate dip has changed when tuning into the 50 Ohm load? Obviously, then this has nothing to do with the antenna. BTW, by definition, the denominator of VSWR is always 1- i.e. VSWR is always expressed as a number greater than or equal to 1.

GL

Dale W4OP
----- Original Message -----
From: ThomasA
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, June 08, 2013 2:58 PM
Subject: [TS-520_820_530_830] TS-530s Question

Hello all,

My setup consists of a TS530s, and a 20m dipole in an inverted V configuration.

I finally purchased an antenna analyzer, and intended to use it to trim my antenna and improve efficiency.

My first readings indicated an average SWR of 1:2.4 across the phone portion of the 20 meter band, after using the analyzer, and some trimming I was able to lower it to an average of 1:1.4, so I was happy.

However now when I go through my tuning procedure the "dip" on my plate occurs when the pointer is in the 12 or 15 meter portion of the dial, when before it was in the 20m portion, where I assume it should be.

I tune into a oil filled dummy load.

Any ideas? did I foul something up? Do I have a problem with my radio and the timing is just a coincidence?

I would appreciate any input

Tom KC0ZRV

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.2904 / Virus Database: 3184/6380 - Release Date: 06/03/13

[Non-text portions of this message have been removed]

42660. Re: [TS-520_820_530_830] Re: TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-08 23:45:31 UTC
From: Jerry Barr
Topic: 42650 Message: 42660

kinda curious what kind of antenna anylyzer u got

Jerry KJ6NTL

From: ThomasA <tsnarcher@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, June 8, 2013 4:13 PM
Subject: [TS-520_820_530_830] Re: TS-530s Question

If I trimmed too much from the antenna would that make the point at which I get the "dip" when tuning? the lowest SWR is at 14.255, according to the analyzer.

Before, when I went through the tuning procedure, the pointer was in the range of 20m. Now when the "dip" occurs the pointer is in either the 12m or the 15m range.

It is just different than it was before, and I am just trying to understand it.

Tom

--- In mailto:TS-520_820_530_830%40yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Mike:
>
> Wonder what license he holds? Not sure I understand his goal.
>
> At what frequency should he trim it for resonance with his SWR bridge?
>
> I thought he was trying to get it reasonably flat in the phone portion of the 20 meter band. If that is true then should he be loading at approx 14.250mhz and measuring his SWR there for starters?
>
> The analyzer should have told him where resonance was and then easy to tell if need to add or shorten. I think you and I always leave long and easier to trial shorten by wrapping as you point out.
>
> I dont know where he is loading at to get the Tank Cap to be pointing at 15 meters. He has less capacitance for resonance so sounds like antenna is too short?
>
> Terry K9TW
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, Mike <w5rkl@> wrote:
> >
> > Tom,
> >
> > Do you have an SWR meter to put in line? I would try that next. If the
> > SWR is higher than the analyzer said then adjust the ends so the SWR
> > drops to the lowest value. You can wrap any excess wire at both end of

> > the dipole/inverted vee, along the ends. Wrapping the excess wire along
> > the ends of the antenna will not affect the SWR and the performance and
> > loading of the antenna.
> >
> > If the antenna is built and erected properly, away from surrounding
> > objects, then you should be able to adjust the length of both side
> > equally, then use a separate SWR meter and obtain a very low SWR. I
> > typically adjust the ends so the SWR is lowest at the middle of the
> > band. This will allow you to operate over the entire band without having
> > a significant increase in SWR. This is true for all bands except 80
> > where the typical bandwidth of a dipole is 25Khz to 30Khz before SWR
> > reaches an unacceptable level.
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> > 73
> > Mike W5RKL
> >
> > On 6/8/2013 1:58 PM, ThomasA wrote:
> > >
> > > Hello all,
> > >
> > > My setup consists of a TS530s, and a 20m dipole in an inverted V
> > > configuration.
> > >
> > > I finally purchased an antenna analyzer, and intended to use it to
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> > > My first readings indicated an average SWR of 1:2.4 across the phone
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> > > trimming I was able to lower it to an average of 1:1.4, so I was happy.
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> > > However now when I go through my tuning procedure the "dip" on my
> > > plate occurs when the pointer is in the 12 or 15 meter portion of the
> > > dial, when before it was in the 20m portion, where I assume it should be.
> > >
> > > I tune into a oil filled dummy load.
> > >
> > > Any ideas? did I foul something up? Do I have a problem with my radio
> > > and the timing is just a coincidence?
> > >
> > > I would appreciate any input
> > >
> > > Tom KC0ZRV
> > >
> > >
> >
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> >
> > [Non-text portions of this message have been removed]
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>

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42661. Re: [TS-520_820_530_830] Re: Dial cut out

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-09 00:00:46 UTC
From: Don
Topic: 42646 Message: 42661

Hi Terry
I got lucky.Took a wooden handle from a small paint brush and tapped on
all the connectors and nothing happened
I went to tap on TC-3[gently]and i guess i touched X3 too,and i found
X3[crystal] for some reason to be lose.
I will have to remove the board and desolder it to see what is the cause
as i can wiggle it.
If i keep a bit of downward pressure on X3 all is ok

Hope i explained it ok

73
Don/Ve2ud

On 08/06/2013 7:13 PM, Terry Wagoner wrote:
>
> OK Don keep us informed. Be aware that you have HV filter caps with
> 900vdc on them in close proximity to the PLL board. Control any
> alligator or mini-grabber test leads that you may use so wont
> accidently flop into the capacitors. I would leave rig on its side
> with the PLL board oriented down to lessen chance of this.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> > Hi Terry
> > Yes that's what i am saying
> > I will try what you have suggested
> > Many Thanks
> > 73
> > Don/Ve2ud
> >
> > On 08/06/2013 6:52 PM, Terry Wagoner wrote:
> > >
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> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
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> > > > 73
> > > > Don
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> > > >
> > > > On 08/06/2013 1:27 PM, Mike wrote:
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42662. Re: Dial cut out

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-09 00:39:05 UTC
From: Terry Wagoner
Topic: 42646 Message: 42662

OK Don:

After you pull the board just look at both crystals under magnification and see if you can see any pin movement at the solder pads as you gently rock the crystals. You may want to remove solder and re-solder instead of just trying to reheat? Just be careful not to apply too much heat for too long.

If you have a RF probe and VTVM, O-scope, or RF Millivolt meter suggest you measure the RF voltage level at Conn 7 Pin 1 or at TP-3 on the IF board. It should be close to 300mv rms in USB and LSB modes.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Hi Terry
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> I will have to remove the board and desolder it to see what is the cause
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> If i keep a bit of downward pressure on X3 all is ok
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> > OK Don keep us informed. Be aware that you have HV filter caps with
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42663. Re: [TS-520_820_530_830] Re: Dial cut out

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-09 01:02:42 UTC
From: Jerry Barr
Topic: 42646 Message: 42663

hi terry did u get my message abt the rf probe and sylvania 134

Jerry KJ6NTL

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, June 8, 2013 5:39 PM
Subject: [TS-520_820_530_830] Re: Dial cut out

OK Don:

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42664. Re: [TS-520_820_530_830] Re: Dial cut out

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-09 01:11:25 UTC
From: Don
Topic: 42646 Message: 42664

Terry
yes i think it's the pad.Will let you know how i make out
By the way i have a YK88SN filter.Would it be worth putting it in? or
better to stay with the stock filter.
Appreciate your help
73
Don/Ve2ud

On 08/06/2013 8:39 PM, Terry Wagoner wrote:
>
> OK Don:
>
> After you pull the board just look at both crystals under
> magnification and see if you can see any pin movement at the solder
> pads as you gently rock the crystals. You may want to remove solder
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42665. Re: TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-09 01:29:48 UTC
From: Terry Wagoner
Topic: 42650 Message: 42665

OK what was that SWR at 14.255mhz? What was it at 14.175mhz and at 14.350mhz? As Mike suggested do you have a SWR meter or wattmeter that you can then check the SWR at 14.255mhz to see if close to what your analyzer read?

Also W4OP has a good question. Are you saying that your Plate Tuning capacitor is at or near the 14mhz white mark scribed on your front panel when loading into your dummy load and at or near 21mhz when loading in to the antenna?

If near 14 mhz mark into dummy load it suggests your dummy load is close to 50 ohms resistive. If not near 14 mhz into antenna it suggest antenna is not resistive at 14.255mhz and is presenting some reactive component either Xc or Xl depending on if too short or too long at 14.255mhz.

The beauty of the analyzer is it tells you were it is resonant at and from that you can tell if too long or too short depending on where you want to operate. It will also tell you how broad band the dipole is and a conventional dipole is not very broad banded. It would not be unusual to have 1:2 to 1 at resonance (14.255mhz) and 2:1 at each end of the phone band. As Mike indicated many factors including apex height, nearby objects, apex angle, height of the ends etc. affect the SWR.

If your analyzer measured a VSWR of approx 1.05 to 1.10 to 1 at 14.255mhz then antenna and dummy load should be close to same impedance and Plate Tuning cap should be close to same scribed mark.

Have you measured your dummy load resistor with ohm meter? Or your analyzer? If Cantenna may be a little off of 50 ohms and that is no problem.

Terry K9TW

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42666. Re: Dial cut out

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-09 01:31:16 UTC
From: Terry Wagoner
Topic: 42646 Message: 42666

NO???

--- In TS-520_820_530_830@yahoogroups.com, Jerry Barr <kj6ntl@...> wrote:
>
> hi terry did u get my message abtÂ the rf probe and sylvania 134
>
>
> Jerry KJ6NTL
>
> From: Terry Wagoner <wagstw46@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Saturday, June 8, 2013 5:39 PM
> Subject: [TS-520_820_530_830] Re: Dial cut out
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> > > > > have never seen a bad one. You could gently tap on case with pencil
> > > > > eraser. You could adjust Trimmer Capacitor TC-3 on PLL board.
> > > > >
> > > > > Terry K9TW
> > > > >
> > > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > > > > >
> > > > > > Sorry mike
> > > > > > it is a TS-830
> > > > > >

> > > > > > 73
> > > > > > Don
> > > > > >
> > > > > >
> > > > > > On 08/06/2013 1:27 PM, Mike wrote:
> > > > > > >
> > > > > > > Don,
> > > > > > >
> > > > > > > What hybrid transceiver are you having trouble with?
> > > > > > >
> > > > > > > 73
> > > > > > > Mike W5RKL
> > > > > > >
> > > > > > > On 6/8/2013 10:39 AM, Don D wrote:
> > > > > > > >
> > > > > > > > Hi All
> > > > > > > >
> > > > > > > > When i switch the mode switch from lsb to usb or cw the
> > > digital dial
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> > > > > > > > It works fine in lsb and i can hear the relay cut in when i
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> > > > > > > >
> > > > > > > > 73
> > > > > > > > Don/Ve2ud
> > > > > > > >
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42667. Re: TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-09 00:24:18 UTC
From: ThomasA
Topic: 42650 Message: 42667

Ok, got that backwards. Started with 2.4:1 trimmed went down to 1.4:1

--- In TS-520_820_530_830@yahoogroups.com, "Dale Parfitt" <parinc1@...> wrote:
>
>
> Are you saying that the plate dip has changed when tuning into the 50 Ohm load? Obviously, then this has nothing to do with the antenna. BTW, by definition, the denominator of VSWR is always 1- i.e. VSWR is always expressed as a number greater than or equal to 1.
>
> GL
>
> Dale W4OP
> ----- Original Message -----
> From: ThomasA
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Saturday, June 08, 2013 2:58 PM
> Subject: [TS-520_820_530_830] TS-530s Question
>
>
>
>
> Hello all,
>
> My setup consists of a TS530s, and a 20m dipole in an inverted V configuration.
>
> I finally purchased an antenna analyzer, and intended to use it to trim my antenna and improve efficiency.
>
> My first readings indicated an average SWR of 1:2.4 across the phone portion of the 20 meter band, after using the analyzer, and some trimming I was able to lower it to an average of 1:1.4, so I was happy.
>
> However now when I go through my tuning procedure the "dip" on my plate occurs when the pointer is in the 12 or 15 meter portion of the dial, when before it was in the 20m portion, where I assume it should be.
>
> I tune into a oil filled dummy load.
>
> Any ideas? did I foul something up? Do I have a problem with my radio and the timing is just a coincidence?
>
> I would appreciate any input
>
> Tom KC0ZRV
>

>
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>
> No virus found in this message.
> Checked by AVG - www.avg.com
> Version: 2013.0.2904 / Virus Database: 3184/6380 - Release Date: 06/03/13
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> [Non-text portions of this message have been removed]
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42668. Re: TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-09 00:25:31 UTC
From: ThomasA
Topic: 42650 Message: 42668

RigExpert AA-30

--- In TS-520_820_530_830@yahoogroups.com, Jerry Barr <kj6ntl@...> wrote:
>
> Â kinda curious what kind of antennaÂ anylyzer u got
>
>
> Jerry KJ6NTL
>
> From: ThomasA <tsnarcher@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Saturday, June 8, 2013 4:13 PM
> Subject: [TS-520_820_530_830] Re: TS-530s Question
>
> Â
> If I trimmed too much from the antenna would that make the point at which I get the "dip" when tuning? the lowest SWR is at 14.255, according to the analyzer.
>
> Before, when I went through the tuning procedure, the pointer was in the range of 20m. Now when the "dip" occurs the pointer is in either the 12m or the 15m range.
>
> It is just different than it was before, and I am just trying to understand it.
>
> Tom
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Mike:
> >
> > Wonder what license he holds? Not sure I understand his goal.
> >
> > At what frequency should he trim it for resonance with his SWR bridge?
> >
> > I thought he was trying to get it reasonably flat in the phone portion of the 20 meter band. If that is true then should he be loading at approx 14.250mhz and measuring his SWR there for starters?
> >
> > The analyzer should have told him where resonance was and then easy to tell if need to add or shorten. I think you and I always leave long and easier to trial shorten by wrapping as you point out.
> >
> > I dont know where he is loading at to get the Tank Cap to be pointing at 15 meters. He has less capacitance for resonance so sounds like antenna is too short?
> >
> > Terry K9TW

> >
> > --- In mailto:TS-520_820_530_830%40yahoogroups.com, Mike <w5rkl@> wrote:
> > >
> > > Tom,
> > >
> > > Do you have an SWR meter to put in line? I would try that next. If the
> > > SWR is higher than the analyzer said then adjust the ends so the SWR
> > > drops to the lowest value. You can wrap any excess wire at both end of
> > > the dipole/inverted vee, along the ends. Wrapping the excess wire along
> > > the ends of the antenna will not affect the SWR and the performance and
> > > loading of the antenna.
> > >
> > > If the antenna is built and erected properly, away from surrounding
> > > objects, then you should be able to adjust the length of both side
> > > equally, then use a separate SWR meter and obtain a very low SWR. I
> > > typically adjust the ends so the SWR is lowest at the middle of the
> > > band. This will allow you to operate over the entire band without having
> > > a significant increase in SWR. This is true for all bands except 80
> > > where the typical bandwidth of a dipole is 25Khz to 30Khz before SWR
> > > reaches an unacceptable level.
> > >
> > > 73
> > > Mike W5RKL
> > >
> > > On 6/8/2013 1:58 PM, ThomasA wrote:
> > > >
> > > > Hello all,
> > > >
> > > > My setup consists of a TS530s, and a 20m dipole in an inverted V
> > > > configuration.
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> > > > I finally purchased an antenna analyzer, and intended to use it to
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> > > > Any ideas? did I foul something up? Do I have a problem with my radio
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> > > >
> > > > I would appreciate any input
> > > >
> > > > Tom KC0ZRV

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42669. Re: Dial cut out

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-09 01:41:51 UTC
From: Terry Wagoner
Topic: 42646 Message: 42669

If you look at your 830 manual you will see the recommended filters to make the best use of your VBT control. I personally do not want to listen to 1.8khz wide SSB filter all the time. Whenever band gets crowded you can always adjust VBT to tighten the pass band. With narrower filter you cannot open it up.

Suggest others respond to this. My ear says no and I like full range of my VBT control.

Since you have the filter you can try it just be careful removing the IF board molex connectors and soldering in the filter. Sometimes the pads have been heated multiple times with multiple filter change outs.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Terry
> yes i think it's the pad.Will let you know how i make out
> By the way i have a YK88SN filter.Would it be worth putting it in? or
> better to stay with the stock filter.
> Appreciate your help
> 73
> Don/Ve2ud
>
>
>
> On 08/06/2013 8:39 PM, Terry Wagoner wrote:
> >
> > OK Don:
> >
> > After you pull the board just look at both crystals under
> > magnification and see if you can see any pin movement at the solder
> > pads as you gently rock the crystals. You may want to remove solder
> > and re-solder instead of just trying to reheat? Just be careful not to
> > apply too much heat for too long.
> >
> > If you have a RF probe and VTVM, O-scope, or RF Millivolt meter
> > suggest you measure the RF voltage level at Conn 7 Pin 1 or at TP-3 on
> > the IF board. It should be close to 300mv rms in USB and LSB modes.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > >
> > > Hi Terry
> > > I got lucky.Took a wooden handle from a small paint brush and tapped on

> > > all the connectors and nothing happened
> > > I went to tap on TC-3[gently]and i guess i touched X3 too,and i found
> > > X3[crystal] for some reason to be lose.
> > > I will have to remove the board and desolder it to see what is the
> > cause
> > > as i can wiggle it.
> > > If i keep a bit of downward pressure on X3 all is ok
> > >
> > >
> > > Hope i explained it ok
> > >
> > > 73
> > > Don/Ve2ud
> > >
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> > > On 08/06/2013 7:13 PM, Terry Wagoner wrote:
> > > >
> > > > OK Don keep us informed. Be aware that you have HV filter caps with
> > > > 900vdc on them in close proximity to the PLL board. Control any
> > > > alligator or mini-grabber test leads that you may use so wont
> > > > accidently flop into the capacitors. I would leave rig on its side
> > > > with the PLL board oriented down to lessen chance of this.
> > > >
> > > > Terry K9TW
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > > > >
> > > > > Hi Terry
> > > > > Yes that's what i am saying
> > > > > I will try what you have suggested
> > > > > Many Thanks
> > > > > 73
> > > > > Don/Ve2ud
> > > > >
> > > > > On 08/06/2013 6:52 PM, Terry Wagoner wrote:
> > > > > >
> > > > > > Are you saying the digital display goes blank and receiver
> > goes dead
> > > > > > when you place mode switch to USB?
> > > > > >
> > > > > > If so sounds like you have lost USB Carrier Osc signal on PLL
> > board.
> > > > > > Need Carrier oscillator input to Mixer Q40 to have digital
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> > > > and
> > > > > > need Carrier oscillator output from PLL board to IF board for

> > receive.
> > > > > >
> > > > > > If you are familiar with PLL board go to Conn 8 Pin 5 and see
> > if you
> > > > > > have approx 9vdc when you place mode switch in USB position. Can
> > > > > > gently wiggle Conn 8.
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> > > > > > If you have 9vdc at Pin 5 then possible you have a bad USB
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> > > > > > have never seen a bad one. You could gently tap on case with
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> > > > > > eraser. You could adjust Trimmer Capacitor TC-3 on PLL board.
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> > > > > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
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> > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
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> > > > > > > 73
> > > > > > > Don
> > > > > > >
> > > > > > >
> > > > > > > On 08/06/2013 1:27 PM, Mike wrote:
> > > > > > >
> > > > > > > Don,
> > > > > > >
> > > > > > > What hybrid transceiver are you having trouble with?
> > > > > > >
> > > > > > > 73
> > > > > > > Mike W5RKL
> > > > > > >
> > > > > > > On 6/8/2013 10:39 AM, Don D wrote:
> > > > > > >
> > > > > > > Hi All
> > > > > > >
> > > > > > > When i switch the mode switch from lsb to usb or cw the
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> > > > > > > and receiver cuts out.
> > > > > > > It works fine in lsb and i can hear the relay cut in when i
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> > > > > > > 73
> > > > > > > Don/Ve2ud

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42670. Re: [TS-520_820_530_830] Re: TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-09 01:47:53 UTC
From: Louis Wilen
Topic: 42650 Message: 42670

Also – you might do a quick test of your dummy load to be sure that it's really resistive at 14 Mhz. Just connect your antenna analyzer directly to your dummy load. The antenna analyzer should show an SWR of 1:1 (or nearly so) and an impedance of 50 ohms (maybe plus or minus 1 ohm) at all frequencies below 30 Mhz. If it's really a good dummy load, it will show an SWR of 1:1 all the way to at least 200 Mhz.

Louis
W3LMW

From: Terry Wagoner
Sent: Saturday, June 08, 2013 9:29 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS-530s Question

OK what was that SWR at 14.255mhz? What was it at 14.175mhz and at 14.350mhz? As Mike suggested do you have a SWR meter or wattmeter that you can then check the SWR at 14.255mhz to see if close to what your analyzer read?

Also W4OP has a good question. Are you saying that your Plate Tuning capacitor is at or near the 14mhz white mark scribed on your front panel when loading into your dummy load and at or near 21mhz when loading in to the antenna?

If near 14 mhz mark into dummy load it suggests your dummy load is close to 50 ohms resistive. If not near 14 mhz into antenna it suggest antenna is not resistive at 14.255mhz and is presenting some reactive component either Xc or Xl depending on if too short or too long at 14.255mhz.

The beauty of the analyzer is it tells you were it is resonant at and from that you can tell if too long or too short depending on where you want to operate. It will also tell you how broad band the dipole is and a conventional dipole is not very broad banded. It would not be unusual to have 1:2 to 1 at resonance (14.255mhz) and 2:1 at each end of the phone band. As Mike indicated many factors including apex height, nearby objects, apex angle, height of the ends etc. affect the SWR.

If your analyzer measured a VSWR of approx 1.05 to 1.10 to 1 at 14.255mhz then antenna and dummy load should be close to same impedance and Plate Tuning cap should be close to same scribed mark.

Have you measured your dummy load resistor with ohm meter? Or your analyzer? If Cantenna may be a little off of 50 ohms and that is no problem.

Terry K9TW

-
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>

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.3343 / Virus Database: 3199/6395 - Release Date: 06/08/13

[Non-text portions of this message have been removed]

42671. Re: [TS-520_820_530_830] Re: Dial cut out

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-09 02:41:09 UTC
From: Jerry Barr
Topic: 42646 Message: 42671

well trtied to send it direct but didnt work/ i have an old sylvania 134 that works and has a 3 volt rf scale /it uses a 1247 tube diode for the detector however i dont have the probe cud i jus use a 1n34 and the rest of the circuitry for an rf probe/ the tube uses 6.3 vac for the cathodeof the detector

Jerry KJ6NTL

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, June 8, 2013 6:31 PM
Subject: [TS-520_820_530_830] Re: Dial cut out

NO???

--- In mailto:TS-520_820_530_830%40yahoogroups.com, Jerry Barr <kj6ntl@...> wrote:
>
> hi terry did u get my message abtÂ the rf probe and sylvania 134
>
>
> Jerry KJ6NTL
>
> From: Terry Wagoner <wagstw46@...>
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Saturday, June 8, 2013 5:39 PM
> Subject: [TS-520_820_530_830] Re: Dial cut out
>
> Â
> OK Don:
>
> After you pull the board just look at both crystals under magnification and see if you can see any pin movement at the solder pads as you gently rock the crystals. You may want to remove solder and re-solder instead of just trying to reheat? Just be careful not to apply too much heat for too long.
>
> If you have a RF probe and VTVM, O-scope, or RF Millivolt meter suggest you measure the RF voltage level at Conn 7 Pin 1 or at TP-3 on the IF board. It should be close to 300mv rms in USB and LSB modes.
>
> Terry K9TW
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> > Hi Terry
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> > I went to tap on TC-3[gently]and i guess i touched X3 too,and i found

> > X3[crystal] for some reason to be lose.
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> > On 08/06/2013 7:13 PM, Terry Wagoner wrote:
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> > > OK Don keep us informed. Be aware that you have HV filter caps with
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> > > > On 08/06/2013 6:52 PM, Terry Wagoner wrote:
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> > > > > >
> > > > > >
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> > > > > > 73
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42672. Re: Dial cut out

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-09 03:08:13 UTC
From: Terry Wagoner
Topic: 42646 Message: 42672

I am not familiar with this RF millivolt meter. I do have an HP-410C and it also uses a tube diode in the probe and the tri-ax cable to the probe carries the filament voltage from the meter to the tube. So I assume similar set up with your instrument that the tube diode is mounted in the matching probe.

If you do not have the probe does this mean you do not have the cable and connector to plug into the meter?

Do you have the manual and schematic for the meter and the probe? If so should be able to figure out which pins of the connector on the meter are the 6.3vac filament and which ones are for the rectified RF.

Should be able to use a 1n34 diode probe and connect the output of it to input of your meter. Might have to replace input connector and just abandon the filament lead in place. Might have to play around with scaling resistors to get accurate readings.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Jerry Barr <kj6ntl@...> wrote:
>
> well trtied to send it direct but didnt work/ i have an old sylvania 134 that works and has aÂ 3 volt rf scale /it uses a 1247 tube diode for the detector however i dont have the probe cud i jus use a 1n34 and the rest of the circuitryÂ for an rf probe/ the tube uses 6.3 vac for the cathodeof the detector
>
>
> Jerry KJ6NTL
>
> From: Terry Wagoner <wagstw46@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Saturday, June 8, 2013 6:31 PM
> Subject: [TS-520_820_530_830] Re: Dial cut out
>
> Â
> NO???
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, Jerry Barr <kj6ntl@> wrote:
> >
> > hi terry did u get my message abtÃ□Â the rf probe and sylvania 134
> >
> >
> > Jerry KJ6NTL
> >
> > From: Terry Wagoner <wagstw46@>
> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > Sent: Saturday, June 8, 2013 5:39 PM

> > Subject: [TS-520_820_530_830] Re: Dial cut out
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> > OK Don:
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> > If you have a RF probe and VTVM, O-scope, or RF Millivolt meter suggest you measure the RF voltage level at Conn 7 Pin 1 or at TP-3 on the IF board. It should be close to 300mv rms in USB and LSB modes.
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> > --- In mailto:TS-520_820_530_830%40yahoogroups.com, Don <ve2ud@> wrote:
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> > > > > I will try what you have suggested
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> > > > > On 08/06/2013 6:52 PM, Terry Wagoner wrote:
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> > > > > > > On 08/06/2013 1:27 PM, Mike wrote:
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> > > > > > > > On 6/8/2013 10:39 AM, Don D wrote:
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42673. Re: Dial cut out

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-09 03:12:07 UTC
From: k5hfg
Topic: 42646 Message: 42673

Hello All,
I agree, No need of the narrow filter with the VBT unless you are an avid CW operator and enjoy contesting. Uggghhhh. I like wide SSB BW and use VBT if it gets a little crowded. I operate more CW than SSB so I use a 530 with narrow filter for CW. Some of us older fellows have a problem with hearing loss in the higher frequencies and tuning into a particular signal with the narrow filter helps. I would think it is a matter of preference. I would recommend using your 830 without the filter for awhile until you are sure it is what you want. The VBT makes adjustment very easy. I would use it for a little bit. Even with CW the VBT is nice. Enjoy your 830. 73, Don K5HFG

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
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> Since you have the filter you can try it just be careful removing the IF board molex connectors and soldering in the filter. Sometimes the pads have been heated multiple times with multiple filter change outs.
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42674. Re: [TS-520_820_530_830] Re: Dial cut out

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-09 03:24:56 UTC
From: Jerry Barr
Topic: 42646 Message: 42674

lately it doesnt look like it matters all bands been crappy/ 6 on down noise noise noise

Jerry KJ6NTL

From: k5hfg <dlbowders@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, June 8, 2013 8:12 PM
Subject: [TS-520_820_530_830] Re: Dial cut out

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42675. Re: [TS-520_820_530_830] Re: TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-09 03:40:12 UTC
From: Mike
Topic: 42650 Message: 42675

Terry,

I don't knowbut when I build and erect a dipole antenna, I don't use an analyzer. I use a simple SWR meter, some RF power applied to the antennafrom the transmitter (transmitter is tuned upinto a 50 ohm dummy loadfirst), the line for both ends is tied around a couple of rocksthrown over a tree limb, and about 30 to 45 minutes of my time.

I have a 40 meter inverted vee that is hanging from a pine tree limb 28 feet in the air at the center. I would go higher but there are too many limbs in the way. The antenna performs perfectly, low SWR over the entire 40 meterband, no SWR higher than 1.7:1 at both ends of the band and SWR of 1.2:1 at the center of the band. It's fed with RG-8x coax and I can work almost any station I can hear, running no more than 85 watts.I have an amp, an Ameritron AL-811 (3 x 811A) but I only use it when I feel it's necessary which isn't that often. I don't "band hop" using the same antenna. If I want to operate on more than one band I'll put the G5RV (102 foot version) back up, shouldn't take more than an hour to erect it (takes time tounravel the antenna and decide which limbs to use) then I would use a tuner, a Drake MN-2000. I currently do not have any RFI problemsof any kind either in the shack, the laptop I use in the shack, or the house. The only RF problem I have ever had was with an old Regency ECT-106 VHF/UHF crystal scanner. I no longer use it inthe shack. I have 2 other scanners in the shack, one is a Regency Touch K500 VHF/UHF and one is a Regency AM Flight Scanner, none of which have any RF problems.

73
Mike W5RKL

On 6/8/2013 5:43 PM, Terry Wagoner wrote:
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> Mike:
>
> Wonder what license he holds? Not sure I understand his goal.
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> at 15 meters. He has less capacitance for resonance so sounds like
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>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@...> wrote:
> >
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42676. Re: [TS-520_820_530_830] Re: TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-09 05:41:37 UTC
From: Jerry Barr
Topic: 42650 Message: 42676

sori never heard of it but that means little, my mfj u tune to frequ want and then tune the ant. for bestswr/ fairly straight forward and simple

Jerry KJ6NTL

From: ThomasA <tsnarcher@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, June 8, 2013 5:25 PM
Subject: [TS-520_820_530_830] Re: TS-530s Question

RigExpert AA-30

--- In mailto:TS-520_820_530_830%40yahoogroups.com, Jerry Barr <kj6ntl@...> wrote:
>
> Â kinda curious what kind of antennaÂ anylyzer u got
>
>
> Jerry KJ6NTL
>
> From: ThomasA <tsnarcher@...>
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Saturday, June 8, 2013 4:13 PM
> Subject: [TS-520_820_530_830] Re: TS-530s Question
>
> Â
> If I trimmed too much from the antenna would that make the point at which I get the "dip" when tuning? the lowest SWR is at 14.255, according to the analyzer.
>
> Before, when I went through the tuning procedure, the pointer was in the range of 20m. Now when the "dip" occurs the pointer is in either the 12m or the 15m range.
>
> It is just different than it was before, and I am just trying to understand it.
>
> Tom
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Mike:
> >
> > Wonder what license he holds? Not sure I understand his goal.
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> > At what frequency should he trim it for resonance with his SWR bridge?
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42677. Re: [TS-520_820_530_830] Re: TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-09 04:02:34 UTC
From: Gregory Graham
Topic: 42650 Message: 42677

Mike
Like your comments. I recently put up my first 10-80 meter
vertical after being off the air for 20 years. I bought my first
Antenna Analyzer and wow is it nice after using a SWR meter to tune
antennas for years. It does so much more than an SWR meter, i.e.
measures db loss in the coax, tests the coax and in a few minutes I was
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one time to tune the antenna where I wanted it. I would highly
recommend using one. I would love to have one of your trees here, but
I live in the desert and there is not one tree over 20 feet high within
a half a mile from my house. Inverted V's are almost impossible to
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original (first) TS-820S Transceiver, matching VFO and scope back on the
air. I still have to do a little cleaning up and detailing and then
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Gregory
NR6C

On 6/8/2013 8:40 PM, Mike wrote:
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42678. Re: [TS-520_820_530_830] Re: TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-09 07:41:08 UTC
From: Jerry Barr
Topic: 42650 Message: 42678

Well i guess i shud really feel lucky, i have about twenty vally oaks in my prop line but, have to have my son come shoot arrows up for the four cornered 573 ft loop up about50 foot in the air/ it tunes every band but twenty very well and i just fineess that one a bit and it works also/ but will soon have to moive and lose it/ keep hearing location location location / but 8i think it what we can do with where we are/ hopefully i will be able to do with where i have to go/its the pitts to get old/

Jerry KJ6NTL

From: Gregory Graham <tbirdgreg@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, June 8, 2013 9:02 PM
Subject: Re: [TS-520_820_530_830] Re: TS-530s Question

Mike
Like your comments. I recently put up my first 10-80 meter
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42679. RE: [TS-520_820_530_830] Re: Dial cut out

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-09 09:55:29 UTC
From: fpath fpath
Topic: 42646 Message: 42679

I have the 2.4Khz SSB filter in all my Hybird radios, never had the opportunity to use 1.8kHz. Depends on how serious you are and if you want to be able to open up the VBT.

73s

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: wagstw46@...
Date: Sun, 9 Jun 2013 01:41:51 +0000
Subject: [TS-520_820_530_830] Re: Dial cut out

If you look at your 830 manual you will see the recommended filters to make the best use of your VBT control. I personally do not want to listen to 1.8khz wide SSB filter all the time. Whenever band gets crowded you can always adjust VBT to tighten the pass band. With narrower filter you cannot open it up.

Suggest others respond to this. My ear says no and I like full range of my VBT control.

Since you have the filter you can try it just be careful removing the IF board molex connectors and soldering in the filter. Sometimes the pads have been heated multiple times with multiple filter change outs.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Terry
> yes i think it's the pad.Will let you know how i make out
> By the way i have a YK88SN filter.Would it be worth putting it in? or
> better to stay with the stock filter.
> Appreciate your help
> 73
> Don/Ve2ud
>
>
>
> On 08/06/2013 8:39 PM, Terry Wagoner wrote:
> >
> > OK Don:
> >
> > After you pull the board just look at both crystals under
> > magnification and see if you can see any pin movement at the solder
> > pads as you gently rock the crystals. You may want to remove solder
> > and re-solder instead of just trying to reheat? Just be careful not to

> > apply too much heat for too long.
> >
> > If you have a RF probe and VTVM, O-scope, or RF Millivolt meter
> > suggest you measure the RF voltage level at Conn 7 Pin 1 or at TP-3 on
> > the IF board. It should be close to 300mv rms in USB and LSB modes.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > >
> > > Hi Terry
> > > I got lucky.Took a wooden handle from a small paint brush and tapped on
> > > all the connectors and nothing happened
> > > I went to tap on TC-3[gently]and i guess i touched X3 too,and i found
> > > X3[crystal] for some reason to be lose.
> > > I will have to remove the board and desolder it to see what is the
> > cause
> > > as i can wiggle it.
> > > If i keep a bit of downward pressure on X3 all is ok
> > >
> > >
> > > Hope i explained it ok
> > >
> > > 73
> > > Don/Ve2ud
> > >
> > >
> > >
> > >
> > > On 08/06/2013 7:13 PM, Terry Wagoner wrote:
> > > >
> > > > OK Don keep us informed. Be aware that you have HV filter caps with
> > > > 900vdc on them in close proximity to the PLL board. Control any
> > > > alligator or mini-grabber test leads that you may use so wont
> > > > accidently flop into the capacitors. I would leave rig on its side
> > > > with the PLL board oriented down to lessen chance of this.
> > > >
> > > > Terry K9TW
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > > > >
> > > > > Hi Terry
> > > > > Yes that's what i am saying
> > > > > I will try what you have suggested
> > > > > Many Thanks
> > > > > 73
> > > > > Don/Ve2ud

> > > > >
> > > > > On 08/06/2013 6:52 PM, Terry Wagoner wrote:
> > > > > >
> > > > > > Are you saying the digital display goes blank and receiver
> > goes dead
> > > > > > when you place mode switch to USB?
> > > > > >
> > > > > > If so sounds like you have lost USB Carrier Osc signal on PLL
> > board.
> > > > > > Need Carrier oscillator input to Mixer Q40 to have digital
> > display
> > > > > and
> > > > > > need Carrier oscillator output from PLL board to IF board for
> > receive.
> > > > > > >
> > > > > > If you are familiar with PLL board go to Conn 8 Pin 5 and see
> > if you
> > > > > > have approx 9vdc when you place mode switch in USB position. Can
> > > > > > gently wiggle Conn 8.
> > > > > > >
> > > > > > If you have 9vdc at Pin 5 then possible you have a bad USB
> > crystal. I
> > > > > > have never seen a bad one. You could gently tap on case with
> > pencil
> > > > > > eraser. You could adjust Trimmer Capacitor TC-3 on PLL board.
> > > > > > >
> > > > > > Terry K9TW
> > > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > > > > > >
> > > > > > Sorry mike
> > > > > > it is a TS-830
> > > > > > >
> > > > > > 73
> > > > > > Don
> > > > > > >
> > > > > > >
> > > > > > On 08/06/2013 1:27 PM, Mike wrote:
> > > > > > >
> > > > > > Don,
> > > > > > >
> > > > > > What hybrid transceiver are you having trouble with?
> > > > > > >
> > > > > > 73
> > > > > > Mike W5RKL
> > > > > > >
> > > > > > On 6/8/2013 10:39 AM, Don D wrote:

> > > > > > > > >
> > > > > > > > > > Hi All
> > > > > > > > > >
> > > > > > > > > > When i switch the mode switch from lsb to usb or cw the
> > > > digital dial
> > > > > > > > > > and receiver cuts out.
> > > > > > > > > > It works fine in lsb and i can hear the relay cut in when i
> > > > > > switch to
> > > > > > > > > > usb,but no dial or audio
> > > > > > > > > > help
> > > > > > > > > >
> > > > > > > > > > 73
> > > > > > > > > > Don/Ve2ud
> > > > > > > > > >
> > > > > > > > > >
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> > > > > > > > > > [Non-text portions of this message have been removed]
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42680. RE: [TS-520_820_530_830] Re: TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-09 09:57:14 UTC
From: fpath fpath
Topic: 42650 Message: 42680

Tom,

I may have missed a part of the thread, but have you tried tuning into the dummy load or other resonate antenna on different band and then check to see if Plate control is out on all bands?

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: louis.wilen@...
Date: Sat, 8 Jun 2013 21:47:53 -0400
Subject: Re: [TS-520_820_530_830] Re: TS-530s Question

Also ? you might do a quick test of your dummy load to be sure that it?s really resistive at 14 Mhz. Just connect your antenna analyzer directly to your dummy load. The antenna analyzer should show an SWR of 1:1 (or nearly so) and an impedance of 50 ohms (maybe plus or minus 1 ohm) at all frequencies below 30 Mhz. If it?s really a good dummy load, it will show an SWR of 1:1 all the way to at least 200 Mhz.

Louis
W3LMW

From: Terry Wagoner
Sent: Saturday, June 08, 2013 9:29 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS-530s Question

OK what was that SWR at 14.255mhz? What was it at 14.175mhz and at 14.350mhz? As Mike suggested do you have a SWR meter or wattmeter that you can then check the SWR at 14.255mhz to see if close to what your analyzer read?

Also W4OP has a good question. Are you saying that your Plate Tuning capacitor is at or near the 14mhz white mark scribed on your front panel when loading into your dummy load and at or near 21mhz when loading in to the antenna?

If near 14 mhz mark into dummy load it suggests your dummy load is close to 50 ohms resistive. If not near 14 mhz into antenna it suggest antenna is not resistive at 14.255mhz and is presenting some reactive component either Xc or Xl depending on if too short or too long at 14.255mhz.

The beauty of the analyzer is it tells you were it is resonant at and from that you can tell if too long or too short depending on where you want to operate. It will also tell you how broad band the dipole is and a conventional dipole is not very broad banded. It would not be unusual to have 1:2 to 1 at resonance (14.255mhz) and 2:1 at each end of the phone band. As Mike indicated many factors including apex height, nearby objects, apex angle, height of the ends etc. affect the SWR.

If your analyzer measured a VSWR of approx 1.05 to 1.10 to 1 at 14.255mhz then antenna and dummy load should be close to same impedance and Plate Tuning cap should be close to same scribed mark.

Have you measured your dummy load resistor with ohm meter? Or your analyzer? If Cantenna may be a little off of 50 ohms and that is no problem.

Terry K9TW

-
> > > [Non-text portions of this message have been removed]
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> >
>

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.3343 / Virus Database: 3199/6395 - Release Date: 06/08/13

[Non-text portions of this message have been removed]

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42681. Re: TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-09 11:09:00 UTC
From: Terry Wagoner
Topic: 42650 Message: 42681

Mike: Yes but at what frequency are you using reduced power from your transmitter to tune the dipole? I think he needed to hear that in addition to check it with an SWR meter.

It depends on your operating goal. Where do you want it to be resonant at? If you want to use it for SSB and CW then you would do this in middle of the allotted frequency range for the band involved. I think that is what your are saying you do when you build a dipole.

I did that for all my first dipoles early in my ham life using 468/F and making it long and then trimming as you describe.

Today I operate less CW so tend to move resonance point up a little higher. I dont spend endless hours trying to get 1:1 and mess around with fat wire or coaxial flat tops to try to broad band it. The Pi-network in the Hybrids handles the resistance and reactance range of the feedpoint impedance of a half wave dipole just fine. It can however cause your normal scribed marks on the Tank capacitor not to align as you move further up and down from resonance. Nothing to worry about.

That was all I was saying. I did not know what his operational goal was and what he was trying to do. I suspect he is trying to make it as flat as he can for the phone portion of the band.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> Terry,
>
> I don't knowbut when I build and erect a dipole antenna, I don't use an
> analyzer. I use a simple SWR meter, some RF power applied to the
> antennafrom the transmitter (transmitter is tuned upinto a 50 ohm dummy
> loadfirst), the line for both ends is tied around a couple of
> rocksthrown over a tree limb, and about 30 to 45 minutes of my time.
>
> I have a 40 meter inverted vee that is hanging from a pine tree limb 28
> feet in the air at the center. I would go higher but there are too many
> limbs in the way. The antenna performs perfectly, low SWR over the
> entire 40 meterband, no SWR higher than 1.7:1 at both ends of the band
> and SWR of 1.2:1 at the center of the band. It's fed with RG-8x coax and
> I can work almost any station I can hear, running no more than 85
> watts.I have an amp, an Ameritron AL-811 (3 x 811A) but I only use it
> when I feel it's necessary which isn't that often. I don't "band hop"
> using the same antenna. If I want to operate on more than one band I'll
> put the G5RV (102 foot version) back up, shouldn't take more than an
> hour to erect it (takes time tounravel the antenna and decide which
> limbs to use) then I would use a tuner, a Drake MN-2000. I currently do
> not have any RFI problemsof any kind either in the shack, the laptop I

> use in the shack, or the house. The only RF problem I have ever had was
> with an old Regency ECT-106 VHF/UHF crystal scanner. I no longer use it
> inthe shack. I have 2 other scanners in the shack, one is a Regency
> Touch K500 VHF/UHF and one is a Regency AM Flight Scanner, none of which
> have any RF problems.
>
> 73
> Mike W5RKL
>
>
>
>
>
> On 6/8/2013 5:43 PM, Terry Wagoner wrote:
> >
> > Mike:
> >
> > Wonder what license he holds? Not sure I understand his goal.
> >
> > At what frequency should he trim it for resonance with his SWR bridge?
> >
> > I thought he was trying to get it reasonably flat in the phone portion
> > of the 20 meter band. If that is true then should he be loading at
> > approx 14.250mhz and measuring his SWR there for starters?
> >
> > The analyzer should have told him where resonance was and then easy to
> > tell if need to add or shorten. I think you and I always leave long
> > and easier to trial shorten by wrapping as you point out.
> >
> > I dont know where he is loading at to get the Tank Cap to be pointing
> > at 15 meters. He has less capacitance for resonance so sounds like
> > antenna is too short?
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@> wrote:
> > >
> > > Tom,
> > >
> > > Do you have an SWR meter to put in line? I would try that next. If the
> > > SWR is higher than the analyzer said then adjust the ends so the SWR
> > > drops to the lowest value. You can wrap any excess wire at both end of
> > > the dipole/inverted vee, along the ends. Wrapping the excess wire along
> > > the ends of the antenna will not affect the SWR and the performance and
> > > loading of the antenna.
> > >
> > > If the antenna is built and erected properly, away from surrounding
> > > objects, then you should be able to adjust the length of both side
> > > equally, then use a separate SWR meter and obtain a very low SWR. I

> > > typically adjust the ends so the SWR is lowest at the middle of the
> > > band. This will allow you to operate over the entire band without
> > having
> > > a significant increase in SWR. This is true for all bands except 80
> > > where the typical bandwidth of a dipole is 25Khz to 30Khz before SWR
> > > reaches an unacceptable level.
> > >
> > > 73
> > > Mike W5RKL
> > >
> > > On 6/8/2013 1:58 PM, ThomasA wrote:
> > > >
> > > > Hello all,
> > > >
> > > > My setup consists of a TS530s, and a 20m dipole in an inverted V
> > > > configuration.
> > > >
> > > > I finally purchased an antenna analyzer, and intended to use it to
> > > > trim my antenna and improve efficiency.
> > > >
> > > > My first readings indicated an average SWR of 1:2.4 across the phone
> > > > portion of the 20 meter band, after using the analyzer, and some
> > > > trimming I was able to lower it to an average of 1:1.4, so I was
> > happy.
> > > >
> > > > However now when I go through my tuning procedure the "dip" on my
> > > > plate occurs when the pointer is in the 12 or 15 meter portion of the
> > > > dial, when before it was in the 20m portion, where I assume it
> > should be.
> > > >
> > > > I tune into a oil filled dummy load.
> > > >
> > > > Any ideas? did I foul something up? Do I have a problem with my radio
> > > > and the timing is just a coincidence?
> > > >
> > > > I would appreciate any input
> > > >
> > > > Tom KC0ZRV
> > > >
> > > >
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> > > >
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42682. Re: TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-09 12:29:24 UTC
From: Terry Wagoner
Topic: 42650 Message: 42682

I should have said that the Plate Tuning (Tank)capacitor indicator may not align if you move up or down frequency much beyond about the 2 to 1 bandwidth points of your resonant dipole or inverted-V. In my experience that would be approx 200 to 300 khz. At those points you are starting to introduce some reactive component that the pi-network must compensate for. As I said previously the hybrid pi-network can handle 2:1 mismatch and you are not going to burn up your final tubes or arc over the loading capacitor.

The tank capacitor position indicator when loading into the resonant frequency of a typical inverted-V should be very close to the position loaded into a nominal 50 ohm resistive dummy load. If anything an inverted-V should present a little lower feedpoint impedance than a dipole at the same height.

So the position difference that is being seen is a puzzle if the SWR of the inverted-V at resonance is in the order of 1:4 to 1.

Again I would confirm this SWR as Mike suggested using a SWR bridge or wattmeter if you have one. Not likely your new analyzer is bad, but a good cross check as well as sweeping your dummy load.

What difference are you seeing in the position of the Plate Loading capacitor for approx 100 watts into the antenna versus into the dummy load?

Terry K9TW

The Pi-network in the Hybrids handles the resistance and reactance range of the feedpoint impedance of a half wave dipole just fine. It can however cause your normal scribed marks on the Tank capacitor not to align as you move further up and down from resonance. Nothing to worry about.
>

>

42683. Re: [TS-520_820_530_830] Re: TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-09 12:39:29 UTC
From: Mike
Topic: 42650 Message: 42683

Terry,

I'm sorry, I thought I had that in my response.

After the dipole is cut for the "In the ball park" overall length and the excess wire is wrapped along both ends, I start at the bottom of the band and check SWR then repeat the test at the top of the band. This tells me whether I have to shorten or lengthen the antenna at both ends. It doesn't take much equal change in length at both ends to bring the antenna into resonance for the frequency one will be operating at. If one does it enough times it becomes easy and doesn't take long at all to complete.

73
Mike W5RKL

On 6/9/2013 6:09 AM, Terry Wagoner wrote:
>
> Mike: Yes but at what frequency are you using reduced power from your
> transmitter to tune the dipole? I think he needed to hear that in
> addition to check it with an SWR meter.
>
> It depends on your operating goal. Where do you want it to be resonant
> at? If you want to use it for SSB and CW then you would do this in
> middle of the allotted frequency range for the band involved. I think
> that is what your are saying you do when you build a dipole.
>
> I did that for all my first dipoles early in my ham life using 468/F
> and making it long and then trimming as you describe.
>
> Today I operate less CW so tend to move resonance point up a little
> higher. I dont spend endless hours trying to get 1:1 and mess around
> with fat wire or coaxial flat tops to try to broad band it. The
> Pi-network in the Hybrids handles the resistance and reactance range
> of the feedpoint impedance of a half wave dipole just fine. It can
> however cause your normal scribed marks on the Tank capacitor not to
> align as you move further up and down from resonance. Nothing to worry
> about.
>
> That was all I was saying. I did not know what his operational goal
> was and what he was trying to do. I suspect he is trying to make it as
> flat as he can for the phone portion of the band.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com

> <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@...> wrote:
> >
> > Terry,
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> > I don't knowbut when I build and erect a dipole antenna, I don't use an
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> > On 6/8/2013 5:43 PM, Terry Wagoner wrote:
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> > > > > I tune into a oil filled dummy load.
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> > > > > Tom KC0ZRV
> > > > >
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42684. Re: TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-09 13:17:28 UTC
From: Terry Wagoner
Topic: 42650 Message: 42684

Mike: I knew you were building a dipole to use for the entire allotted band. Just wanted the newer folks to understand what you are telling them. You have to pick a frequency to apply 468/F to get your initial 1/2 wavelength physical wire length. Some folks like you will pick center of the band, some center of phone band, some center of CW band or some variation on these. Since I dont work near high end of phone bands but more commonly in the phone band I use frequency that is a little high of the center of the band.

However today what is being taught and partly due to solid state no tune finals is that you could never operate with such an antenna without a Tuner. The impedance excursions and resulting SWR would be too high.

For some folks that means once you move off resonance (which may be 1:3 to 1 if you are feeding a 65 ohm antenna with 50 ohm coax) you have to get that SWR down. I know folks who use Tuner with their resonant dipoles and trap beams and if they move off the resonant frequency 1khz they immediately re-tune the tuner. If that makes them happy no harm done.

You and I have both built many dipoles and inverted-V without a super wham-o-dyne analyzer. However, they are tools and like all tools can make job easier, more efficient, and faster. Additionally they can provide you with some data you would not otherwise get. The question is what do you use that data for? What does knowing your inverted-V feedpoint is 54.06 - J0.537 going to do for you? For average ham not much.

I think where the Analyzers really shine is in areas like tuning traps and building multiband antennas like an OCF. You can sweep the OCF and see where you have approx 200 ohms sweet spot to install your 4:1 balun. Without the analyzer have to use formulas and as many opinions as people. Do I cut from one end 33%,34%,or 38%? Takes lots of raising and lowering and trial cut and maybe add cycles. Not to mention lots of on-off heating cycles on your Hybrid finals.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> Terry,
>
> I'm sorry, I thought I had that in my response.
>
> After the dipole is cut for the "In the ball park" overall length and
> the excess wire is wrapped along both ends, I start at the bottom of the
> band and check SWR then repeat the test at the top of the band. This
> tells me whether I have to shorten or lengthen the antenna at both ends.
> It doesn't take much equal change in length at both ends to bring the
> antenna into resonance for the frequency one will be operating at. If
> one does it enough times it becomes easy and doesn't take long at all to
> complete.
>

> 73
> Mike W5RKL
>
>
> On 6/9/2013 6:09 AM, Terry Wagoner wrote:
> >
> > Mike: Yes but at what frequency are you using reduced power from your
> > transmitter to tune the dipole? I think he needed to hear that in
> > addition to check it with an SWR meter.
> >
> > It depends on your operating goal. Where do you want it to be resonant
> > at? If you want to use it for SSB and CW then you would do this in
> > middle of the allotted frequency range for the band involved. I think
> > that is what your are saying you do when you build a dipole.
> >
> > I did that for all my first dipoles early in my ham life using 468/F
> > and making it long and then trimming as you describe.
> >
> > Today I operate less CW so tend to move resonance point up a little
> > higher. I dont spend endless hours trying to get 1:1 and mess around
> > with fat wire or coaxial flat tops to try to broad band it. The
> > Pi-network in the Hybrids handles the resistance and reactance range
> > of the feedpoint impedance of a half wave dipole just fine. It can
> > however cause your normal scribed marks on the Tank capacitor not to
> > align as you move further up and down from resonance. Nothing to worry
> > about.
> >
> > That was all I was saying. I did not know what his operational goal
> > was and what he was trying to do. I suspect he is trying to make it as
> > flat as he can for the phone portion of the band.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@> wrote:
> > >
> > > Terry,
> > >
> > > I don't knowbut when I build and erect a dipole antenna, I don't use an
> > > analyzer. I use a simple SWR meter, some RF power applied to the
> > > antennafrom the transmitter (transmitter is tuned upinto a 50 ohm dummy
> > > loadfirst), the line for both ends is tied around a couple of
> > > rocksthrown over a tree limb, and about 30 to 45 minutes of my time.
> > >
> > > I have a 40 meter inverted vee that is hanging from a pine tree limb 28
> > > feet in the air at the center. I would go higher but there are too many
> > > limbs in the way. The antenna performs perfectly, low SWR over the
> > > entire 40 meterband, no SWR higher than 1.7:1 at both ends of the band
> > > and SWR of 1.2:1 at the center of the band. It's fed with RG-8x coax
> > and

> > > I can work almost any station I can hear, running no more than 85
> > > watts.I have an amp, an Ameritron AL-811 (3 x 811A) but I only use it
> > > when I feel it's necessary which isn't that often. I don't "band hop"
> > > using the same antenna. If I want to operate on more than one band I'll
> > > put the G5RV (102 foot version) back up, shouldn't take more than an
> > > hour to erect it (takes time tounravel the antenna and decide which
> > > limbs to use) then I would use a tuner, a Drake MN-2000. I currently do
> > > not have any RFI problemsof any kind either in the shack, the laptop I
> > > use in the shack, or the house. The only RF problem I have ever had was
> > > with an old Regency ECT-106 VHF/UHF crystal scanner. I no longer use it
> > > inthe shack. I have 2 other scanners in the shack, one is a Regency
> > > Touch K500 VHF/UHF and one is a Regency AM Flight Scanner, none of
> > which
> > > have any RF problems.
> > >
> > > 73
> > > Mike W5RKL
> > >
> > >
> > >
> > >
> > >
> > > On 6/8/2013 5:43 PM, Terry Wagoner wrote:
> > > >
> > > > Mike:
> > > >
> > > > Wonder what license he holds? Not sure I understand his goal.
> > > >
> > > > At what frequency should he trim it for resonance with his SWR bridge?
> > > >
> > > > I thought he was trying to get it reasonably flat in the phone
> > portion
> > > > of the 20 meter band. If that is true then should he be loading at
> > > > approx 14.250mhz and measuring his SWR there for starters?
> > > >
> > > > The analyzer should have told him where resonance was and then
> > easy to
> > > > tell if need to add or shorten. I think you and I always leave long
> > > > and easier to trial shorten by wrapping as you point out.
> > > >
> > > > I dont know where he is loading at to get the Tank Cap to be pointing
> > > > at 15 meters. He has less capacitance for resonance so sounds like
> > > > antenna is too short?
> > > >
> > > > Terry K9TW
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@> wrote:
> > > > >

> > > > > Tom,
> > > > >
> > > > > Do you have an SWR meter to put in line? I would try that next.
> > If the
> > > > > SWR is higher than the analyzer said then adjust the ends so the SWR
> > > > > drops to the lowest value. You can wrap any excess wire at both
> > end of
> > > > > the dipole/inverted vee, along the ends. Wrapping the excess
> > wire along
> > > > > the ends of the antenna will not affect the SWR and the
> > performance and
> > > > > loading of the antenna.
> > > > >
> > > > > If the antenna is built and erected properly, away from surrounding
> > > > > objects, then you should be able to adjust the length of both side
> > > > > equally, then use a separate SWR meter and obtain a very low SWR. I
> > > > > typically adjust the ends so the SWR is lowest at the middle of the
> > > > > band. This will allow you to operate over the entire band without
> > > > having
> > > > > a significant increase in SWR. This is true for all bands except 80
> > > > > where the typical bandwidth of a dipole is 25Khz to 30Khz before SWR
> > > > > reaches an unacceptable level.
> > > > >
> > > > > 73
> > > > > Mike W5RKL
> > > > >
> > > > > On 6/8/2013 1:58 PM, ThomasA wrote:
> > > > > >
> > > > > > Hello all,
> > > > > >
> > > > > > My setup consists of a TS530s, and a 20m dipole in an inverted V
> > > > > > configuration.
> > > > > >
> > > > > > I finally purchased an antenna analyzer, and intended to use it to
> > > > > > trim my antenna and improve efficiency.
> > > > > >
> > > > > > My first readings indicated an average SWR of 1:2.4 across the
> > phone
> > > > > > portion of the 20 meter band, after using the analyzer, and some
> > > > > > trimming I was able to lower it to an average of 1:1.4, so I was
> > > > happy.
> > > > > >
> > > > > > However now when I go through my tuning procedure the "dip" on my
> > > > > > plate occurs when the pointer is in the 12 or 15 meter portion
> > of the
> > > > > > dial, when before it was in the 20m portion, where I assume it
> > > > should be.
> > > > > >
> > > > > > I tune into a oil filled dummy load.
> > > > > >

> > > > > > Any ideas? did I foul something up? Do I have a problem with
> > my radio
> > > > > > > and the timing is just a coincidence?
> > > > > > >
> > > > > > > I would appreciate any input
> > > > > > >
> > > > > > > Tom KC0ZRV
> > > > > > >
> > > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > > [Non-text portions of this message have been removed]
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> > > > [Non-text portions of this message have been removed]
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42685. Re: TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-09 10:51:06 UTC
From: ThomasA
Topic: 42650 Message: 42685

I connected the analyzer directly to the dummy load, and impedance is 49.7 ohms. The SWR is 1:1 to 1.10:1 across the 20 m band.

My concern is that the rig does not behave like it normally does during tuning, and I am afraid that I have damaged my radio.

The fact that it has all taken place while I am experimenting with the length of my antenna, and analyzer actually is just a coincidence, because the rig behaves the same way when tuning into the dummy load.

Since testing the dummy load and finding it to be in good shape, it points more to the radio itself.

I just don't know what would make the rig behave this way, or what to do to correct it.

--- In TS-520_820_530_830@yahoogroups.com, "Louis Wilen" <louis.wilen@...> wrote:
>
> Also â□" you might do a quick test of your dummy load to be sure that itâ□□s really resistive at 14 Mhz. Just connect your antenna analyzer directly to your dummy load. The antenna analyzer should show an SWR of 1:1 (or nearly so) and an impedance of 50 ohms (maybe plus or minus 1 ohm) at all frequencies below 30 Mhz. If itâ□□s really a good dummy load, it will show an SWR of 1:1 all the way to at least 200 Mhz.
>
> Louis
> W3LMW
>
> From: Terry Wagoner
> Sent: Saturday, June 08, 2013 9:29 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: TS-530s Question
>
>
> OK what was that SWR at 14.255mhz? What was it at 14.175mhz and at 14.350mhz? As Mike suggested do you have a SWR meter or wattmeter that you can then check the SWR at 14.255mhz to see if close to what your analyzer read?
>
> Also W4OP has a good question. Are you saying that your Plate Tuning capacitor is at or near the 14mhz white mark scribed on your front panel when loading into your dummy load and at or near 21mhz when loading in to the antenna?
>
> If near 14 mhz mark into dummy load it suggests your dummy load is close to 50 ohms resistive. If not near 14 mhz into antenna it suggest antenna is not resistive at 14.255mhz and is presenting some reactive component either Xc or Xl depending on if too short or too long at 14.255mhz.
>
> The beauty of the analyzer is it tells you were it is resonant at and from that you can tell if too long or too short depending on where you want to operate. It will also tell you how broad band the dipole is and a conventional dipole is not very broad banded. It would not be unusual to have 1:2 to 1 at resonance (14.255mhz) and 2:1 at each end of the

phone band. As Mike indicated many factors including apex height, nearby objects, apex angle, height of the ends etc. affect the SWR.
>
> If your analyzer measured a VSWR of approx 1.05 to 1.10 to 1 at 14.255mhz then antenna and dummy load should be close to same impedance and Plate Tuning cap should be close to same scribed mark.
>
> Have you measured your dummy load resistor with ohm meter? Or your analyzer? If Cantenna may be a little off of 50 ohms and that is no problem.
>
> Terry K9TW
>
> -
> > > > [Non-text portions of this message have been removed]
> > > >
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>
> No virus found in this message.
> Checked by AVG - www.avg.com
> Version: 2013.0.3343 / Virus Database: 3199/6395 - Release Date: 06/08/13
>
>
> [Non-text portions of this message have been removed]
>

42686. Re: [TS-520_820_530_830] Re: TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-09 17:47:14 UTC
From: Bob Macklin
Topic: 42650 Message: 42686

Some of these problems can be caused by heating of the antenna system (coax) components. You will not see these problems at the low power level of the analyzer but when you apply higher power from the transmitter you will get different results.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: ThomasA
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, June 09, 2013 3:51 AM
Subject: [TS-520_820_530_830] Re: TS-530s Question

I connected the analyzer directly to the dummy load, and impedance is 49.7 ohms. The SWR is 1:1 to 1.10:1 across the 20 m band.

My concern is that the rig does not behave like it normally does during tuning, and I am afraid that I have damaged my radio.

The fact that it has all taken place while I am experimenting with the length of my antenna, and analyzer actually is just a coincidence, because the rig behaves the same way when tuning into the dummy load.

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I just don't know what would make the rig behave this way, or what to do to correct it.

--- In TS-520_820_530_830@yahoogroups.com, "Louis Wilen" <louis.wilen@...> wrote:
>
> Also â?" you might do a quick test of your dummy load to be sure that itâ?Ts really resistive at 14 Mhz. Just connect your antenna analyzer directly to your dummy load. The antenna analyzer should show an SWR of 1:1 (or nearly so) and an impedance of 50 ohms (maybe plus or minus 1 ohm) at all frequencies below 30 Mhz. If itâ?Ts really a good dummy load, it will show an SWR of 1:1 all the way to at least 200 Mhz.
>
> Louis
> W3LMW
>
> From: Terry Wagoner
> Sent: Saturday, June 08, 2013 9:29 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: TS-530s Question
>
>

> OK what was that SWR at 14.255mhz? What was it at 14.175mhz and at 14.350mhz? As Mike suggested do you have a SWR meter or wattmeter that you can then check the SWR at 14.255mhz to see if close to what your analyzer read?
>
> Also W4OP has a good question. Are you saying that your Plate Tuning capacitor is at or near the 14mhz white mark scribed on your front panel when loading into your dummy load and at or near 21mhz when loading in to the antenna?
>
> If near 14 mhz mark into dummy load it suggests your dummy load is close to 50 ohms resistive. If not near 14 mhz into antenna it suggest antenna is not resistive at 14.255mhz and is presenting some reactive component either Xc or Xl depending on if too short or too long at 14.255mhz.
>
> The beauty of the analyzer is it tells you were it is resonant at and from that you can tell if too long or too short depending on where you want to operate. It will also tell you how broad band the dipole is and a conventional dipole is not very broad banded. It would not be unusual to have 1:2 to 1 at resonance (14.255mhz) and 2:1 at each end of the phone band. As Mike indicated many factors including apex height, nearby objects, apex angle, height of the ends etc. affect the SWR.
>
> If your analyzer measured a VSWR of approx 1.05 to 1.10 to 1 at 14.255mhz then antenna and dummy load should be close to same impedance and Plate Tuning cap should be close to same scribed mark.
>
> Have you measured your dummy load resistor with ohm meter? Or your analyzer? If Cantenna may be a little off of 50 ohms and that is no problem.
>
> Terry K9TW
>
> -
> > > > [Non-text portions of this message have been removed]
> > > >
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>
> No virus found in this message.
> Checked by AVG - www.avg.com
> Version: 2013.0.3343 / Virus Database: 3199/6395 - Release Date: 06/08/13
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

42687. KENWOOD HYBRID USER NET (June 9th, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-09 18:44:27 UTC
From: mvgilger
Topic: 42687 Message: 42687

For next week, I will not be here to run the net. For the weekend of the 22nd, there will not be a net on Saturday, due to Field Day. Sunday should be ok as I think FD will have ended by the time the net starts.

The Saturday's net on 40 meter had 18 stations checking in with good band conditions. We had 7 new check-in's, W4OP, KK4JFP, W2UIS, KC2TFX, KC2TRX, and W2UDG.

Out of all stations checking in, there was:

2 running TS-520(x)
0 running TS-530(x)
2 running TS-820(x)
2 running TS-830S
1 running TS-900S

I was running my TS-940s. The rest were running non hybrids of one model or another.

The Sunday's net on 20 meter we had 11 stations checking in under very poor band conditions. We had 5 new check-in, KB7DXN, N0RMB, W5JGV, KB7DXN, and KK6BQZ.

Out of those, there was:

1 running TS-520(x)
1 running TS-530(x)
2 running TS-820(x)
2 running TS-830S

I was running my TS-940s. The rest were running non hybrids of one model or another.

We have been having several people checking in regularly with their TS-430, TS-440, and TS-940's, which of course is not a hybrid, although over 30+ years old. Everyone is welcome as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a net control station, please send me an email. Currently it's just myself, WB2KNR and WB0SGA. I would like to get several more. If we do, we can alternate so everyone might be on a 3-4 week rotation. It's a lot of fun and a good way to make sure you station is optimized.

For anyone that has not heard, we have a new web site that WB4HFN is hosting. He currently has a very nice site for Drake, Collins and Heathkit and now Kenwood Hybrids. Good quality manuals plus sale flyers and brochures will be found here, along with user supplied information for all Hybrids.

His URL is:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754 check-ins, Sunday total 563 check-ins

November 2012, Saturday's, net total = 47, Sundays total = 20
December 2012, Saturday's, net total = 74, Sunday's total = 70
January 2013, Saturday's, net total = 93, Sunday's total = 87
February 2013, Saturday's net total = 103, Sundays total = 87
March 2013, Saturday's, net total = 112, Sunday's total =39
April 2013, Saturday's net total = 52, Sunday's total = 29
May 2013, Saturday's net total = 45, Sunday's total = 50
June 2013, Saturday's net total = 19, Sunday's total = 20 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

42688. Re: TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-09 19:43:15 UTC
From: Terry Wagoner
Topic: 42650 Message: 42688

Tom:

Are you saying that the Plate tuning capacitor now points to 21 mhz when loading on 20 meters into your dummy load instead of pointing at 14 mhz?

If so, I agree you should try a different coax jumper from rig to dummy load. If it still does it with another jumper then need to open rig and make sure the shaft coupler on the Plate Tuning capacitor isnt loose. You can tell by holding the capacitor shaft or plates and then turning the knob. If the knob turns the coupler is loose. Be careful so you dont damage any of the plates. I would full mesh them if going to hold them in place.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "ThomasA" <tsnarcher@...> wrote:
>
> I connected the analyzer directly to the dummy load, and impedance is 49.7 ohms. The SWR is 1:1 to 1.10:1 across the 20 m band.
>
> My concern is that the rig does not behave like it normally does during tuning, and I am afraid that I have damaged my radio.
>
> The fact that it has all taken place while I am experimenting with the length of my antenna, and analyzer actually is just a coincidence, because the rig behaves the same way when tuning into the dummy load.
>
> Since testing the dummy load and finding it to be in good shape, it points more to the radio itself.
>
> I just don't know what would make the rig behave this way, or what to do to correct it.
>
> --- In TS-520_820_530_830@yahoogroups.com, "Louis Wilen" <louis.wilen@> wrote:
> >
> > Also â□" you might do a quick test of your dummy load to be sure that itâ□□s really resistive at 14 Mhz. Just connect your antenna analyzer directly to your dummy load. The antenna analyzer should show an SWR of 1:1 (or nearly so) and an impedance of 50 ohms (maybe plus or minus 1 ohm) at all frequencies below 30 Mhz. If itâ□□s really a good dummy load, it will show an SWR of 1:1 all the way to at least 200 Mhz.
> >
> > Louis
> > W3LMW
> >
> > From: Terry Wagoner
> > Sent: Saturday, June 08, 2013 9:29 PM
> > To: TS-520_820_530_830@yahoogroups.com
> > Subject: [TS-520_820_530_830] Re: TS-530s Question
> >
> >
> > OK what was that SWR at 14.255mhz? What was it at 14.175mhz and at 14.350mhz? As Mike suggested do you

have a SWR meter or wattmeter that you can then check the SWR at 14.255mhz to see if close to what your analyzer read?
> >
> > Also W4OP has a good question. Are you saying that your Plate Tuning capacitor is at or near the 14mhz white mark scribed on your front panel when loading into your dummy load and at or near 21mhz when loading in to the antenna?
> >
> > If near 14 mhz mark into dummy load it suggests your dummy load is close to 50 ohms resistive. If not near 14 mhz into antenna it suggest antenna is not resistive at 14.255mhz and is presenting some reactive component either Xc or Xl depending on if too short or too long at 14.255mhz.
> >
> > The beauty of the analyzer is it tells you were it is resonant at and from that you can tell if too long or too short depending on where you want to operate. It will also tell you how broad band the dipole is and a conventional dipole is not very broad banded. It would not be unusual to have 1:2 to 1 at resonance (14.255mhz) and 2:1 at each end of the phone band. As Mike indicated many factors including apex height, nearby objects, apex angle, height of the ends etc. affect the SWR.
> >
> > If your analyzer measured a VSWR of approx 1.05 to 1.10 to 1 at 14.255mhz then antenna and dummy load should be close to same impedance and Plate Tuning cap should be close to same scribed mark.
> >
> > Have you measured your dummy load resistor with ohm meter? Or your analyzer? If Cantenna may be a little off of 50 ohms and that is no problem.
> >
> > Terry K9TW
> >
> > -
> > > > > > [Non-text portions of this message have been removed]
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> > >
> > > No virus found in this message.
> > > Checked by AVG - www.avg.com
> > > Version: 2013.0.3343 / Virus Database: 3199/6395 - Release Date: 06/08/13
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

42689. Re: TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 00:26:17 UTC
From: ThomasA
Topic: 42650 Message: 42689

Yes Terry, that is it exactly. I intend to try a different coax jumper, and if I need to I will open the rig up.

I appreciate all of the patience, I suppose I am still apprehensive about the tuning procedure, and the damage I could do tuning.

I am trying to learn as much as I can though, and appreciate all of the advice.

Tom

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Tom:
>
> Are you saying that the Plate tuning capacitor now points to 21 mhz when loading on 20 meters into your dummy load instead of pointing at 14 mhz?
>
> If so, I agree you should try a different coax jumper from rig to dummy load. If it still does it with another jumper then need to open rig and make sure the shaft coupler on the Plate Tuning capacitor isnt loose. You can tell by holding the capacitor shaft or plates and then turning the knob. If the knob turns the coupler is loose. Be careful so you dont damage any of the plates. I would full mesh them if going to hold them in place.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "ThomasA" <tsnarcher@> wrote:
> >
> > I connected the analyzer directly to the dummy load, and impedance is 49.7 ohms. The SWR is 1:1 to 1.10:1 across the 20 m band.
> >
> > My concern is that the rig does not behave like it normally does during tuning, and I am afraid that I have damaged my radio.
> >
> > The fact that it has all taken place while I am experimenting with the length of my antenna, and analyzer actually is just a coincidence, because the rig behaves the same way when tuning into the dummy load.
> >
> > Since testing the dummy load and finding it to be in good shape, it points more to the radio itself.
> >
> > I just don't know what would make the rig behave this way, or what to do to correct it.
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Louis Wilen" <louis.wilen@> wrote:
> > >
> > > Also â□" you might do a quick test of your dummy load to be sure that itâ□□s really resistive at 14 Mhz. Just connect your antenna analyzer directly to your dummy load. The antenna analyzer should show an SWR of 1:1 (or nearly so) and an impedance of 50 ohms (maybe plus or minus 1 ohm) at all frequencies below 30 Mhz. If itâ□□s really a good dummy load, it will show an SWR of 1:1 all the way to at least 200 Mhz.

> > >
> > > Louis
> > > W3LMW
> > >
> > > From: Terry Wagoner
> > > Sent: Saturday, June 08, 2013 9:29 PM
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Subject: [TS-520_820_530_830] Re: TS-530s Question
> > >
> > >
> > > OK what was that SWR at 14.255mhz? What was it at 14.175mhz and at 14.350mhz? As Mike suggested do you have a SWR meter or wattmeter that you can then check the SWR at 14.255mhz to see if close to what your analyzer read?
> > >
> > > Also W4OP has a good question. Are you saying that your Plate Tuning capacitor is at or near the 14mhz white mark scribed on your front panel when loading into your dummy load and at or near 21mhz when loading in to the antenna?
> > >
> > > If near 14 mhz mark into dummy load it suggests your dummy load is close to 50 ohms resistive. If not near 14 mhz into antenna it suggest antenna is not resistive at 14.255mhz and is presenting some reactive component either Xc or Xl depending on if too short or too long at 14.255mhz.
> > >
> > > The beauty of the analyzer is it tells you were it is resonant at and from that you can tell if too long or too short depending on where you want to operate. It will also tell you how broad band the dipole is and a conventional dipole is not very broad banded. It would not be unusual to have 1:2 to 1 at resonance (14.255mhz) and 2:1 at each end of the phone band. As Mike indicated many factors including apex height, nearby objects, apex angle, height of the ends etc. affect the SWR.
> > >
> > > If your analyzer measured a VSWR of approx 1.05 to 1.10 to 1 at 14.255mhz then antenna and dummy load should be close to same impedance and Plate Tuning cap should be close to same scribed mark.
> > >
> > > Have you measured your dummy load resistor with ohm meter? Or your analyzer? If Cantenna may be a little off of 50 ohms and that is no problem.
> > >
> > > Terry K9TW
> > >
> > > -
> > > > > [Non-text portions of this message have been removed]
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> > >
> > >
> > > No virus found in this message.
> > > Checked by AVG - www.avg.com
> > > Version: 2013.0.3343 / Virus Database: 3199/6395 - Release Date: 06/08/13
> > >

> > >
> > > [Non-text portions of this message have been removed]
> > >
> >
>

42690. TS-820s to PC CW software

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 00:35:41 UTC
From: Andrew Schneider
Topic: 42690 Message: 42690

I have a Kenwood TS-820s I am looking for some windows based or Linux based
CW recognition software and CW keyer software.

Any suggestions?

Andrew Schneider N7EBG

andrew@...

[Non-text portions of this message have been removed]

42691. RE Kenwood TS-820s Interface cable for CW

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 00:36:42 UTC
From: Andrew Schneider
Topic: 42691 Message: 42691

I have a Kenwood TS-820s; need an interface cable to plug the transceiver into the PC for CW.

Anyone have suggestions or DIY plans?

Andrew Schneider N7EBG

andrew@...

[Non-text portions of this message have been removed]

42692. Re: [TS-520_820_530_830] Re: TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 01:30:08 UTC
From: John Davidson
Topic: 42650 Message: 42692

When I build a new antenna I always hang it up and run a charted sweep of the SWR vs freq on graph paper and refer to it for;
1. trimming it to the part of the band I operate on.
2. future reference, storm survival etc where I can see if anything has changed over time and can make an inspection to see what broke if the next sweep is way off from the original.
I HAVE GRAPHS PLOTTED IN A FOLDER IN MY DESK DRAWER FOR ALL MY ANTENNAS.

From: Mike <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, June 8, 2013 11:40 PM
Subject: Re: [TS-520_820_530_830] Re: TS-530s Question

Terry,

I don't knowbut when I build and erect a dipole antenna, I don't use an analyzer. I use a simple SWR meter, some RF power applied to the antennafrom the transmitter (transmitter is tuned upinto a 50 ohm dummy loadfirst),
Cap to be pointing
> at 15 meters. He has less capacitance for resonance so sounds like
> antenna is too short?
>
> Terry K9TWands except 80
> > where the typical bandwidth of a dipole is 25Khz to 30Khz before SWR
> > reaches an unacceptable level.
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

42693. Re: [TS-520_820_530_830] Re: Dial cut out

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 02:03:19 UTC
From: Don
Topic: 42646 Message: 42693

Terry
I got the board removed today and found that the crystals were not
soldered very well from the factory.The rest of the board was fine,just
those two
Both Leeds were very lose and not much solder to hold them.Measurements
were fine.
I need to buy some better alignment tools and was wondering what you
might recommend
I have pasted this site as they have a nice assortment

http://www.mtechnologies.com/tools/index.htm#
<http://www.mtechnologies.com/tools/index.htm#alignset>alignset
<http://www.mtechnologies.com/tools/index.htm#alignset>

Thanks
73
Don/Ve2ud

On 08/06/2013 8:39 PM, Terry Wagoner wrote:
>
> OK Don:
>
> After you pull the board just look at both crystals under
> magnification and see if you can see any pin movement at the solder
> pads as you gently rock the crystals. You may want to remove solder
> and re-solder instead of just trying to reheat? Just be careful not to
> apply too much heat for too long.
>
> If you have a RF probe and VTVM, O-scope, or RF Millivolt meter
> suggest you measure the RF voltage level at Conn 7 Pin 1 or at TP-3 on
> the IF board. It should be close to 300mv rms in USB and LSB modes.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> > Hi Terry
> > I got lucky.Took a wooden handle from a small paint brush and tapped on
> > all the connectors and nothing happened
> > I went to tap on TC-3[gently]and i guess i touched X3 too,and i found
> > X3[crystal] for some reason to be lose.
> > I will have to remove the board and desolder it to see what is the
> cause
> > as i can wiggle it.
> > If i keep a bit of downward pressure on X3 all is ok

> >
> >
> > Hope i explained it ok
> >
> > 73
> > Don/Ve2ud
> >
> >
> >
> >
> > On 08/06/2013 7:13 PM, Terry Wagoner wrote:
> > >
> > > OK Don keep us informed. Be aware that you have HV filter caps with
> > > 900vdc on them in close proximity to the PLL board. Control any
> > > alligator or mini-grabber test leads that you may use so wont
> > > accidently flop into the capacitors. I would leave rig on its side
> > > with the PLL board oriented down to lessen chance of this.
> > >
> > > Terry K9TW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > > >
> > > > Hi Terry
> > > > Yes that's what i am saying
> > > > I will try what you have suggested
> > > > Many Thanks
> > > > 73
> > > > Don/Ve2ud
> > > >
> > > > On 08/06/2013 6:52 PM, Terry Wagoner wrote:
> > > > >
> > > > > Are you saying the digital display goes blank and receiver
> goes dead
> > > > > when you place mode switch to USB?
> > > > >
> > > > > If so sounds like you have lost USB Carrier Osc signal on PLL
> board.
> > > > > Need Carrier oscillator input to Mixer Q40 to have digital
> display
> > > and
> > > > > need Carrier oscillator output from PLL board to IF board for
> receive.
> > > > >
> > > > > If you are familiar with PLL board go to Conn 8 Pin 5 and see
> if you
> > > > > have approx 9vdc when you place mode switch in USB position. Can
> > > > > gently wiggle Conn 8.
> > > > >

> > > > > If you have 9vdc at Pin 5 then possible you have a bad USB
> crystal. I
> > > > > have never seen a bad one. You could gently tap on case with
> pencil
> > > > > eraser. You could adjust Trimmer Capacitor TC-3 on PLL board.
> > > > > >
> > > > > > Terry K9TW
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > > > > > >
> > > > > > > Sorry mike
> > > > > > > it is a TS-830
> > > > > > >
> > > > > > > 73
> > > > > > > Don
> > > > > > >
> > > > > > >
> > > > > > > On 08/06/2013 1:27 PM, Mike wrote:
> > > > > > > >
> > > > > > > > Don,
> > > > > > > >
> > > > > > > > What hybrid transceiver are you having trouble with?
> > > > > > > >
> > > > > > > > 73
> > > > > > > > Mike W5RKL
> > > > > > > >
> > > > > > > > On 6/8/2013 10:39 AM, Don D wrote:
> > > > > > > > >
> > > > > > > > > Hi All
> > > > > > > > >
> > > > > > > > > When i switch the mode switch from lsb to usb or cw the
> > > digital dial
> > > > > > > > > and receiver cuts out.
> > > > > > > > > It works fine in lsb and i can hear the relay cut in when i
> > > > > switch to
> > > > > > > > > usb,but no dial or audio
> > > > > > > > > help
> > > > > > > > >
> > > > > > > > > 73
> > > > > > > > > Don/Ve2ud
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > [Non-text portions of this message have been removed]
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42694. TS-530S VOX anomaly

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 01:44:14 UTC
From: Craig
Topic: 42694 Message: 42694

I have just a acquired a very nice TS-530S -- a real beaut. It has one problem -- and one only (and it may be me).

The anti-VOX seems to be non-functional. Any VOX gain setting above zero gets the VOX relay tripping repeatedly, no matter what anti-VOX adjustment is made, even if the speaker volume is low and the microphone (an MC-50) is remotely located. The VOX works normally with headphones muting the speaker.

Whaddya think?

73,

Craig
W3CRR

42695. Re: TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 02:18:54 UTC
From: Terry Wagoner
Topic: 42650 Message: 42695

Tom:

It is not likely you have done any damage to your radio although odd that there appears to have been some change. Did you use your rigs output to tune your inverted V prior to getting your antenna analyzer?

Multiple long key down cycles while trimming the antenna can be hard on it if not loaded properly and giving it a little rest.

Do you have an external wattmeter in line? Are you getting approx 100 watts output into dummy load and 20 meter inverted-V?

Here are some ways to hurt the radio (primarily shorten the life of your 6146 final tubes):

1. Long off resonance key down times (not having the plate current dipped to minimum) especially if tuning in CW mode instead of Tune mode. OK to tune in CW mode once you get some experience.

2. Routinely loading beyond recommended maximum Ip of 265 ma or tuning for Max Smoke and long key down at Max Smoke. Most of us who run TS-830s limit the plate current to approx 225ma for 100 watts output.

3. Running high duty cycle modes like PSK without reducing maximum plate current.

Contrary to popular opinion you will not burn up your 6146 tubes or arc over you loading capacitor if you load into an antenna that presents 2 to 1 VSWR. If you can load to approx 100 watt output at 225 ma it means that your pi-network was able to match the impedance that your feedline presented to it. It may not always result in the Plate tune and load controls pointing to where they do when you are loading into a 50 ohm resistive dummy load.

One additional question. Does your plate tune pointer now point to different place when you load on every band into your dummy load?

There are fixed padder capacitors that are switched in the plate tune and load capacitors and they can go bad, but not likely that all went bad at one time. None are switched in the Plate tune capacitor for 20 meters. They are switched in the Plate Load capacitor.

I would try another coax jumper between your rigs SO-239 connector and the dummy load (no antenna switch or any other devices in line) and see how the controls behave. If pointer remains out of alignment then it is time to inspect the Plate Tune capacitor coupling as I suggested.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "ThomasA" <tsnarcher@...> wrote:
>
> Yes Terry, that is it exactly. I intend to try a different coax jumper, and if I need to I will open the rig up.
>

> I appreciate all of the patience, I suppose I am still apprehensive about the tuning procedure, and the damage I could do tuning.
>
> I am trying to learn as much as I can though, and appreciate all of the advice.
>
> Tom
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Tom:
> >
> > Are you saying that the Plate tuning capacitor now points to 21 mhz when loading on 20 meters into your dummy load instead of pointing at 14 mhz?
> >
> > If so, I agree you should try a different coax jumper from rig to dummy load. If it still does it with another jumper then need to open rig and make sure the shaft coupler on the Plate Tuning capacitor isnt loose. You can tell by holding the capacitor shaft or plates and then turning the knob. If the knob turns the coupler is loose. Be careful so you dont damage any of the plates. I would full mesh them if going to hold them in place.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "ThomasA" <tsnarcher@> wrote:
> > >
> > > I connected the analyzer directly to the dummy load, and impedance is 49.7 ohms. The SWR is 1:1 to 1.10:1 across the 20 m band.
> > >
> > > My concern is that the rig does not behave like it normally does during tuning, and I am afraid that I have damaged my radio.
> > >
> > > The fact that it has all taken place while I am experimenting with the length of my antenna, and analyzer actually is just a coincidence, because the rig behaves the same way when tuning into the dummy load.
> > >
> > > Since testing the dummy load and finding it to be in good shape, it points more to the radio itself.
> > >
> > > I just don't know what would make the rig behave this way, or what to do to correct it.
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "Louis Wilen" <louis.wilen@> wrote:
> > > >
> > > > Also â□" you might do a quick test of your dummy load to be sure that itâ□□s really resistive at 14 Mhz. Just connect your antenna analyzer directly to your dummy load. The antenna analyzer should show an SWR of 1:1 (or nearly so) and an impedance of 50 ohms (maybe plus or minus 1 ohm) at all frequencies below 30 Mhz. If itâ□□s really a good dummy load, it will show an SWR of 1:1 all the way to at least 200 Mhz.
> > > >
> > > > Louis
> > > > W3LMW
> > > >
> > > > From: Terry Wagoner
> > > > Sent: Saturday, June 08, 2013 9:29 PM
> > > > To: TS-520_820_530_830@yahoogroups.com

> > > > Subject: [TS-520_820_530_830] Re: TS-530s Question
> > > >
> > > >
> > > > OK what was that SWR at 14.255mhz? What was it at 14.175mhz and at 14.350mhz? As Mike suggested do you have a SWR meter or wattmeter that you can then check the SWR at 14.255mhz to see if close to what your analyzer read?
> > > >
> > > > Also W4OP has a good question. Are you saying that your Plate Tuning capacitor is at or near the 14mhz white mark scribed on your front panel when loading into your dummy load and at or near 21mhz when loading in to the antenna?
> > > >
> > > > If near 14 mhz mark into dummy load it suggests your dummy load is close to 50 ohms resistive. If not near 14 mhz into antenna it suggest antenna is not resistive at 14.255mhz and is presenting some reactive component either Xc or Xl depending on if too short or too long at 14.255mhz.
> > > >
> > > > The beauty of the analyzer is it tells you were it is resonant at and from that you can tell if too long or too short depending on where you want to operate. It will also tell you how broad band the dipole is and a conventional dipole is not very broad banded. It would not be unusual to have 1:2 to 1 at resonance (14.255mhz) and 2:1 at each end of the phone band. As Mike indicated many factors including apex height, nearby objects, apex angle, height of the ends etc. affect the SWR.
> > > >
> > > > If your analyzer measured a VSWR of approx 1.05 to 1.10 to 1 at 14.255mhz then antenna and dummy load should be close to same impedance and Plate Tuning cap should be close to same scribed mark.
> > > >
> > > > Have you measured your dummy load resistor with ohm meter? Or your analyzer? If Cantenna may be a little off of 50 ohms and that is no problem.
> > > >
> > > > Terry K9TW
> > > >
> > > > -
> > > > > > > [Non-text portions of this message have been removed]
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> > > >
> > > > No virus found in this message.
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> > > > Version: 2013.0.3343 / Virus Database: 3199/6395 - Release Date: 06/08/13
> > > >
> > > >
> > > > [Non-text portions of this message have been removed]
> > > >
> > >
> >
>

42696. RE: [TS-520_820_530_830] TS-530S VOX anomaly

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 02:23:59 UTC
From: fpath fpath
Topic: 42694 Message: 42696

Craig,

This is common when the vox delay hasn't been properly adjusted. You'll find this on the fron panel next to the send\rec paddle switch. It is most prob set to 0 or very low, turn to about 12 and see how you go from there. Once you know that is it you can set the delay to suit your needs if you use the VIX function.

73's

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: crgrbrts@...
Date: Mon, 10 Jun 2013 01:44:14 +0000
Subject: [TS-520_820_530_830] TS-530S VOX anomaly

I have just a acquired a very nice TS-530S -- a real beaut. It has one problem -- and one only (and it may be me).

The anti-VOX seems to be non-functional. Any VOX gain setting above zero gets the VOX relay tripping repeatedly, no matter what anti-VOX adjustment is made, even if the speaker volume is low and the microphone (an MC-50) is remotely located. The VOX works normally with headphones muting the speaker.

Whaddya think?

73,

Craig
W3CRR

[Non-text portions of this message have been removed]

42697. RE: [TS-520_820_530_830] Re: TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 02:33:30 UTC
From: fpath fpath
Topic: 42650 Message: 42697

Terry,

In relation to this problem with the misaligned plate cap, I asked Tom to check other bands, didn't receive any response back, if you recall that issue with the 830 we worked on where the 100,390 and 22pf caps on S22 were either out of spec or cracked, it wasn't aligned properly on all bands but still within marking referenc areas on front panel but not in normal postion. Would be a good reference spot to see if it is the PI circuit or just a change in resonance. Sorry to ask if I missed the respoinse. Starting to hear of a few more hybirds that are coming up with the S22 padder issue, simple fix really if it is that. Has there been any mention of a good earth on the radio?

73s

Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: wagstw46@...
Date: Mon, 10 Jun 2013 02:18:54 +0000
Subject: [TS-520_820_530_830] Re: TS-530s Question

Tom:

It is not likely you have done any damage to your radio although odd that there appears to have been some change. Did you use your rigs output to tune your inverted V prior to getting your antenna analyzer?

Multiple long key down cycles while trimming the antenna can be hard on it if not loaded properly and giving it a little rest.

Do you have an external wattmeter in line? Are you getting approx 100 watts output into dummy load and 20 meter inverted-V?

Here are some ways to hurt the radio (primarily shorten the life of your 6146 final tubes):

1. Long off resonance key down times (not having the plate current dipped to minimum) especially if tuning in CW mode instead of Tune mode. OK to tune in CW mode once you get some experience.

2. Routinely loading beyond recommended maximum Ip of 265 ma or tuning for Max Smoke and long key down at Max Smoke. Most of us who run TS-830s limit the plate current to approx 225ma for 100 watts output.

3. Running high duty cycle modes like PSK without reducing maximum plate current.

Contrary to popular opinion you will not burn up your 6146 tubes or arc over you loading capacitor if you load into an antenna that presents 2 to 1 VSWR. If you can load to approx 100 watt output at 225 ma it means that your pi-network was able to match the impedance

that your feedline presented to it. It may not always result in the Plate tune and load controls pointing to where they do when you are loading into a 50 ohm resistive dummy load.

One additional question. Does your plate tune pointer now point to different place when you load on every band into your dummy load?

There are fixed padder capacitors that are switched in the plate tune and load capacitors and they can go bad, but not likely that all went bad at one time. None are switched in the Plate tune capacitor for 20 meters. They are switched in the Plate Load capacitor.

I would try another coax jumper between your rigs SO-239 connector and the dummy load (no antenna switch or any other devices in line) and see how the controls behave. If pointer remains out of alignment then it is time to inspect the Plate Tune capacitor coupling as I suggested.

Terry K9TW

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> >
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> > > >
> > > > Also ??" you might do a quick test of your dummy load to be sure that it???s really resistive at 14 Mhz. Just connect your antenna analyzer directly to your dummy load. The antenna analyzer should show an SWR of 1:1 (or nearly so) and an impedance of 50 ohms (maybe plus or minus 1 ohm) at all frequencies below 30 Mhz. If it???s really a good dummy load, it will show an SWR of 1:1 all the way to at least 200 Mhz.
> > > >
> > > > Louis
> > > > W3LMW
> > > >
> > > > From: Terry Wagoner
> > > > Sent: Saturday, June 08, 2013 9:29 PM
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Subject: [TS-520_820_530_830] Re: TS-530s Question
> > > >
> > > >
> > > > OK what was that SWR at 14.255mhz? What was it at 14.175mhz and at 14.350mhz? As Mike suggested do you have a SWR meter or wattmeter that you can then check the SWR at 14.255mhz to see if close to what your analyzer read?
> > > >
> > > > Also W4OP has a good question. Are you saying that your Plate Tuning capacitor is at or near the 14mhz white mark scribed on your front panel when loading into your dummy load and at or near 21mhz when loading in to the antenna?
> > > >
> > > > If near 14 mhz mark into dummy load it suggests your dummy load is close to 50 ohms resistive. If not near 14 mhz into antenna it suggest antenna is not resistive at 14.255mhz and is presenting some reactive component either Xc or Xl depending on if too short or too long at 14.255mhz.
> > > >
> > > > The beauty of the analyzer is it tells you were it is resonant at and from that you can tell if too long or too short depending on where you want to operate. It will also tell you how broad band the dipole is and a conventional dipole is not very broad banded. It would not be unusual to have 1:2 to 1 at resonance (14.255mhz) and 2:1 at each end of the phone band. As Mike indicated many factors including apex height, nearby objects, apex angle, height of the ends etc. affect the SWR.
> > > >
> > > > If your analyzer measured a VSWR of approx 1.05 to 1.10 to 1 at 14.255mhz then antenna and dummy load should be close to same impedance and Plate Tuning cap should be close to same scribed mark.

> > > >
> > > > Have you measured your dummy load resistor with ohm meter? Or your analyzer? If Cantenna may be a little off of 50 ohms and that is no problem.
> > > >
> > > > Terry K9TW
> > > >
> > > > -
> > > > > > [Non-text portions of this message have been removed]
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> > > > > >
> > > > >
> > > >
> > > >
> > > >
> > > >
> > > > No virus found in this message.
> > > > Checked by AVG - www.avg.com
> > > > Version: 2013.0.3343 / Virus Database: 3199/6395 - Release Date: 06/08/13
> > > >
> > > >
> > > > [Non-text portions of this message have been removed]
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> >
>

[Non-text portions of this message have been removed]

42698. Re: Dial cut out

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 02:35:50 UTC
From: Terry Wagoner
Topic: 42646 Message: 42698

Don:

Very good. A lot cheaper than having to buy new xtal.

For years GC Electronics was the standard in alignment tools. I have a nice older set and have supplemented it over the years.

GC makes a 8 piece CB set and a 12 piece set you could consider for starters. Can find sets on Ebay from time to time and I think on Amazon.Com.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
>
> Terry
> I got the board removed today and found that the crystals were not
> soldered very well from the factory.The rest of the board was fine,just
> those two
> Both Leeds were very lose and not much solder to hold them.Measurements
> were fine.
> I need to buy some better alignment tools and was wondering what you
> might recommend
> I have pasted this site as they have a nice assortment
>
> http://www.mtechnologies.com/tools/index.htm#
> <http://www.mtechnologies.com/tools/index.htm#alignset>alignset
> <http://www.mtechnologies.com/tools/index.htm#alignset>
>
> Thanks
> 73
> Don/Ve2ud
>
> On 08/06/2013 8:39 PM, Terry Wagoner wrote:
> >
> > OK Don:
> >
> > After you pull the board just look at both crystals under
> > magnification and see if you can see any pin movement at the solder
> > pads as you gently rock the crystals. You may want to remove solder
> > and re-solder instead of just trying to reheat? Just be careful not to
> > apply too much heat for too long.
> >
> > If you have a RF probe and VTVM, O-scope, or RF Millivolt meter
> > suggest you measure the RF voltage level at Conn 7 Pin 1 or at TP-3 on
> > the IF board. It should be close to 300mv rms in USB and LSB modes.

> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > >
> > > Hi Terry
> > > I got lucky.Took a wooden handle from a small paint brush and tapped on
> > > all the connectors and nothing happened
> > > I went to tap on TC-3[gently]and i guess i touched X3 too,and i found
> > > X3[crystal] for some reason to be lose.
> > > I will have to remove the board and desolder it to see what is the
> > cause
> > > as i can wiggle it.
> > > If i keep a bit of downward pressure on X3 all is ok
> > >
> > >
> > > Hope i explained it ok
> > >
> > > 73
> > > Don/Ve2ud
> > >
> > >
> > >
> > >
> > > On 08/06/2013 7:13 PM, Terry Wagoner wrote:
> > > >
> > > > OK Don keep us informed. Be aware that you have HV filter caps with
> > > > 900vdc on them in close proximity to the PLL board. Control any
> > > > alligator or mini-grabber test leads that you may use so wont
> > > > accidently flop into the capacitors. I would leave rig on its side
> > > > with the PLL board oriented down to lessen chance of this.
> > > >
> > > > Terry K9TW
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > > > >
> > > > > Hi Terry
> > > > > Yes that's what i am saying
> > > > > I will try what you have suggested
> > > > > Many Thanks
> > > > > 73
> > > > > Don/Ve2ud
> > > > >
> > > > > On 08/06/2013 6:52 PM, Terry Wagoner wrote:
> > > > > >
> > > > > > Are you saying the digital display goes blank and receiver
> > goes dead

> > > > > > when you place mode switch to USB?
> > > > > >
> > > > > > If so sounds like you have lost USB Carrier Osc signal on PLL
> > board.
> > > > > > Need Carrier oscillator input to Mixer Q40 to have digital
> > display
> > > > and
> > > > > > need Carrier oscillator output from PLL board to IF board for
> > receive.
> > > > > > >
> > > > > > If you are familiar with PLL board go to Conn 8 Pin 5 and see
> > if you
> > > > > > have approx 9vdc when you place mode switch in USB position. Can
> > > > > > gently wiggle Conn 8.
> > > > > > >
> > > > > > If you have 9vdc at Pin 5 then possible you have a bad USB
> > crystal. I
> > > > > > have never seen a bad one. You could gently tap on case with
> > pencil
> > > > > > eraser. You could adjust Trimmer Capacitor TC-3 on PLL board.
> > > > > > >
> > > > > > Terry K9TW
> > > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > > > > > > >
> > > > > > > Sorry mike
> > > > > > > it is a TS-830
> > > > > > > >
> > > > > > > 73
> > > > > > > Don
> > > > > > > >
> > > > > > > >
> > > > > > > On 08/06/2013 1:27 PM, Mike wrote:
> > > > > > > > >
> > > > > > > > Don,
> > > > > > > > >
> > > > > > > > What hybrid transceiver are you having trouble with?
> > > > > > > > >
> > > > > > > > 73
> > > > > > > > Mike W5RKL
> > > > > > > > >
> > > > > > > > On 6/8/2013 10:39 AM, Don D wrote:
> > > > > > > > > >
> > > > > > > > Hi All
> > > > > > > > >
> > > > > > > > When i switch the mode switch from lsb to usb or cw the
> > > > digital dial

> > > > > > > > > and receiver cuts out.
> > > > > > > > > > It works fine in lsb and i can hear the relay cut in when i
> > > > > > switch to
> > > > > > > > > > usb,but no dial or audio
> > > > > > > > > > help
> > > > > > > > > >
> > > > > > > > > > 73
> > > > > > > > > > Don/Ve2ud
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > >
> > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > >
> > > > > > > > >
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> > > > > > > > >
> > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > >
> > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > >
> > > > > > [Non-text portions of this message have been removed]
> > > > > >

42699. Re: TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 02:45:02 UTC
From: Terry Wagoner
Topic: 42650 Message: 42699

Hi Dave:

I agree he should check all bands and not just 20 meters. It is possible he is looking at a bad padder cap or bandswitch situation as you point out. Hopefully we can get the report back that we need to analyze the fault. Apparently was working ok and then after using rig to trim new 20 meter inverted-V the pointer on Plate tune cap no longer aligned as I understand the problem (both on antenna and dummy load).

I had also asked about what had happened to the Plate Load capacitor position and did not hear back. Suspect he is overloaded with responses and questions at this point.

I would much rather tighten the coupler than replace padder caps!

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
> Terry,
>
>
>
> In relation to this problem with the misaligned plate cap, I asked Tom to check other bands, didn't receive any response back, if you recall that issue with the 830 we worked on where the 100,390 and 22pf caps on S22 were either out of spec or cracked, it wasn't aligned properly on all bands but still within marking referenc areas on front panel but not in normal postion. Would be a good reference spot to see if it is the PI circuit or just a change in resonance. Sorry to ask if I missed the respoinse. Starting to hear of a few more hybirds that are coming up with the S22 padder issue, simple fix really if it is that. Has there been any mention of a good earth on the radio?
>
> 73s
>
> Dave
> VK5PDL
>
>
>
> To: TS-520_820_530_830@yahoogroups.com
> From: wagstw46@...
> Date: Mon, 10 Jun 2013 02:18:54 +0000
> Subject: [TS-520_820_530_830] Re: TS-530s Question
>
>
>
>
>
> Tom:

>
> It is not likely you have done any damage to your radio although odd that there appears to have been some change. Did you use your rigs output to tune your inverted V prior to getting your antenna analyzer?
>
> Multiple long key down cycles while trimming the antenna can be hard on it if not loaded properly and giving it a little rest.
>
> Do you have an external wattmeter in line? Are you getting approx 100 watts output into dummy load and 20 meter inverted-V?
>
> Here are some ways to hurt the radio (primarily shorten the life of your 6146 final tubes):
>
> 1. Long off resonance key down times (not having the plate current dipped to minimum) especially if tuning in CW mode instead of Tune mode. OK to tune in CW mode once you get some experience.
>
> 2. Routinely loading beyond recommended maximum Ip of 265 ma or tuning for Max Smoke and long key down at Max Smoke. Most of us who run TS-830s limit the plate current to approx 225ma for 100 watts output.
>
> 3. Running high duty cycle modes like PSK without reducing maximum plate current.
>
> Contrary to popular opinion you will not burn up your 6146 tubes or arc over you loading capacitor if you load into an antenna that presents 2 to 1 VSWR. If you can load to approx 100 watt output at 225 ma it means that your pi-network was able to match the impedance that your feedline presented to it. It may not always result in the Plate tune and load controls pointing to where they do when you are loading into a 50 ohm resistive dummy load.
>
> One additional question. Does your plate tune pointer now point to different place when you load on every band into your dummy load?
>
> There are fixed padder capacitors that are switched in the plate tune and load capacitors and they can go bad, but not likely that all went bad at one time. None are switched in the Plate tune capacitor for 20 meters. They are switched in the Plate Load capacitor.
>
> I would try another coax jumper between your rigs SO-239 connector and the dummy load (no antenna switch or any other devices in line) and see how the controls behave. If pointer remains out of alignment then it is time to inspect the Plate Tune capacitor coupling as I suggested.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "ThomasA" <tsnarcher@> wrote:
> >
> > Yes Terry, that is it exactly. I intend to try a different coax jumper, and if I need to I will open the rig up.
> >
> > I appreciate all of the patience, I suppose I am still apprehensive about the tuning procedure, and the damage I could do tuning.
> >
> > I am trying to learn as much as I can though, and appreciate all of the advice.
> >
> > Tom
> >

> > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > >
> > > Tom:
> > >
> > > Are you saying that the Plate tuning capacitor now points to 21 mhz when loading on 20 meters into your dummy load instead of pointing at 14 mhz?
> > >
> > > If so, I agree you should try a different coax jumper from rig to dummy load. If it still does it with another jumper then need to open rig and make sure the shaft coupler on the Plate Tuning capacitor isnt loose. You can tell by holding the capacitor shaft or plates and then turning the knob. If the knob turns the coupler is loose. Be careful so you dont damage any of the plates. I would full mesh them if going to hold them in place.
> > >
> > > Terry K9TW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "ThomasA" <tsnarcher@> wrote:
> > > >
> > > > I connected the analyzer directly to the dummy load, and impedance is 49.7 ohms. The SWR is 1:1 to 1.10:1 across the 20 m band.
> > > >
> > > > My concern is that the rig does not behave like it normally does during tuning, and I am afraid that I have damaged my radio.
> > > >
> > > > The fact that it has all taken place while I am experimenting with the length of my antenna, and analyzer actually is just a coincidence, because the rig behaves the same way when tuning into the dummy load.
> > > >
> > > > Since testing the dummy load and finding it to be in good shape, it points more to the radio itself.
> > > >
> > > > I just don't know what would make the rig behave this way, or what to do to correct it.
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "Louis Wilen" <louis.wilen@> wrote:
> > > > >
> > > > > Also â□" you might do a quick test of your dummy load to be sure that itâ□□s really resistive at 14 Mhz. Just connect your antenna analyzer directly to your dummy load. The antenna analyzer should show an SWR of 1:1 (or nearly so) and an impedance of 50 ohms (maybe plus or minus 1 ohm) at all frequencies below 30 Mhz. If itâ□□s really a good dummy load, it will show an SWR of 1:1 all the way to at least 200 Mhz.
> > > > >
> > > > > Louis
> > > > > W3LMW
> > > > >
> > > > > From: Terry Wagoner
> > > > > Sent: Saturday, June 08, 2013 9:29 PM
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > Subject: [TS-520_820_530_830] Re: TS-530s Question
> > > > >
> > > > >
> > > > > OK what was that SWR at 14.255mhz? What was it at 14.175mhz and at 14.350mhz? As Mike suggested do you have a SWR meter or wattmeter that you can then check the SWR at 14.255mhz to see if close to what your analyzer read?
> > > > >

> > > > > Also W4OP has a good question. Are you saying that your Plate Tuning capacitor is at or near the 14mhz white mark scribed on your front panel when loading into your dummy load and at or near 21mhz when loading in to the antenna?
> > > > >
> > > > > If near 14 mhz mark into dummy load it suggests your dummy load is close to 50 ohms resistive. If not near 14 mhz into antenna it suggest antenna is not resistive at 14.255mhz and is presenting some reactive component either Xc or Xl depending on if too short or too long at 14.255mhz.
> > > > >
> > > > > The beauty of the analyzer is it tells you were it is resonant at and from that you can tell if too long or too short depending on where you want to operate. It will also tell you how broad band the dipole is and a conventional dipole is not very broad banded. It would not be unusual to have 1:2 to 1 at resonance (14.255mhz) and 2:1 at each end of the phone band. As Mike indicated many factors including apex height, nearby objects, apex angle, height of the ends etc. affect the SWR.
> > > > >
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> > > > >
> > > > > Have you measured your dummy load resistor with ohm meter? Or your analyzer? If Cantenna may be a little off of 50 ohms and that is no problem.
> > > > >
> > > > > Terry K9TW
> > > > >
> > > > > -
> > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > No virus found in this message.
> > > > > Checked by AVG - www.avg.com
> > > > > Version: 2013.0.3343 / Virus Database: 3199/6395 - Release Date: 06/08/13
> > > > > >
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> [Non-text portions of this message have been removed]

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42700. Re: [TS-520_820_530_830] Re: Dial cut out

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 02:48:43 UTC
From: Jerry Barr
Topic: 42646 Message: 42700

i have bought from morse a couple times over the last couple yrs but overlooked the alighnment tools thanks for the link/still wondering abt the rf probe for the old sylvania vtvm
Jerry KJ6NTL

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, June 9, 2013 7:35 PM
Subject: [TS-520_820_530_830] Re: Dial cut out

Don:

Very good. A lot cheaper than having to buy new xtal.

For years GC Electronics was the standard in alignment tools. I have a nice older set and have supplemented it over the years.

GC makes a 8 piece CB set and a 12 piece set you could consider for starters. Can find sets on Ebay from time to time and I think on Amazon.Com.

Terry K9TW

--- In mailto:TS-520_820_530_830%40yahoogroups.com, Don <ve2ud@...> wrote:
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>
> Terry
> I got the board removed today and found that the crystals were not
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> might recommend
> I have pasted this site as they have a nice assortment
>
> http://www.mtechnologies.com/tools/index.htm#
> <http://www.mtechnologies.com/tools/index.htm#alignset>alignset
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>
> Thanks
> 73
> Don/Ve2ud
>
> On 08/06/2013 8:39 PM, Terry Wagoner wrote:
> >
> > OK Don:
> >

> > After you pull the board just look at both crystals under
> > magnification and see if you can see any pin movement at the solder
> > pads as you gently rock the crystals. You may want to remove solder
> > and re-solder instead of just trying to reheat? Just be careful not to
> > apply too much heat for too long.
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> > If you have a RF probe and VTVM, O-scope, or RF Millivolt meter
> > suggest you measure the RF voltage level at Conn 7 Pin 1 or at TP-3 on
> > the IF board. It should be close to 300mv rms in USB and LSB modes.
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> > --- In mailto:TS-520_820_530_830%40yahoogroups.com
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> > > > OK Don keep us informed. Be aware that you have HV filter caps with
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> > > > alligator or mini-grabber test leads that you may use so wont
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> > > >
> > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com
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> > > > >
> > > > > Hi Terry
> > > > > Yes that's what i am saying

> > > > > I will try what you have suggested
> > > > > Many Thanks
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> > > > > Don/Ve2ud
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> > > > > On 08/06/2013 6:52 PM, Terry Wagoner wrote:
> > > > > >
> > > > > > Are you saying the digital display goes blank and receiver
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> > > > > > need Carrier oscillator output from PLL board to IF board for
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> > > > > >
> > > > > > If you are familiar with PLL board go to Conn 8 Pin 5 and see
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> > > > > > have approx 9vdc when you place mode switch in USB position. Can
> > > > > > gently wiggle Conn 8.
> > > > > >
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> > > > > >

> > > > > > > > > 73
> > > > > > > > > Mike W5RKL
> > > > > > > > > >
> > > > > > > > > > On 6/8/2013 10:39 AM, Don D wrote:
> > > > > > > > > > >
> > > > > > > > > > > Hi All
> > > > > > > > > > >
> > > > > > > > > > > When i switch the mode switch from lsb to usb or cw the
> > > > > digital dial
> > > > > > > > > > > and receiver cuts out.
> > > > > > > > > > > It works fine in lsb and i can hear the relay cut in when i
> > > > > switch to
> > > > > > > > > > > usb,but no dial or audio
> > > > > > > > > > > help
> > > > > > > > > > >
> > > > > > > > > > > 73
> > > > > > > > > > > Don/Ve2ud
> > > > > > > > > > >
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42701. Re: TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 02:54:33 UTC
From: <tsnarcher@...>
Topic: 42650 Message: 42701

Gentlemen,

Sorry for not responding like I should, I have had family obligations today and have not been able to spend much time in the shack.

I will do better responding, and thank you all again for the advice.

Tom

[Non-text portions of this message have been removed]

42702. Re: [TS-520_820_530_830] TS-530S VOX anomaly

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 02:50:57 UTC
From: Craig Roberts
Topic: 42694 Message: 42702

Thanks very much, Dave. Good idea but, unfortunately, that's not the problem this time. The VOX delay is set correctly. The VOX works fine, with a range of delays, if the speaker is muted, but with the volume up -- even to a point so low as to be inaudible -- the relaytrips repeatedly -- unless I unplug the mike.

Microphone cable wiring??

73,
Craig
W3CRR

42703. Re: [TS-520_820_530_830] TS-530S VOX anomaly

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 03:43:46 UTC
From: Mike
Topic: 42694 Message: 42703

Craig,

Have you tried cleaning the pot with DeoXit F5 fader control cleaner
then rotate the pot throughout its travel several times?

73
Mike W5RKL

On 6/9/2013 9:50 PM, Craig Roberts wrote:
>
> Thanks very much, Dave. Good idea but, unfortunately, that's not the
> problem this time. The VOX delay is set correctly. The VOX works fine,
> with a range of delays, if the speaker is muted, but with the volume up
> -- even to a point so low as to be inaudible -- the relaytrips
> repeatedly -- unless I unplug the mike.
>
> Microphone cable wiring??
>
> 73,
> Craig
> W3CRR
>
>

[Non-text portions of this message have been removed]

42704. Re: Advice please, wire wrap vs. other connection methods, 520SE.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 07:08:11 UTC
From: adrian.langford@ymail.com
Topic: 42567 Message: 42704

I have just received pair of the HV electrolytics from K4EAA, so I was interested to notice that they also used wire wrap to those original electrolytics! Bit of a pain as I can't just desolder old leads and resolder - they are pretty tight do I will have to remove all the wiring associated with those caps and replace. It's strange as I used to do a lot of wire wrap in past but on logic boards, 5V not 500V!

73s Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "k5hfg" <dlbowders@...> wrote:
>
> Sorry for the delayed response. At work. I did not want to use battery but I could not get my variable supply down past 9V. It was getting late, got to get up at 4AM, so I went to bed. I will get back to it on the weekend. May have to repair or replace my variable supply. I did check the resistance across the connection. I just put male a nd female together and measured .2 ohms on a fluke 27 but did not continue any further. ran out of time. I appreciate the responses and do not mind extended instructions. Will let you know what I find.
> Thanks guys, Don K5HFG
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Certainly not directed to you Mike. I know you fully understand. Just never know how far you have to take any of this stuff anymore. I guess better to give more detail than to assume anything?
> >
> > Would probably be "Good Enough" to just measure contact resistance with DMM, but like all things in electronics there is a wide definition of good enough and then there are "Standard and Good Engineering Practices". Test equipment and measuring have always interested me. Problem is good test gear is so expensive. This is why I am interested in watching the development of USB based test gear for the lap top. Prices are coming down on things like RF Power millivolt meters and VNAs.
> >
> > I think if I had a kid in EE school I would coach him/her to major in Measurement & Control Instrumentation and not RF or Telecommunications. I think more job opportunities.
> >
> > Take Care
> > Terry
>

42705. RE: [TS-520_820_530_830] Re: TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 14:04:58 UTC
From: fpath fpath
Topic: 42650 Message: 42705

Hi Terry,

Tighten the coupler so much easier and better, just thought I'd through my two cnets worth in just incase it was over looked. Would hate to see someone have to go through what we did for the 830s. Had a look at mine when I got home and remembered that my shaft coupler was loose aswell. Hopefully it isn't much but glad to help out if he needs to go through the padder issue. Hopefully we get to hear if the other bands are in or out of alignment.

73s

Dave

VK5DPL

To: TS-520_820_530_830@yahoogroups.com
From: wagstw46@...
Date: Mon, 10 Jun 2013 02:45:02 +0000
Subject: [TS-520_820_530_830] Re: TS-530s Question

Hi Dave:

I agree he should check all bands and not just 20 meters. It is possible he is looking at a bad padder cap or bandswitch situation as you point out. Hopefully we can get the report back that we need to analyze the fault. Apparently was working ok and then after using rig to trim new 20 meter inverted-V the pointer on Plate tune cap no longer aligned as I understand the problem (both on antenna and dummy load).

I had also asked about what had happened to the Plate Load capacitor position and did not hear back. Suspect he is overloaded with responses and questions at this point.

I would much rather tighten the coupler than replace padder caps!

Terry K9TW

[Non-text portions of this message have been removed]

42706. RE: [TS-520_820_530_830] TS-530S VOX anomaly

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 14:12:54 UTC
From: fpath fpath
Topic: 42694 Message: 42706

Craig,

Have you had a look at the anti vox on the rear panel? As Mike suggested good idea to give it a clean and lube with Deoxit. I had a Shure 444 that arrived with another radio and similar problem, ended up being a broken ground wire was shorting out and causing relay to trip

73's

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
CC: fpath@...
From: crgrbrts@...
Date: Sun, 9 Jun 2013 22:50:57 -0400
Subject: Re: [TS-520_820_530_830] TS-530S VOX anomaly

Thanks very much, Dave. Good idea but, unfortunately, that's not the
problem this time. The VOX delay is set correctly. The VOX works fine,
with a range of delays, if the speaker is muted, but with the volume up
-- even to a point so low as to be inaudible -- the relaytrips
repeatedly -- unless I unplug the mike.

Microphone cable wiring??

73,
Craig
W3CRR

[Non-text portions of this message have been removed]

42707. Re: Advice please, wire wrap vs. other connection methods, 520SE.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 15:36:14 UTC
From: Terry Wagoner
Topic: 42567 Message: 42707

No need to wire wrap the leads of the new HV filter caps. Yes remove the old bleeder resistors and rf bypass caps. Take a picture or make a drawing of the as built wiring before you start removing the leads, jumper, and resistors/caps. Take note of the capacitor polarity.

When you unwind the leads you will have to cut off the curly ends and dispose as they will be brittle and work hardened. Will need to strip back and get new conductor to solder on the terminals. Control the cut ends so you dont have any wire clippings fall into the rig or fly into adjacent boards.

Lightly sand the terminals of Kens new filter caps and just make one or two wraps and solder the leads on. I use the bleeder resistor body to install the bypass caps across them and then use the resistor leads to shunt the assembly across the filter cap terminals.

If you end up with short jumper wire just make a new one with hook up wire and you should have enough B+ lead length and can usually pull up a little if needed.

If you have a LCR bridge and ESR meter good time to record the values of the new filter caps. Although likely for remaining life of the rig you wont have to worry about replacing them again. I record this stuff to aid me in future troubleshooting.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@..." <adrian@...> wrote:
>
> I have just received pair of the HV electrolytics from K4EAA, so I was interested to notice that they also used wire wrap to those original electrolytics! Bit of a pain as I can't just desolder old leads and resolder - they are pretty tight do I will have to remove all the wiring associated with those caps and replace. It's strange as I used to do a lot of wire wrap in past but on logic boards, 5V not 500V!
>
> 73s Adrian G4IQW
>
> --- In TS-520_820_530_830@yahoogroups.com, "k5hfg" <dlbowders@> wrote:
> >
> > Sorry for the delayed response. At work. I did not want to use battery but I could not get my variable supply down past 9V. It was getting late, got to get up at 4AM, so I went to bed. I will get back to it on the weekend. May have to repair or replace my variable supply. I did check the resistance across the connection. I just put male a nd female together and measured .2 ohms on a fluke 27 but did not continue any further. ran out of time. I appreciate the responses and do not mind extended instructions. Will let you know what I find.
> > Thanks guys, Don K5HFG
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > >

> > > Certainly not directed to you Mike. I know you fully understand. Just never know how far you have to take any of this stuff anymore. I guess better to give more detail than to assume anything?
> > >
> > > Would probably be "Good Enough" to just measure contact resistance with DMM, but like all things in electronics there is a wide definition of good enough and then there are "Standard and Good Engineering Practices". Test equipment and measuring have always interested me. Problem is good test gear is so expensive. This is why I am interested in watching the development of USB based test gear for the lap top. Prices are coming down on things like RF Power millivolt meters and VNAs.
> > >
> > > I think if I had a kid in EE school I would coach him/her to major in Measurement & Control Instrumentation and not RF or Telecommunications. I think more job opportunities.
> > >
> > > Take Care
> > > Terry
> >
>

42708. How to give your old Kenwood a significant boost in performance .

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 10:11:33 UTC
From: wa4axt
Topic: 42708 Message: 42708

You can greatly improve your any old radio and give it a huge number of modern features using the free Ham created software HDSDR .

http://www.hdsdr.de/wnew.html

It takes a while to set it up and figure it out , but if your old Kenwood is your primary rig , its worth the effort.It gives you features like dsp noise reduction and variable dsp selectively that can be controlled while viewing the audio spectrum your listening to for example.For SSB LSB and USB you set the low and tune to 1 and the mode to USB.For cw you set the low to 1 and the tune to your favorite pitch .I used 850 hz .

Just to try it out , you just feed the audio form your radio to the line in of your computer and away you go . Later you can cut the coax going from the rx board to the input of the radios volume control and run the two lines to a male phone jack on the rear of the radio like I did .The low level sound form the rx board goes to the computers line in and the line out of the computer goes to the input of the volume control and then on to the audio power amp in the radio which totally integrates the software with your boat anchor . I even tried the software once on my 1950es Hallicrafter S-53 and the results were incredible .Later after getting a new KenwoodS TS-590 I returned the boat anchor to its original configuration .

42709. Re: Looking to clean my 820 - digital display keeps shifting (but not going out)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 15:38:58 UTC
From: Barry
Topic: 42587 Message: 42709

I cleaned everything last night thanks to everybody's advice, and thanks for giving me the info so I could intelligently work on it!

I let it dry thoroughly and plugged it in later on last night. It seems to be as sensitive as before, and thankfully 14.000 and up the display is much more stable. 3.5 and up, not so much. Those digits fluctuate a good bit, especially when someone's signal is receiving very strongly.

Sounds like the leads should be resoldered. That I won't attempt since that's a pretty delicate situation, so I may find someone that is experienced enough to try that fix. Till then I'll keep on listening.

Taking my Tech test Saturday and really looking forward to it!

Barry

Jeremiah 29:11-13

--- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@...> wrote:
>
> My Great Uncle has been put in a nursing home but sold me his TS-820 with the VFO, MC-50 mic and speaker, and I take my Tech exam a week from Saturday. I'm excited to get the license so I can start talking, but in the meantime I've been playing around listening to the TS-820.
>
> He also sold me a Yaesu FT-757GX with its power supply and FT-757AT automatic antenna tuner, so I'm going back and forth listening to each of them.
>
> I'm really liking the Kenwood, though. I'm tempted to sell the Yaesu and keep the 820! I know very little about them, though - I've never been a ham but have always been interested.
>
> How hard is it to clean contacts on the 820 without getting shocked to high heaven? One of the main things I want to do is get the digital display to quit hopping around like it does. It changes numbers often rapidly, but thankfully it doesn't just completely go off. It's just fairly erratic in changing frequency numbers.
>
> Any help you can give me would be so greatly appreciated! I'm sorry I'm not as up to speed as everybody here, but I'm trying to learn quickly so I can contribute to the group. I am not a complete tech newbie - I do the IT at our church and am very technically oriented, but I've never worked with ham radios.
>
> Thanks to everybody.

>
> Barry
>
>
> ------------------
>
>
> Jeremiah 29:11-13
>

42710. VFO-820 - two sockets soldered together - can't work with the 9 pin cable

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 16:13:01 UTC
From: Barry
Topic: 42710 Message: 42710

I'm curious - I was cleaning the 820 last night and thought I'd try to connect the external VFO-820. I found the 9-pin cable the other day and tried to plug it into the VFO-820, but I saw when I unscrewed the cover of the plug-in socket that 2 sockets are apparently soldered together. The 2 soldered sockets are on the VFO-820 - not on the 820 itself.

I have read a couple of older posts that looked like the 820 itself used to have a couple of those pin sockets soldered together, but I'm not sure why this VFO-820 would have the sockets soldered together.

I have a picture here of the way it looks:

http://www.digcservices.com/ham/VFO-820BB.jpg

Is there a way I can get this VFO-820 to work?

Barry

Jeremiah 29:11-13 / John 3:16

42711. Re: [TS-520_820_530_830] VFO-820 - two sockets soldered together - can't work with the 9 pin cable

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 16:34:08 UTC
From: n6wk@...
Topic: 42710 Message: 42711

That plug that is in the VFO is to be used on the back of the 820 if you have NO VFO attached.
Remove that plug, connect the cable from the radio to the VFO and all should be fine.
The 820 needs pins 8 & 9 jumpered on the back of the radio when no external VFO is used.

73,
Gordon

On 6/10/2013 9:13 AM, Barry wrote:
>
> I'm curious - I was cleaning the 820 last night and thought I'd try to
> connect the external VFO-820. I found the 9-pin cable the other day
> and tried to plug it into the VFO-820, but I saw when I unscrewed the
> cover of the plug-in socket that 2 sockets are apparently soldered
> together. The 2 soldered sockets are on the VFO-820 - not on the 820
> itself.
>
> I have read a couple of older posts that looked like the 820 itself
> used to have a couple of those pin sockets soldered together, but I'm
> not sure why this VFO-820 would have the sockets soldered together.
>
> I have a picture here of the way it looks:
>
> http://www.digcservices.com/ham/VFO-820BB.jpg
>
> Is there a way I can get this VFO-820 to work?
>
> Barry
>
> ----------
>
> Jeremiah 29:11-13 / John 3:16
>
>

42712. Re: [TS-520_820_530_830] VFO-820 - two sockets soldered together - can't work with the 9 pin cable

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 17:03:14 UTC
From: Joseph Stiles
Topic: 42710 Message: 42712

Barry,

  Gordon is right. I take it that the 820 you have is working correctly?? Is there a plug/jumper in 9 pin socket at back of the rig?
May I recommend that you take your DMM, or what ever you have, and check for continuity of the "remote vfo cable" If original,
one or more wires may have broken/come loose from one of the pins inside of the plug(s)
Having the jumpered plug in the back of
the remove vfo seems to be to serve no purpose...except possibly to keep it from getting lost

73 Joe
WB7UQU

From: "n6wk@..." <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 10, 2013 9:34 AM
Subject: Re: [TS-520_820_530_830] VFO-820 - two sockets soldered together - can't work with the 9 pin cable

That plug that is in the VFO is to be used on the back of the 820 if you
have NO VFO attached.
Remove that plug, connect the cable from the radio to the VFO and all
should be fine.
The 820 needs pins 8 & 9 jumpered on the back of the radio when no
external VFO is used.

73,
Gordon

On 6/10/2013 9:13 AM, Barry wrote:
>
> I'm curious - I was cleaning the 820 last night and thought I'd try to
> connect the external VFO-820. I found the 9-pin cable the other day
> and tried to plug it into the VFO-820, but I saw when I unscrewed the
> cover of the plug-in socket that 2 sockets are apparently soldered
> together. The 2 soldered sockets are on the VFO-820 - not on the 820
> itself.
>
> I have read a couple of older posts that looked like the 820 itself
> used to have a couple of those pin sockets soldered together, but I'm
> not sure why this VFO-820 would have the sockets soldered together.
>
> I have a picture here of the way it looks:

>
> http://www.digcservices.com/ham/VFO-820BB.jpg
>
> Is there a way I can get this VFO-820 to work?
>
> Barry
>
> ----------
>
> Jeremiah 29:11-13 / John 3:16
>
>

Yahoo! Groups Links

[Non-text portions of this message have been removed]

42713. Re: VFO-820 - two sockets soldered together - can't work with the 9 pin cable

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 17:12:22 UTC
From: Barry
Topic: 42710 Message: 42713

Thanks for getting back to me quickly. Does it matter that the 820 transceiver didn't have the plug in it since it was in the external VFO? And should I just plug it back in the 820 itself when I get done using the external?

Barry

Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> That plug that is in the VFO is to be used on the back of the 820 if you
> have NO VFO attached.
> Remove that plug, connect the cable from the radio to the VFO and all
> should be fine.
> The 820 needs pins 8 & 9 jumpered on the back of the radio when no
> external VFO is used.
>
>
> 73,
> Gordon
>
>
> On 6/10/2013 9:13 AM, Barry wrote:
> >
> > I'm curious - I was cleaning the 820 last night and thought I'd try to
> > connect the external VFO-820. I found the 9-pin cable the other day
> > and tried to plug it into the VFO-820, but I saw when I unscrewed the
> > cover of the plug-in socket that 2 sockets are apparently soldered
> > together. The 2 soldered sockets are on the VFO-820 - not on the 820
> > itself.
> >
> > I have read a couple of older posts that looked like the 820 itself
> > used to have a couple of those pin sockets soldered together, but I'm
> > not sure why this VFO-820 would have the sockets soldered together.
> >
> > I have a picture here of the way it looks:
> >
> > http://www.digcservices.com/ham/VFO-820BB.jpg
> >
> > Is there a way I can get this VFO-820 to work?
> >
> > Barry
> >

> > ----------
> >
> > Jeremiah 29:11-13 / John 3:16
> >
> >
>

42714. Re: VFO-820 - two sockets soldered together - can't work with the 9 pin cable

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 17:15:53 UTC
From: Barry
Topic: 42710 Message: 42714

Yes, from what I can tell the 820 is working well and receiving a lot, actually. I heard from Canada to Pennsylvania last night and am keeping a log of all that I pick up on it just so I can go to some of the more frequented frequencies.

I'm going to check tonight when I get home to see how the external works - the actual cable looks like it ought to be okay, but the older remote cable is cracked all over. It's probably toast, but I know I don't need it for this external.

Barry

Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Barry,
>
> Gordon is right. I take it that the 820 you have is working correctly?? Is there a plug/jumper in 9 pin socket at back of the rig?
> May I recommend that you take your DMM, or what ever you have, and check for continuity of the "remote vfo cable" If original,
> one or more wires may have broken/come loose from one of the pins inside of the plug(s) Having the jumpered plug in the back of
> the remove vfo seems to be to serve no purpose...except possibly to keep it from getting lost
>
>
>
> 73 Joe
> WB7UQU
>
>
>
> _____
> From: "n6wk@..." <n6wk@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, June 10, 2013 9:34 AM
> Subject: Re: [TS-520_820_530_830] VFO-820 - two sockets soldered together - can't work with the 9 pin cable
>
>
> That plug that is in the VFO is to be used on the back of the 820 if you
> have NO VFO attached.
> Remove that plug, connect the cable from the radio to the VFO and all

> should be fine.
> The 820 needs pins 8 & 9 jumpered on the back of the radio when no
> external VFO is used.
>
>
> 73,
> Gordon
>
>
> On 6/10/2013 9:13 AM, Barry wrote:
> >
> > I'm curious - I was cleaning the 820 last night and thought I'd try to
> > connect the external VFO-820. I found the 9-pin cable the other day
> > and tried to plug it into the VFO-820, but I saw when I unscrewed the
> > cover of the plug-in socket that 2 sockets are apparently soldered
> > together. The 2 soldered sockets are on the VFO-820 - not on the 820
> > itself.
> >
> > I have read a couple of older posts that looked like the 820 itself
> > used to have a couple of those pin sockets soldered together, but I'm
> > not sure why this VFO-820 would have the sockets soldered together.
> >
> > I have a picture here of the way it looks:
> >
> > http://www.digcservices.com/ham/VFO-820BB.jpg
> >
> > Is there a way I can get this VFO-820 to work?
> >
> > Barry
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> > ----------
> >
> > Jeremiah 29:11-13 / John 3:16
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> Yahoo! Groups Links
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> [Non-text portions of this message have been removed]
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42715. Re: [TS-520_820_530_830] How to give your old Kenwood a significant boost in performance .

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 20:46:13 UTC
From: Jan Servaites
Topic: 42708 Message: 42715

I don't understand what you are doing yet. I use HDSDR and w/Softrock SDR to view my radio's IF.
Could you make a diagram drawing of your setup and also the configuration of HDSDR?
That would help.
Jan N8CBX

wa4axt wrote:

> You can greatly improve your any old radio and give it a huge number
> of modern features using the free Ham created software HDSDR .
>
> http://www.hdsdr.de/wnew.html
>
> It takes a while to set it up and figure it out , but if your old
> Kenwood is your primary rig , its worth the effort.It gives you
> features like dsp noise reduction and variable dsp selectively that
> can be controlled while viewing the audio spectrum your listening to
> for example.For SSB LSB and USB you set the low and tune to 1 and the
> mode to USB.For cw you set the low to 1 and the tune to your favorite
> pitch .I used 850 hz .
>
> Just to try it out , you just feed the audio form your radio to the
> line in of your computer and away you go . Later you can cut the coax
> going from the rx board to the input of the radios volume control and
> run the two lines to a male phone jack on the rear of the radio like I
> did .The low level sound form the rx board goes to the computers line
> in and the line out of the computer goes to the input of the volume
> control and then on to the audio power amp in the radio which totally
> integrates the software with your boat anchor . I even tried the
> software once on my 1950es Hallicrafter S-53 and the results were
> incredible .Later after getting a new KenwoodS TS-590 I returned the
> boat anchor to its original configuration .
>
>

42716. Re: [TS-520_820_530_830] Re: VFO-820 - two sockets soldered together - can't work with the 9 pin cable

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 21:18:27 UTC
From: Jerry Barr
Topic: 42710 Message: 42716

hey Barry just another 2 cents here /if that plug was not in the radio and the radio worked they may have a jumper on the radio pins which u need to remove if u plug the vfo in/someonelse correct me if i am wrong!

Jerry KJ6NTL

From: Barry <bonnevilleblb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 10, 2013 10:12 AM
Subject: [TS-520_820_530_830] Re: VFO-820 - two sockets soldered together - can't work with the 9 pin cable

Thanks for getting back to me quickly. Does it matter that the 820 transceiver didn't have the plug in it since it was in the external VFO? And should I just plug it back in the 820 itself when I get done using the external?

Barry

Jeremiah 29:11-13 / John 3:16

--- In mailto:TS-520_820_530_830%40yahoogroups.com, n6wk@... wrote:
>
> That plug that is in the VFO is to be used on the back of the 820 if you
> have NO VFO attached.
> Remove that plug, connect the cable from the radio to the VFO and all
> should be fine.
> The 820 needs pins 8 & 9 jumpered on the back of the radio when no
> external VFO is used.
>
>
> 73,
> Gordon
>
>
> On 6/10/2013 9:13 AM, Barry wrote:
> >
> > I'm curious - I was cleaning the 820 last night and thought I'd try to
> > connect the external VFO-820. I found the 9-pin cable the other day
> > and tried to plug it into the VFO-820, but I saw when I unscrewed the
> > cover of the plug-in socket that 2 sockets are apparently soldered
> > together. The 2 soldered sockets are on the VFO-820 - not on the 820
> > itself.
> >

> > I have read a couple of older posts that looked like the 820 itself
> > used to have a couple of those pin sockets soldered together, but I'm
> > not sure why this VFO-820 would have the sockets soldered together.
> >
> > I have a picture here of the way it looks:
> >
> > http://www.digcservices.com/ham/VFO-820BB.jpg
> >
> > Is there a way I can get this VFO-820 to work?
> >
> > Barry
> >
> > ----------
> >
> > Jeremiah 29:11-13 / John 3:16
> >
> >
>

[Non-text portions of this message have been removed]

42717. Re: [TS-520_820_530_830] How to give your old Kenwood a significant boost in performance .

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 22:18:14 UTC
From: John Davidson
Topic: 42708 Message: 42717

How can you view your receiver's I.F. band signal if all you have is audio going to the computer ??
Are you also in the market for snake oil ??

From: Jan Servaites <jservaites@woh.rr.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 10, 2013 4:46 PM
Subject: Re: [TS-520_820_530_830] How to give your old Kenwood a significant boost in performance .

I don't understand what you are doing yet. I use HDSDR and w/Softrock
SDR to view my radio's IF.
Could you make a diagram drawing of your setup and also the
configuration of HDSDR?
That would help.
Jan N8CBX

wa4axt wrote:

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> can be controlled while viewing the audio spectrum your listening to
> for example.For SSB LSB and USB you set the low and tune to 1 and the
> mode to USB.For cw you set the low to 1 and the tune to your favorite
> pitch .I used 850 hz .
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> Just to try it out , you just feed the audio form your radio to the
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> integrates the software with your boat anchor . I even tried the
> software once on my 1950es Hallicrafter S-53 and the results were
> incredible .Later after getting a new KenwoodS TS-590 I returned the
> boat anchor to its original configuration .
>

>

Yahoo! Groups Links

[Non-text portions of this message have been removed]

42718. Re: [TS-520_820_530_830] TS-530S VOX anomaly

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 22:33:32 UTC
From: John Davidson
Topic: 42694 Message: 42718

Try reversing the wires to the speaker.

From: fpath fpath <fpath@...>
To: "TS-520_820_530_830@yahoogroups.com" <ts-520_820_530_830@yahoogroups.com>
Sent: Sunday, June 9, 2013 10:23 PM
Subject: RE: [TS-520_820_530_830] TS-530S VOX anomaly

Craig,

This is common when the vox delay hasn't been properly adjusted. You'll find this on the fron panel next to the send\rec paddle switch. It is most prob set to 0 or very low, turn to about 12 and see how you go from there. Once you know that is it you can set the delay to suit your needs if you use the VIX function.

73's

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: crgrbrts@...
Date: Mon, 10 Jun 2013 01:44:14 +0000
Subject: [TS-520_820_530_830] TS-530S VOX anomaly

I have just a acquired a very nice TS-530S -- a real beaut. It has one problem -- and one only (and it may be me).

The anti-VOX seems to be non-functional. Any VOX gain setting above zero gets the VOX relay tripping repeatedly, no matter what anti-VOX adjustment is made, even if the speaker volume is low and the microphone (an MC-50) is remotely located. The VOX works normally with headphones muting the speaker.

Whaddya think?

73,

Craig
W3CRR

[Non-text portions of this message have been removed]

Yahoo! Groups Links

[Non-text portions of this message have been removed]

42719. Re: [TS-520_820_530_830] How to give your old Kenwood a significant boost in performance .

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-10 23:49:44 UTC
From: Jan Servaites
Topic: 42708 Message: 42719

John,
I think you should read up on the Softrock SDR and how it works.
I pick off some of the IF signal (from any older radio) and the Softrock SDR sends the info to the audio channels of the PC where the HDSDR displays the IF much like a spectrum analyizer.
Jan N8CBX

John Davidson wrote:

> How can you view your receiver's I.F. band signal if all you have is
> audio going to the computer ??
> Are you also in the market for snake oil ??
>
> _____
> From: Jan Servaites <jservaites@...
> <mailto:jservaites%40woh.rr.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Monday, June 10, 2013 4:46 PM
> Subject: Re: [TS-520_820_530_830] How to give your old Kenwood a
> significant boost in performance .
>
>
> I don't understand what you are doing yet. I use HDSDR and w/Softrock
> SDR to view my radio's IF.
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> configuration of HDSDR?
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> >
> >
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> ------------------------------------
>
> Yahoo! Groups Links
>
> [Non-text portions of this message have been removed]
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>

42720. Re: TS 820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 00:26:51 UTC
From: ke7kpb
Topic: 42600 Message: 42720

Mike, So sorry for the long pause in the reply as I was on the road. I started back on the radio and I traced the plug wiring and found that the I get continuity between pins 3 and 5. I did turn off the sg switch. I did check this with the xmt/stby switch and even with the mike plugged in and still pins 3and 5 closed contacts. Could have someone have rewired the plug. Now I am wondering about the alc wiring. I did a complete recap and replaced the driver and finals and did the neutralization. The radio runs great but just will not run the amp.
Robert.

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> Robert,
>
> Did you forget to flip the amplifier's XMT/STBY switch to XMT? If the
> wiring is right between the AL-811 and the transceiver's rear accessory
> socket but the XMT/STBY switch on the amp is in "STBY" then the amp
> won't key. This is a switch that quite often is not set to XMT which
> prevents the amp from being keyed. When the wiring between the 820 and
> the amp's RELAY socket is right AND the XMT/STBY switch is set to XMT,
> the amp will key and the RED led above the XMT/STBY switch should light.
>
> If you suspect the relay is not working in the amp, simply short the
> RELAY socket's center connector to the amp's chassis with NO Rf drive
> applied to the amp and the XMT/STBY switch set to XMT, the relay should
> energize in the amp.
>
> I use simple stereo interconnecting cables cut to the length I need,
> leaving one end with an RCA male plug that fits the AL-811 RELAY socket.
> The center conductor of the stereo cable connects to pon 5 and the
> shield to pin 4 on the 820's 8 pin socket. ALC is connected using same
> stereo cables cut to length, center wire is connected to pin 6 and
> shield to pin 1 or 4 on the 820's accessory octal socket. The amplifier
> voltage and current is "12VDC at 100ma" so stereo cables can easily
> handle the voltage and current. I have the AL-811 3 tube amp.
>
> 73
> Mike W5RKL
>
> On 6/5/2013 6:56 PM, ke7kpb wrote:
> >
> > I have a dumb question. I am trying to hook up a Ameritron 811a amp
> > the the ts 820s and I used pin 4 for the common ground and pin 5 for
> > the relay and pin 6 for the alc on the remote connector. According to
> > the diagram between pin 4 and pin 5 should be a n/o contact for the
> > keying the amp or am I doing something wrong? The amp will not key.

> > Robert.
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

42721. Re: [TS-520_820_530_830] How to give your old Kenwood a significant boost in performance .

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 00:43:57 UTC
From: Wes Will
Topic: 42708 Message: 42721

On 06/10/2013 06:49 PM, Jan Servaites wrote:\

> I pick off some of the IF signal (from any older radio) and the Softrock
> SDR sends the info to the audio channels of the PC where the HDSDR

Are you trying to say there's some sort of frequency conversion going on
in a bit of hardware somewhere between the radio and the PC that
down-converts the 455kHz IF to something under the 20kHz that the PC
sound card can accept? Otherwise, shoving 455kHz into a circuit that
can handle AT MOST 23 or so kHz is going to cause some .... issues.

--
Wes Will
N9KDY

42722. Re: [TS-520_820_530_830] How to give your old Kenwood a significant boost in performance .

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 01:32:51 UTC
From: Bob Macklin
Topic: 42708 Message: 42722

Some PC soundcards can handle 196KHz. I radio IF is fed to quaderature detector and that output is fed to the soundcard as the I/Q channels.

Try reading about "CWSKIMMER".

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: "Wes Will" <wwill@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, June 10, 2013 5:43 PM
Subject: Re: [TS-520_820_530_830] How to give your old Kenwood a significant boost in performance .

> On 06/10/2013 06:49 PM, Jan Servaites wrote:\
>
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>
>
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> can handle AT MOST 23 or so kHz is going to cause some .... issues.
>
> --
> Wes Will
> N9KDY
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
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42723. Re: [TS-520_820_530_830] How to give your old Kenwood a significant boost in performance .

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 01:34:30 UTC
From: Jeff Blaine
Topic: 42708 Message: 42723

Wes, welcome to the world of SDR. That's what the softrock does - it's a
$25 SDR about the size of two fingers. RF in, AF (IQ format) out.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

-----Original Message-----
From: Wes Will
Sent: Tuesday, June 11, 2013 9:43 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] How to give your old Kenwood a significant
boost in performance .

On 06/10/2013 06:49 PM, Jan Servaites wrote:\

> I pick off some of the IF signal (from any older radio) and the Softrock
> SDR sends the info to the audio channels of the PC where the HDSDR

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--
Wes Will
N9KDY

Yahoo! Groups Links

42724. Re: [TS-520_820_530_830] Re: TS 820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 01:54:11 UTC
From: Mike
Topic: 42600 Message: 42724

Robert,

I think you are mistakenly measuring continuity between pins "3" and "4" not pins "3" and "5".

Pin "3" on the rear 8 pin octal socket is connected to ground at relay terminals RL-4 in receive. In transmit, pin 3 is no longer connected to ground through relay terminal RL-4 BUT pin 5 "IS" connected to ground potential through relay RL-4. Have you looked at the 820 schematic's wiring of the rear 8 pin octal socket?

Pin 6, Remote ALC input, is connected to pin 7 "RLC" on the RF Unit's RF3 plug.

You should study the 820's schematic wiring so you will see how the socket's wiring should be. For amplifier relay control by the 820, including the remote ALC input, the only pins you should be concerned about are pins "5" and "4" for amplifier relay control and pins "6" and "4" for remote ALC input to the 820.

You said that you performed a "complete recap and replaced the driver and finals and did the neutralization". Did you replace "every" electrolytic capacitor in the 820? What troubleshooting results indicated you needed to do all those things?

73
Mike W5RKL

On 6/10/2013 7:26 PM, ke7kpb wrote:
>
> Mike, So sorry for the long pause in the reply as I was on the road. I
> started back on the radio and I traced the plug wiring and found that
> the I get continuity between pins 3 and 5. I did turn off the sg
> switch. I did check this with the xmt/stby switch and even with the
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> someone have rewired the plug. Now I am wondering about the alc
> wiring. I did a complete recap and replaced the driver and finals and
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> amp.
> Robert.
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@...> wrote:
> >
> > Robert,
> >
> > Did you forget to flip the amplifier's XMT/STBY switch to XMT? If the

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> > socket but the XMT/STBY switch on the amp is in "STBY" then the amp
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> > the amp's RELAY socket is right AND the XMT/STBY switch is set to XMT,
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> >
> > If you suspect the relay is not working in the amp, simply short the
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> > I use simple stereo interconnecting cables cut to the length I need,
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> > shield to pin 4 on the 820's 8 pin socket. ALC is connected using same
> > stereo cables cut to length, center wire is connected to pin 6 and
> > shield to pin 1 or 4 on the 820's accessory octal socket. The amplifier
> > voltage and current is "12VDC at 100ma" so stereo cables can easily
> > handle the voltage and current. I have the AL-811 3 tube amp.
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> > 73
> > Mike W5RKL
> >
> > On 6/5/2013 6:56 PM, ke7kpb wrote:
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> > > I have a dumb question. I am trying to hook up a Ameritron 811a amp
> > > the the ts 820s and I used pin 4 for the common ground and pin 5 for
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> > >
> > >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
>

[Non-text portions of this message have been removed]

42725. RE: [TS-520_820_530_830] Re: TS 820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 03:05:23 UTC
From: Robert Port
Topic: 42600 Message: 42725

I did study the schematics. It was on page 37 of the manual. I downloaded the manual, service manual, The red wire is on pin 3 and the l blue wire is on pin five and two disc caps are on pin 4. It shows pin 6 as alc input and pin 4 is ground.

I can send you pics. As far as the caps. All electrolytic caps were changed because the radio is over 25 years old and caps degrade over the years. Even new ones sitting on the shelves. They dry out. The finals were 6146As and weak and the driver tube, let's say there were fireworks in the tube when I tested it on my dyna-jet 707. Too much traveling I need to stay home more often.

Robert.

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Mike
Sent: Monday, June 10, 2013 7:54 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: TS 820s

Robert,

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> mike plugged in and still pins 3and 5 closed contacts. Could have
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> --- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@...> wrote:
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> > Robert,
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> > Did you forget to flip the amplifier's XMT/STBY switch to XMT? If the
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> > > I have a dumb question. I am trying to hook up a Ameritron 811a amp
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> > >
> > >
> >
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> >
> > [Non-text portions of this message have been removed]
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>

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[Non-text portions of this message have been removed]

42726. Re: How to give your old Kenwood a significant boost in performance .

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 04:00:22 UTC
From: brett_knudson
Topic: 42708 Message: 42726

This really interests me! Any tips on getting the IF out off my TS-520? I saw the your mod for your TS-520s on your website. Are they the same?

I'm getting back into ham radio after a 30 year hiatus. I passed my tech last year, and taking General on Wednesday night. I purchased a TS-520 last year, but mostly have been listening. It seems to tune up ok into a dummy load, so I think it's in okay shape. I just order the re-cap kit from http://www.hybridrestore.com.

I have a degree in electronics, but haven't done any radio work, let alone transmitters, in a long time. I don't think the re-cap will be much of a problem.

Wish me luck with the re-cap project. Any suggestions are always appreciated.

73 Brett N0BAK

--- In TS-520_820_530_830@yahoogroups.com, "Jeff Blaine" <keepwalking188@...> wrote:
>
> Wes, welcome to the world of SDR. That's what the softrock does - it's a
> $25 SDR about the size of two fingers. RF in, AF (IQ format) out.
>
> 73/jeff/ac0c
> www.ac0c.com
> alpha-charlie-zero-charlie
>
> -----Original Message-----
> From: Wes Will
> Sent: Tuesday, June 11, 2013 9:43 AM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [TS-520_820_530_830] How to give your old Kenwood a significant
> boost in performance .
>
> On 06/10/2013 06:49 PM, Jan Servaites wrote:\
>
> > I pick off some of the IF signal (from any older radio) and the Softrock
> > SDR sends the info to the audio channels of the PC where the HDSDR
>
>
> Are you trying to say there's some sort of frequency conversion going on
> in a bit of hardware somewhere between the radio and the PC that
> down-converts the 455kHz IF to something under the 20kHz that the PC
> sound card can accept? Otherwise, shoving 455kHz into a circuit that
> can handle AT MOST 23 or so kHz is going to cause some .... issues.
>
> --
> Wes Will
> N9KDY

>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>

42727. Re: How to give your old Kenwood a significant boost in performance .

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 04:20:48 UTC
From: brett_knudson
Topic: 42708 Message: 42727

I think I found the answer to my post about getting the IF sig in an old service bulletin on the Kenwood web page. http://www.kenwoodusa.com/UserFiles/File/UnitedStates/Communications/AMA/ServiceBulletins/ASB0063.pdf

I love the internet (big data!).

73 Brett N0BAK

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> -----Original Message-----
> From: Wes Will
> Sent: Tuesday, June 11, 2013 9:43 AM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [TS-520_820_530_830] How to give your old Kenwood a significant
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> On 06/10/2013 06:49 PM, Jan Servaites wrote:\
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> --
> Wes Will
> N9KDY
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>

42728. Re: [TS-520_820_530_830] Re: How to give your old Kenwood a significant boost in performance .

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 04:55:08 UTC
From: Jeff Blaine
Topic: 42708 Message: 42728

Brett,

I don’t know what the input Z of the SM-220 is, but you would probably want to add a high-z buffer of some kind between this tap and the SDR to avoid potentially loading the IF.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: brett_knudson
Sent: Tuesday, June 11, 2013 1:20 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: How to give your old Kenwood a significant boost in performance .

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73 Brett N0BAK

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> -----Original Message-----
> From: Wes Will
> Sent: Tuesday, June 11, 2013 9:43 AM
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Subject: Re: [TS-520_820_530_830] How to give your old Kenwood a significant
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> Wes Will
> N9KDY
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>

[Non-text portions of this message have been removed]

42729. Re: [TS-520_820_530_830] Re: How to give your old Kenwood a significant boost in performance .

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 05:14:27 UTC
From: Jerry Barr
Topic: 42708 Message: 42729

i hear all this stuff about the sdr and the funcube dongle but no real info so i shud jus thro 25 buckjs ure way to make u smile and me frustrated cause its not doing what u say oh and the dongle is never in stock

Jerry KJ6NTL

From: Jeff Blaine <keepwalking188@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 10, 2013 9:55 PM
Subject: Re: [TS-520_820_530_830] Re: How to give your old Kenwood a significant boost in performance .

Brett,

I don’t know what the input Z of the SM-220 is, but you would probably want to add a high-z buffer of some kind between this tap and the SDR to avoid potentially loading the IF.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: brett_knudson
Sent: Tuesday, June 11, 2013 1:20 PM
To: mailto:TS-520_820_530_830%40yahoogroups.com
Subject: [TS-520_820_530_830] Re: How to give your old Kenwood a significant boost in performance .

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73 Brett N0BAK

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> -----Original Message-----

> From: Wes Will
> Sent: Tuesday, June 11, 2013 9:43 AM
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Subject: Re: [TS-520_820_530_830] How to give your old Kenwood a significant
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> On 06/10/2013 06:49 PM, Jan Servaites wrote:\
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> --
> Wes Will
> N9KDY
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>

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[Non-text portions of this message have been removed]

42730. Re: [TS-520_820_530_830] Re: How to give your old Kenwood a significant boost in performance .

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 11:35:16 UTC
From: Jan Servaites
Topic: 42708 Message: 42730

There is plenty of drive available, and actually too much. I have to
throw in some 10-20db attenuation.
You want to pick off from the 8 Mhz IF, not 455, and Kenwood brings the
8Mhz out to the back panel on most models, even my TS940
Jan N8CBX

Jeff Blaine wrote:

>
>
> Brett,
>
> I don’t know what the input Z of the SM-220 is, but you would probably
> want to add a high-z buffer of some kind between this tap and the SDR
> to avoid potentially loading the IF.
>
> 73/jeff/ac0c
> www.ac0c.com
> alpha-charlie-zero-charlie
>
> From: brett_knudson
> Sent: Tuesday, June 11, 2013 1:20 PM
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: [TS-520_820_530_830] Re: How to give your old Kenwood a
> significant boost in performance .
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> old service bulletin on the Kenwood web page.
> http://www.kenwoodusa.com/UserFiles/File/UnitedStates/Communications/AMA/ServiceBulletin
s/ASB0063.pdf
>
> I love the internet (big data!).
>
> 73 Brett N0BAK
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Jeff Blaine"
> <keepwalking188@...> wrote:
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> > www.ac0c.com
> > alpha-charlie-zero-charlie
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> > From: Wes Will
> > Sent: Tuesday, June 11, 2013 9:43 AM
> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > Subject: Re: [TS-520_820_530_830] How to give your old Kenwood a
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> >
> > --
> > Wes Will
> > N9KDY
> >
> >
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
> >
>
> [Non-text portions of this message have been removed]
>
>

42731. Need a 37.395 crystal for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 12:19:30 UTC
From: tjb813
Topic: 42731 Message: 42731

I a working on a TS-520 for a friend. He says "the 28.5 band doesn't work". On investigation I discover a CB mod. SOmeone installed a 36.395 crystal.

So I am looking for a 37.395. If some one has one to sell, please contact me off-list.

Thanks
Tim

42732. Re: [TS-520_820_530_830] How to give your old Kenwood a significant boost in performance .

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 12:32:20 UTC
From: John Davidson
Topic: 42708 Message: 42732

I see ATX mentioned connecting to the volume control high terminal, that AIN'T I.F. it's AUDIO ! someone has the wrong info.

_____
From: Jan Servaites <jservaites@...>

John,
I think you should read up on the Softrock SDR and how it works.
I pick off some of the IF signal (from any older radio) and the Softrock SDR sends the info to the audio channels of the PC where the HDSDR displays the IF much like a spectrum analyizer.
Jan N8CBX

John Davidson wrote:

> How can you view your receiver's I.F. band signal if all you have is
> audio going to the computer ??
> Are you also in the market for snake oil ??
>
>
>
> wa4axt wrote:
>
> > You can greatly improve your any old radio and give it a huge number
> > of modern features using the free Ham created software HDSDR .
> >
> > http://www.hdsdr.de/wnew.html
> >
> > Just to try it out , you just feed the audio form your radio to the
> > line in of your computer and away you go . Later you can cut the coax
> > going from the rx board to the input of the radios volume control and
> > .The low level sound form the rx board goes to the computers line
> > in and the line out of the computer goes to the input of the volume
> >
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

42733. Re: [TS-520_820_530_830] Re: TS 820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 13:23:35 UTC
From: Mike
Topic: 42600 Message: 42733

Robert,

Pins 5 and 4 on the 820's REMOTE socket should not have continuity in receive but should have continuity in transmit.

Pins 3 and 5 on the 820's REMOTE socket should have continuity in receive but should not have continuity in transmit.

Pin 6 (Remote ALC Input) on the 820's REMOTE socket and pin 7 "RLC" (Remote Level Control) on the RF Unit's RF3 plug should have continuity.

Pins 1 and 4 are ground (chassis).

Is it possible that a previous owner has changed the wiring on the 820's REMOTE socket? Yes anything is possible. You will have to use an ohm meter and the 820's schematic to determine what changes in the REMOTE socket's wiring, if any, exist then change the wiring to the REMOTE socket back to what it is suppose to be. I can't say why any previous owner would change the wiring on the 820's REMOTE socket. The relay terminals shown on the 820's schematic, "RL-1" through "RL-4" are the terminals on the relay located below the chassis inside the small metal enclosure between the final amplifier PC board and the rear panel.

I mean on disrespect but I would have never recommended replacing ALL of the electrolytic capacitors in the 820 at once simply because they are old. Replacing components in this manner is referred to as the "Shot gun" replacement method, a common method based on the misguided idea that, "the capacitors are old so they are probably bad or will go bad shortly so for insurance, I'll replace them all at once.". Using this method does not result in any improvement in overall performance but it can quite easily lead to additional problems such as cracked foil runs on the PC boards the 820 didn't initially have. The PC board foil runs are very thin and are easily damaged by heat and physical stress. A component, whether it's a capacitor, resistor, diode, or transistor of any type, should not be replaced unless there is physical evidence found during a visual inspection or results through troubleshooting circuits in the 820 that indicates the component(s) is/are bad.

73
Mike W5RKL

On 6/10/2013 10:05 PM, Robert Port wrote:
>
> I did study the schematics. It was on page 37 of the manual. I downloaded
> the manual, service manual, The red wire is on pin 3 and the l blue
> wire is
> on pin five and two disc caps are on pin 4. It shows pin 6 as alc

> input and
> pin 4 is ground.
>
> I can send you pics. As far as the caps. All electrolytic caps were
> changed
> because the radio is over 25 years old and caps degrade over the
> years. Even
> new ones sitting on the shelves. They dry out. The finals were 6146As and
> weak and the driver tube, let's say there were fireworks in the tube
> when I
> tested it on my dyna-jet 707. Too much traveling I need to stay home more
> often.
>
> Robert.
>
> From: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> [mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Mike
> Sent: Monday, June 10, 2013 7:54 PM
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: Re: [TS-520_820_530_830] Re: TS 820s
>
> Robert,
>
> I think you are mistakenly measuring continuity between pins "3" and "4"
> not pins "3" and "5".
>
> Pin "3" on the rear 8 pin octal socket is connected to ground at relay
> terminals RL-4 in receive. In transmit, pin 3 is no longer connected to
> ground through relay terminal RL-4 BUT pin 5 "IS" connected to ground
> potential through relay RL-4. Have you looked at the 820 schematic's
> wiring of the rear 8 pin octal socket?
>
> Pin 6, Remote ALC input, is connected to pin 7 "RLC" on the RF Unit's
> RF3 plug.
>
> You should study the 820's schematic wiring so you will see how the
> socket's wiring should be. For amplifier relay control by the 820,
> including the remote ALC input, the only pins you should be concerned
> about are pins "5" and "4" for amplifier relay control and pins "6" and
> "4" for remote ALC input to the 820.
>
> You said that you performed a "complete recap and replaced the driver
> and finals and did the neutralization". Did you replace "every"
> electrolytic capacitor in the 820? What troubleshooting results
> indicated you needed to do all those things?
>
> 73

> Mike W5RKL
>
> On 6/10/2013 7:26 PM, ke7kpb wrote:
> >
> > Mike, So sorry for the long pause in the reply as I was on the road. I
> > started back on the radio and I traced the plug wiring and found that
> > the I get continuity between pins 3 and 5. I did turn off the sg
> > switch. I did check this with the xmt/stby switch and even with the
> > mike plugged in and still pins 3and 5 closed contacts. Could have
> > someone have rewired the plug. Now I am wondering about the alc
> > wiring. I did a complete recap and replaced the driver and finals and
> > did the neutralization. The radio runs great but just will not run the
> > amp.
> > Robert.
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@...> wrote:
> > >
> > > Robert,
> > >
> > > Did you forget to flip the amplifier's XMT/STBY switch to XMT? If the
> > > wiring is right between the AL-811 and the transceiver's rear
> accessory
> > > socket but the XMT/STBY switch on the amp is in "STBY" then the amp
> > > won't key. This is a switch that quite often is not set to XMT which
> > > prevents the amp from being keyed. When the wiring between the 820 and
> > > the amp's RELAY socket is right AND the XMT/STBY switch is set to XMT,
> > > the amp will key and the RED led above the XMT/STBY switch should
> light.
> > >
> > > If you suspect the relay is not working in the amp, simply short the
> > > RELAY socket's center connector to the amp's chassis with NO Rf drive
> > > applied to the amp and the XMT/STBY switch set to XMT, the relay
> should
> > > energize in the amp.
> > >
> > > I use simple stereo interconnecting cables cut to the length I need,
> > > leaving one end with an RCA male plug that fits the AL-811 RELAY
> > socket.
> > > The center conductor of the stereo cable connects to pon 5 and the
> > > shield to pin 4 on the 820's 8 pin socket. ALC is connected using same
> > > stereo cables cut to length, center wire is connected to pin 6 and
> > > shield to pin 1 or 4 on the 820's accessory octal socket. The
> amplifier
> > > voltage and current is "12VDC at 100ma" so stereo cables can easily
> > > handle the voltage and current. I have the AL-811 3 tube amp.
> > >
> > > 73

> > > Mike W5RKL
> > >
> > > On 6/5/2013 6:56 PM, ke7kpb wrote:
> > > >
> > > > I have a dumb question. I am trying to hook up a Ameritron 811a amp
> > > > the the ts 820s and I used pin 4 for the common ground and pin 5 for
> > > > the relay and pin 6 for the alc on the remote connector.
> According to
> > > > the diagram between pin 4 and pin 5 should be a n/o contact for the
> > > > keying the amp or am I doing something wrong? The amp will not key.
> > > > Robert.
> > > >
> > > >
> > >
> > >
> > >
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> [Non-text portions of this message have been removed]
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42734. Re: [TS-520_820_530_830] Need a 37.395 crystal for TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 13:53:51 UTC
From: Mike
Topic: 42731 Message: 42734

Tim,

If no one has the 10 meter crystal you are looking for then I recommend International Crystals in Oklahoma City, OK They can make and sell you a replacement crystal for your 520 for about $22 plus a few dollars shipping. See their website at the link below.

http://www.icmfg.com/hamradio.html

They have an 800 number and they take all major credit cards. I have been dealing with them for years for all my crystal needs from Heterdyne crystals for my Drake B and C Line twins, Heathkit transmitter and transceiver HET OSC crystals to Regency scanner crystals (yep those old Regency scanners still work in many areas today). I use "Shara Gore" who works in sales.

I have never received a bad crystal from them and I've ordered plenty of crystals from International Crystals over the years. Their prices are the same as Jans Crystals in Ft Meyers, Florida who I have also dealt with in the past. If you are restoring the 520 then I would recommend new for the replacement crystal. You will have to perform the alignment once the replacement crystal is installed.

73
Mike W5RKL

On 6/11/2013 7:19 AM, tjb813 wrote:
>
> I a working on a TS-520 for a friend. He says "the 28.5 band doesn't
> work". On investigation I discover a CB mod. SOmeone installed a
> 36.395 crystal.
>
> So I am looking for a 37.395. If some one has one to sell, please
> contact me off-list.
>
> Thanks
> Tim
>
>

[Non-text portions of this message have been removed]

42735. Re: How to give your old Kenwood a significant boost in performance .

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 07:25:31 UTC
From: wa4axt
Topic: 42708 Message: 42735

--- In TS-520_820_530_830@yahoogroups.com, Jan Servaites <jservaites@...> wrote:
>
> I don't understand what you are doing yet. I use HDSDR and w/Softrock
> SDR to view my radio's IF.
> Could you make a diagram drawing of your setup and also the
> configuration of HDSDR?
> That would help.
> Jan N8CBX
>

By setting the low freq to 1hz you are making the HDSDR work as a audio processor .The IF frequency is set up to be 1hz , and when in the usb position , you are hearing and processing audio frequencies and its being displayed from 1hz and up . What I could see on the spectrum display was only from 0hz to 4khz the way I had it set up .

I might point out that I had to use a IF , or low freq , of 1hz instead of 0 hz because I had problems with the software not recognizing 0 hz.

I set the input sampling rate on the HDSDR at 10.025k and the output rate at 8k . On my TS-530s the audio came out of the 1st audio amp after the detector which was an ideal level for feeding the line input to the computer sound card . The audio is then processed using HDSDR and sent out of the line output and on to the TS-530S volume control and then on to the 530's audio power amplifier IC .

This idea of using HDSDR with my radio is similar to what I did in the 1970es as a kid with a AUTEK analogue type audio filter used on my Hallicrafter FPM-300 transceiver that only had a 2.1khz ssb filter .With this set up I liked the fact that once I got all the input/output audio levels correct I could adjust the sound using the rigs volume control and in effect the audio processor became just another stage in the radio.

I found from using this set up that its to bad that modern radios no longer use a RF type IF shift like the older radios do .The combination of a RF IF shift with a a 500hz roofing filter feeding a narrow but ring free dsp audio filter is a very effective combination and gives the user I think the best of the analogue and digital worlds.

note :Copy and paste this url to see a crude picture of what I did .

http://s237.photobucket.com/user/rtaylor0361/media/a3064338-812e-4694-9ab4-adef190fb66d_zps6a47bde1.jpg.html

When the audio levels were properly set ,the audio quality using my sound blaster card was excellent and found no reason to set up a way to add a bypass switch to the HDSDR stage I had added to my radio.

42736. Re: How to give your old Kenwood a significant boost in performance .

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 08:11:30 UTC
From: wa4axt
Topic: 42708 Message: 42736

I might also point out that during the time that I was using HDSDR with my TS530S , I noticed that adjusting my radio to the desired signal using both my ear and the HDSDR used as a audio spectrum analyzer was a better and more effective way to tune your radio so today I am using the HDSDR with its dsp filtering funtions off just to view the audio spectrum from 1hz to 4khz as I tune my TS-590S to the desired signal and adjust its DSP filters.

42737. Is your boat anchor acting like a room air filter ?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 10:54:14 UTC
From: wa4axt
Topic: 42737 Message: 42737

In the 70es I had a Hallicrafter radio that had a fan attached to it to cool the sweep tube finials .After a few years of use I started having intermittent problems that appeared to be related to the units various switches and the radios uncovered tx/rx change over relay . After opening the radio it was obvious that the cooling fan was sucking air and dirt into the radio cabinet and dirt was accumulating everywhere . I blew out the dirt and cleaned the switches and all was fine. To prevent this problem in the future , I cut strips of filter material from a home AC filter and using duct tape created a crude filter for my radio. I also covered the adjustment holes with scotch tape . This arrangement was by no means air tight but did the job very effectively .In 2007 when I got my TS-530S ,I blew out the large amount of accumulated dirt that was in it using a leaf blower (lol),and after adding the filters the radio inside has been clean of dirt ever since.

A recent look at the trouble shooting guide of my TS-590s said that if one is experiencing low transmit output , it could be due to a dirty cooling fan filter . I was sure glad that Kenwood , unlike other radio builders , finial recognized this problem and took action to prevent dirt build up in the radio .
You may want to consider installing air filters on any boat anchor you might have that uses a cooling fan.

42738. Re: VFO-820 - two sockets soldered together - can't work with the 9 pin cable

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 12:31:20 UTC
From: Barry
Topic: 42710 Message: 42738

I was able to plug it in last night and get it powered up. What are the optimum settings for using the external VFO? I didn't hear much coming from it when I tried it, but I may not have had it set right.

The cable fit just fine once I pulled the jumpered pins out of the external VFO.

Barry

Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, Jerry Barr <kj6ntl@...> wrote:
>
> hey Barry just another 2 cents here /if that plug was not in the radio and the radio worked they may have a jumper on the radio pins which u need to remove if u plug the vfo in/someonelseÂ correct me if i am wrong!
>
>
> Jerry KJ6NTL

42739. TS-820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 16:01:02 UTC
From: kg4odx
Topic: 2059 Message: 42739

During the replacement of a fried VOX FIX board in my TS-820 a burned out resistor lead shorted to chassis ground. Now nothing works except the panel lights and cooling fan. I checked the 13vac from the transformer it's putting out to the rectifier board. Not sure where to go from here

73,

Bill

42740. Re: VFO-820 - two sockets soldered together - can't work with the 9 pin cable

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 17:06:30 UTC
From: Terry Wagoner
Topic: 42710 Message: 42740

Barry:

There are no optimal settings just how you chose to operate. The external or remote VFO allows you to run split operation to chase DX. Most folks leave the rig VFO on TX and the remote on RX. You can use whatever combination you want.

I recommend a remote VFO for several reasons;
1. You can even out or distribute the mechanical wear of the drive train. Often the internal VFO has had thousands of lock to lock operations and will have excessive axial and radial wear. Remote VFOs typically have far fewer operations on them and less wear so wont have a VFO knob that looks like it is on an eccentric.

2. Of course you get the operational flexibility that it allows. TX/RX on internal. TX on internal and RX on Remote, TX on Remote and RX on internal, and RX/TX on Remote.

3. Troubleshooting: If the internal VFO has excessive drift after warm up then switch to the remote VFO and see if you have same excessive drift. If you do then the most likely cause is bad regulated 9vdc. If you do not then problem is likely internal to the rigs VFO.

I have two TS-830s each with a VFO-240 and I would not be without them.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@...> wrote:
>
> I was able to plug it in last night and get it powered up. What are the optimum settings for using the external VFO? I didn't hear much coming from it when I tried it, but I may not have had it set right.
>
> The cable fit just fine once I pulled the jumpered pins out of the external VFO.
>
> Barry
>
> -----------
>
> Jeremiah 29:11-13 / John 3:16
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> --- In TS-520_820_530_830@yahoogroups.com, Jerry Barr <kj6ntl@> wrote:
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> >
> > Jerry KJ6NTL

>

42741. Re: TS-820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 17:17:08 UTC
From: Terry Wagoner
Topic: 2059 Message: 42741

You are making me a little nervous, but start by going to the AF-AVR board and measuring the 14vdc input and 9 vdc regulated output and the RF-1 3.3vdc output.

Anytime you are replacing boards do not plug or unplug Molex connectors with the rig powered on.

When making energized measurements use a jumper lead to connect the negative lead of your measuring device to chassis ground. This way only have to control the positive test prod. Make sure you are aware of where your other hand and body is at relative to the chassis.

For high voltages I would consider powering down the rig and use jumper leads to connect both test leads and then power on and take the reading and then power down to remove both test leads. Make sure you have good test leads (no frayed or cracked insulation, and/or wire ends exposed at the clips or prods). Make sure you make good positive mechanical connections so the clip leads cannot pop off and fly into the energized rig.

You must be aware of the voltages in this radio and where you can get in trouble if you make accidental hand contact or have a lead or some other conductor drop into the radio. It takes understanding of where the hazards are at in the radio and how to safely manage those hazards by employing good safe work practices. Attention to detail is a must.

Not scolding you just dont want to see you get hurt.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "kg4odx" <bill.kg4odx@...> wrote:
>
> During the replacement of a fried VOX FIX board in my TS-820 a burned out resistor lead shorted to chassis ground. Now nothing works except the panel lights and cooling fan. I checked the 13vac from the transformer it's putting out to the rectifier board. Not sure where to go from here
>
> 73,
>
> Bill
>

42742. Re: [TS-520_820_530_830] Re: TS-820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 17:26:25 UTC
From: Don
Topic: 2059 Message: 42742

Great Advice Terry
I have had my hair stand up a couple of time and was lucky to survive it
After the shock is over i counted my lucky stars as that's some jolt you get
Keep your left hand in your pocket

73
Don/Ve2ud

On 11/06/2013 1:17 PM, Terry Wagoner wrote:
>
> You are making me a little nervous, but start by going to the AF-AVR
> board and measuring the 14vdc input and 9 vdc regulated output and the
> RF-1 3.3vdc output.
>
> Anytime you are replacing boards do not plug or unplug Molex
> connectors with the rig powered on.
>
> When making energized measurements use a jumper lead to connect the
> negative lead of your measuring device to chassis ground. This way
> only have to control the positive test prod. Make sure you are aware
> of where your other hand and body is at relative to the chassis.
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> For high voltages I would consider powering down the rig and use
> jumper leads to connect both test leads and then power on and take the
> reading and then power down to remove both test leads. Make sure you
> have good test leads (no frayed or cracked insulation, and/or wire
> ends exposed at the clips or prods). Make sure you make good positive
> mechanical connections so the clip leads cannot pop off and fly into
> the energized rig.
>
> You must be aware of the voltages in this radio and where you can get
> in trouble if you make accidental hand contact or have a lead or some
> other conductor drop into the radio. It takes understanding of where
> the hazards are at in the radio and how to safely manage those hazards
> by employing good safe work practices. Attention to detail is a must.
>
> Not scolding you just dont want to see you get hurt.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "kg4odx"
> <bill.kg4odx@...> wrote:
> >
> > During the replacement of a fried VOX FIX board in my TS-820 a

> burned out resistor lead shorted to chassis ground. Now nothing works
> except the panel lights and cooling fan. I checked the 13vac from the
> transformer it's putting out to the rectifier board. Not sure where to
> go from here
> >
> > 73,
> >
> > Bill
> >
>
>

[Non-text portions of this message have been removed]

42743. Re: [TS-520_820_530_830] Re: TS-820 AND High Voltage SAFETY!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 17:26:13 UTC
From: Wes Will
Topic: 2059 Message: 42743

On 06/11/2013 12:17 PM, Terry Wagoner wrote:
> Make sure you are aware of where
> your other hand and body is at relative to the chassis.

One hand on the probe, the other in your back pocket.

That's how I was taught to handle high voltages. You learn QUICKLY when troubleshooting an old television (what I learned on, tube tv's and am radios) if you slip taking a high-voltage reading off a TV fly-back transformer and it bites you.

Saw a classmate go nearly 20 feet from the muscle-spasm.

B-Plus is nothing to mess with if you're tired, inattentive, worried, or otherwise distracted. Make sure others around you know that for whatever short time (and tell them when you're done) you're too busy with something dangerous, please no distractions.

If you find yourself trying to contort and wiggle around to get the probe in place, STOP! and work out another way. Maybe a clip lead when it's powered down, or even a quick tack-job with some wire and a soldering iron. (Don't see that being needed in these rigs so much as some older gear.) If you can't reach it without being a double-jointed chimpanzee, something isn't right and you're very likely to slip and cause a serious short somewhere. Been here. Done this. It got expensive, and quick.

And DON'T do this kind of thing in an otherwise-empty house! Make sure someone is around the place and looks in on you occasionally. Invite a friend or neighbour over if you have to. It might mean the difference in surviving a zap and not. Time is CRITICAL if you take a high amperage surge across the chest cavity and stop your heart.

If you're not used to big values of voltage and amperage, stay out of the chassis and get help. Hams are all over the place, and a lot of them and in particular those of us aulde phartes who grew up with this stuff already know the tricks. Terry has given several good ones.

Be safe, I get club notices of "Silent Keys" nearly every week from the local groups. Don't need more unnecessary ones from here, thanks anyway.

--
Wes Will
N9KDY

42744. Re: [TS-520_820_530_830] Re: TS-820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 18:23:56 UTC
From: Mike
Topic: 2059 Message: 42744

This is another reason to learn basic electricity and electronics! don't mean to sound disrespectful but there are too many hams today that think they know but in reality they don't. Also, it has been said many times, there are voltages inside the hybrids that can easily KILL YOU if you do not use proper safety precautions and do not respect the AC and DC voltage that exist inside the hybrids! Some may think we are talking down to them or being disrespectful but that is not true!! There are too many hams and people in general who are now SK's because they didn't follow safety precuations, didn't pay attention, and/or were distracted by something while they were working around AC or DC voltages! Remember, it's not the voltage so much that does the damage but rather the "current"! A recent news spot talked about a man who was in a lift bucket that was killed when his head came in contact with "80KV". I suspect when the investigation is over, it will be found that he was "distracted" or "wasn't paying attention"! We all have made those mistakes, not paying attention, been distracted, etc., so we know what happens so don't take it personally, we are only telling you these thing so you won't make those mistakes!

73
Mike W5RKL

On 6/11/2013 12:26 PM, Don wrote:
>
> Great Advice Terry
> I have had my hair stand up a couple of time and was lucky to survive it
> After the shock is over i counted my lucky stars as that's some jolt
> you get
> Keep your left hand in your pocket
>
> 73
> Don/Ve2ud
>
> On 11/06/2013 1:17 PM, Terry Wagoner wrote:
> >
> > You are making me a little nervous, but start by going to the AF-AVR
> > board and measuring the 14vdc input and 9 vdc regulated output and the
> > RF-1 3.3vdc output.
> >
> > Anytime you are replacing boards do not plug or unplug Molex
> > connectors with the rig powered on.
> >
> > When making energized measurements use a jumper lead to connect the
> > negative lead of your measuring device to chassis ground. This way
> > only have to control the positive test prod. Make sure you are aware

> > of where your other hand and body is at relative to the chassis.
> >
> > For high voltages I would consider powering down the rig and use
> > jumper leads to connect both test leads and then power on and take the
> > reading and then power down to remove both test leads. Make sure you
> > have good test leads (no frayed or cracked insulation, and/or wire
> > ends exposed at the clips or prods). Make sure you make good positive
> > mechanical connections so the clip leads cannot pop off and fly into
> > the energized rig.
> >
> > You must be aware of the voltages in this radio and where you can get
> > in trouble if you make accidental hand contact or have a lead or some
> > other conductor drop into the radio. It takes understanding of where
> > the hazards are at in the radio and how to safely manage those hazards
> > by employing good safe work practices. Attention to detail is a must.
> >
> > Not scolding you just dont want to see you get hurt.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "kg4odx"
> > <bill.kg4odx@...> wrote:
> > >
> > > During the replacement of a fried VOX FIX board in my TS-820 a
> > burned out resistor lead shorted to chassis ground. Now nothing works
> > except the panel lights and cooling fan. I checked the 13vac from the
> > transformer it's putting out to the rectifier board. Not sure where to
> > go from here
> > >
> > > 73,
> > >
> > > Bill
> > >
> >
> >
>
> [Non-text portions of this message have been removed]
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>

[Non-text portions of this message have been removed]

42745. New 820S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 17:43:32 UTC
From: Wm Marvin
Topic: 42745 Message: 42745

Hi Group This is my first post. I recently purchased a near mint 820S for under $300 shipped with CW filter. WOW beautiful condition electrically and physically......I would rate it a 9.7/10. It also has a KB1 VFO knob.
One minor problem....the VFO calibration ring sometimes gets tight when turning the VFO hence the VFO calibration can shift. Is the VFO ring to tight against face plate body??

Now if I could find a 830S in the same condition I would find nirvana.

Best DX

Bill KB9IV

42746. Re: [TS-520_820_530_830] Re: TS-820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 18:45:51 UTC
From: Bill Wheeler
Topic: 2059 Message: 42746

the rig was not on during the changing of the board, now does anybody have
a though on how to proceed with troubleshooting???

[Non-text portions of this message have been removed]

42747. Re: [TS-520_820_530_830] New 820S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 18:56:06 UTC
From: Joseph Stiles
Topic: 42745 Message: 42747

Bill,

I think that maybe the KB1 knob is a little to close to the face plate. Grab the VFO knob...wiggle it up & down....any play? Pull...in and out (gently)..any play?
My guess is no, to both questions. Many times after getting a rig that has been shipped by...well...I won't name them......

Obtain... a 1.5mm allen wrench...loosen the "set screws" of the KB1 knob...and remove...using your fingers...rotate the VFO shaft and check for
any rough spots/binding through its entire travel...several times....I will guess that it will be fine...reinstall the KB1 and adjust the clearance between it...dial skirt..face plate.....there should be a spring and two washers....washer...
spring...washer..skirt/knob...etc for smooth operation...even a 0.5mm 'bit extra clearance will make it fine..with no effect to operation

73 Joe
WB7UQU

From: Wm Marvin <wmarvin2@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 11, 2013 10:43 AM
Subject: [TS-520_820_530_830] New 820S

Hi Group This is my first post. I recently purchased a near mint 820S for under $300 shipped with CW filter. WOW beautiful condition electrically and physically......I would rate it a 9.7/10. It also has a KB1 VFO knob.
One minor problem....the VFO calibration ring sometimes gets tight when turning the VFO hence the VFO calibration can shift. Is the VFO ring to tight against face plate body??

Now if I could find a 830S in the same condition I would find nirvana.

Best DX

Bill KB9IV

[Non-text portions of this message have been removed]

42748. Re: TS-820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 18:56:37 UTC
From: Terry Wagoner
Topic: 2059 Message: 42748

I think I gave you a good first place to look but I can see you have apparently dismissed that.

Funny how leads can short to ground when the rig is down powered and unplugged! Good luck.

Terry K9TW
> the rig was not on during the changing of the board, now does anybody have
> a though on how to proceed with troubleshooting???
>
>
> [Non-text portions of this message have been removed]
>

42749. Re: [TS-520_820_530_830] Re: TS-820 AND High Voltage SAFETY!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 18:56:58 UTC
From: Ken Winterling
Topic: 2059 Message: 42749

To All,

Many test probes have a lot of metal tip exposed which is just begging to contact something other than the small point you want to measure. Years ago I covered a couple of my probe set tips with heat shrink tubing (when I graduated from electrical tape!) right to the points leaving no more than approximately 1mm exposed. That significantly reduces the chance of shorting to an adjacent component, ground, etc. It also reduces the damage done if the probe slips off the point you are measuring. I have other probes that can be used when I need to attach an alligator clip as well as dedicated leads with alligator clips and banana plugs.

The link below shows relatively inexpensive insulated test probe 2" (50.8mm) extensions that slip onto your probes and work very well for making measurements in a crowded chassis:
http://www.amazon.com/Fluke-TP88-Rigid-Probe-Length/dp/B000VRFL10

A more expensive probe option is the adjustable/retractable length, from 0 to 76 mm (almost 3"), insulated probes found at the following site:
http://www.fluke.com/fluke/usen
/accessories/test-leads-probes-and-clips/tl40.htm?PID=56751

Ken
WA2LBI

On Tue, Jun 11, 2013 at 1:26 PM, Wes Will <wwill@...> wrote:

> **
>
>
> On 06/11/2013 12:17 PM, Terry Wagoner wrote:
> > Make sure you are aware of where
> > your other hand and body is at relative to the chassis.
>
> One hand on the probe, the other in your back pocket.
>
> That's how I was taught to handle high voltages. You learn QUICKLY when
> troubleshooting an old television (what I learned on, tube tv's and am
> radios) if you slip taking a high-voltage reading off a TV fly-back
> transformer and it bites you.
>
> Saw a classmate go nearly 20 feet from the muscle-spasm.
>
> B-Plus is nothing to mess with if you're tired, inattentive, worried, or
> otherwise distracted. Make sure others around you know that for
> whatever short time (and tell them when you're done) you're too busy

> with something dangerous, please no distractions.
>
> If you find yourself trying to contort and wiggle around to get the
> probe in place, STOP! and work out another way. Maybe a clip lead when
> it's powered down, or even a quick tack-job with some wire and a
> soldering iron. (Don't see that being needed in these rigs so much as
> some older gear.) If you can't reach it without being a double-jointed
> chimpanzee, something isn't right and you're very likely to slip and
> cause a serious short somewhere. Been here. Done this. It got
> expensive, and quick.
>
> And DON'T do this kind of thing in an otherwise-empty house! Make sure
> someone is around the place and looks in on you occasionally. Invite a
> friend or neighbour over if you have to. It might mean the difference
> in surviving a zap and not. Time is CRITICAL if you take a high
> amperage surge across the chest cavity and stop your heart.
>
> If you're not used to big values of voltage and amperage, stay out of
> the chassis and get help. Hams are all over the place, and a lot of
> them and in particular those of us aulde phartes who grew up with this
> stuff already know the tricks. Terry has given several good ones.
>
> Be safe, I get club notices of "Silent Keys" nearly every week from the
> local groups. Don't need more unnecessary ones from here, thanks anyway.
>
> --
> Wes Will
> N9KDY
>
>

[Non-text portions of this message have been removed]

42750. Re: TS-820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 19:01:08 UTC
From: kg4odx
Topic: 2059 Message: 42750

Never mind, I'll figure this out on my own. I did not post here to flamed. Just thought some may have an idea about a fix. Gee's

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> This is another reason to learn basic electricity and electronics! don't
> mean to sound disrespectful but there are too many hams today that think
> they know but in reality they don't. Also, it has been said many times,
> there are voltages inside the hybrids that can easily KILL YOU if you do
> not use proper safety precautions and do not respect the AC and DC
> voltage that exist inside the hybrids! Some may think we are talking
> down to them or being disrespectful but that is not true!! There are too
> many hams and people in general who are now SK's because they didn't
> follow safety precuations, didn't pay attention, and/or were distracted
> by something while they were working around AC or DC voltages! Remember,
> it's not the voltage so much that does the damage but rather the
> "current"! A recent news spot talked about a man who was in a lift
> bucket that was killed when his head came in contact with "80KV". I
> suspect when the investigation is over, it will be found that he was
> "distracted" or "wasn't paying attention"! We all have made those
> mistakes, not paying attention, been distracted, etc., so we know what
> happens so don't take it personally, we are only telling you these thing
> so you won't make those mistakes!
>
> 73
> Mike W5RKL
>
> On 6/11/2013 12:26 PM, Don wrote:
> >
> > Great Advice Terry
> > I have had my hair stand up a couple of time and was lucky to survive it
> > After the shock is over i counted my lucky stars as that's some jolt
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> > Keep your left hand in your pocket
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> > Don/Ve2ud
> >
> > On 11/06/2013 1:17 PM, Terry Wagoner wrote:
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> > > For high voltages I would consider powering down the rig and use
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> > > You must be aware of the voltages in this radio and where you can get
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> > > the hazards are at in the radio and how to safely manage those hazards
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> > >
> > > Not scolding you just dont want to see you get hurt.
> > >
> > > Terry K9TW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "kg4odx"
> > > <bill.kg4odx@> wrote:
> > > >
> > > > During the replacement of a fried VOX FIX board in my TS-820 a
> > > burned out resistor lead shorted to chassis ground. Now nothing works
> > > except the panel lights and cooling fan. I checked the 13vac from the
> > > transformer it's putting out to the rectifier board. Not sure where to
> > > go from here
> > > >
> > > > 73,
> > > >
> > > > Bill
> > > >
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> >
> > [Non-text portions of this message have been removed]
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>
> [Non-text portions of this message have been removed]

>

42751. Re: [TS-520_820_530_830] Re: TS-820 AND High Voltage SAFETY!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 19:11:44 UTC
From: W2FID
Topic: 2059 Message: 42751

ANYONE WHO HAS EVER SEEN SOMEONE GET BITTEN BY THE HIGH VOLTAGE IN A TV TRANSFORMER WILL WONDER HOW IT GOT ITS NAME.....
IF YOU ARE NOT CAREFUL IT WILL MAKE YOU "FLY BACK"!!!
MARSHALL
W2FID

--- On Tue, 6/11/13, Wes Will <wwill@...> wrote:

From: Wes Will <wwill@...u>
Subject: Re: [TS-520_820_530_830] Re: TS-820 AND High Voltage SAFETY!!
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, June 11, 2013, 10:26 AM

On 06/11/2013 12:17 PM, Terry Wagoner wrote:
> Make sure you are aware of where
> your other hand and body is at relative to the chassis.

One hand on the probe, the other in your back pocket.

That's how I was taught to handle high voltages. You learn QUICKLY when troubleshooting an old television (what I learned on, tube tv's and am radios) if you slip taking a high-voltage reading off a TV fly-back transformer and it bites you.

Saw a classmate go nearly 20 feet from the muscle-spasm.

B-Plus is nothing to mess with if you're tired, inattentive, worried, or otherwise distracted. Make sure others around you know that for whatever short time (and tell them when you're done) you're too busy with something dangerous, please no distractions.

If you find yourself trying to contort and wiggle around to get the probe in place, STOP! and work out another way. Maybe a clip lead when it's powered down, or even a quick tack-job with some wire and a soldering iron. (Don't see that being needed in these rigs so much as some older gear.) If you can't reach it without being a double-jointed chimpanzee, something isn't right and you're very likely to slip and cause a serious short somewhere. Been here. Done this. It got expensive, and quick.

And DON'T do this kind of thing in an otherwise-empty house! Make sure someone is around the place and looks in on you occasionally. Invite a friend or neighbour over if you have to. It might mean the difference in surviving a zap and not. Time is CRITICAL if you take a high amperage surge across the chest cavity and stop your heart.

If you're not used to big values of voltage and amperage, stay out of the chassis and get help. Hams are all over the place, and a lot of them and in particular those of us aulde phartes who grew up with this stuff already know the tricks. Terry has given several good ones.

Be safe, I get club notices of "Silent Keys" nearly every week from the local groups. Don't need more unnecessary ones from here, thanks anyway.

--
Wes Will
N9KDY

[Non-text portions of this message have been removed]

42752. Re: TS-820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 19:18:41 UTC
From: Terry Wagoner
Topic: 2059 Message: 42752

What in the heck is happening here recently. What kind of Hams do we have as members now?

No one called you a dumb ass or idiot or stupid. No one held you up to ridicule or made an example out of you. You came here and said a "burned out resistor lead shorted to chassis while you were troubleshooting" and now want to know where to look. Well what the heck is a burned out resistor lead and how did it contact the chassis?

No one knows anything about your knowledge or experience level so anyone with an ounce of brain would be concerned about giving you any unqualified direction where to put your fingers next into a box full of rattle snakes.

You call coaching on risks and risk management being FLAMED. That is insane. You would not have made it in Fossil or Nuclear Power electric shop for 10 minutes if you are that thin skinned. I will never assume you know anything or have any experience level and even if your were a Senior Tech with 30 years experience you would get a pre-job briefing that would include the hazards associated with the job and the required PPE and safe work practices. I would be derelict in my duties if I just assumed you knew and understood.

If you call this being Flamed then I feel sorry for you. I can put my head on the pillow tonite.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "kg4odx" <bill.kg4odx@...> wrote:
>
> Never mind, I'll figure this out on my own. I did not post here to flamed. Just thought some may have an idea about a fix. Gee's
>
> --- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@> wrote:
> >
> > This is another reason to learn basic electricity and electronics! don't
> > mean to sound disrespectful but there are too many hams today that think
> > they know but in reality they don't. Also, it has been said many times,
> > there are voltages inside the hybrids that can easily KILL YOU if you do
> > not use proper safety precautions and do not respect the AC and DC
> > voltage that exist inside the hybrids! Some may think we are talking
> > down to them or being disrespectful but that is not true!! There are too
> > many hams and people in general who are now SK's because they didn't
> > follow safety precuations, didn't pay attention, and/or were distracted
> > by something while they were working around AC or DC voltages! Remember,
> > it's not the voltage so much that does the damage but rather the
> > "current"! A recent news spot talked about a man who was in a lift
> > bucket that was killed when his head came in contact with "80KV". I
> > suspect when the investigation is over, it will be found that he was
> > "distracted" or "wasn't paying attention"! We all have made those
> > mistakes, not paying attention, been distracted, etc., so we know what

> > happens so don't take it personally, we are only telling you these thing
> > so you won't make those mistakes!
> >
> > 73
> > Mike W5RKL
> >
> > On 6/11/2013 12:26 PM, Don wrote:
> > >
> > > Great Advice Terry
> > > I have had my hair stand up a couple of time and was lucky to survive it
> > > After the shock is over i counted my lucky stars as that's some jolt
> > > you get
> > > Keep your left hand in your pocket
> > >
> > > 73
> > > Don/Ve2ud
> > >
> > > On 11/06/2013 1:17 PM, Terry Wagoner wrote:
> > > >
> > > > You are making me a little nervous, but start by going to the AF-AVR
> > > > board and measuring the 14vdc input and 9 vdc regulated output and the
> > > > RF-1 3.3vdc output.
> > > >
> > > > Anytime you are replacing boards do not plug or unplug Molex
> > > > connectors with the rig powered on.
> > > >
> > > > When making energized measurements use a jumper lead to connect the
> > > > negative lead of your measuring device to chassis ground. This way
> > > > only have to control the positive test prod. Make sure you are aware
> > > > of where your other hand and body is at relative to the chassis.
> > > >
> > > > For high voltages I would consider powering down the rig and use
> > > > jumper leads to connect both test leads and then power on and take the
> > > > reading and then power down to remove both test leads. Make sure you
> > > > have good test leads (no frayed or cracked insulation, and/or wire
> > > > ends exposed at the clips or prods). Make sure you make good positive
> > > > mechanical connections so the clip leads cannot pop off and fly into
> > > > the energized rig.
> > > >
> > > > You must be aware of the voltages in this radio and where you can get
> > > > in trouble if you make accidental hand contact or have a lead or some
> > > > other conductor drop into the radio. It takes understanding of where
> > > > the hazards are at in the radio and how to safely manage those hazards
> > > > by employing good safe work practices. Attention to detail is a must.
> > > >
> > > > Not scolding you just dont want to see you get hurt.
> > > >
> > > > Terry K9TW
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com

> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "kg4odx"
> > > > <bill.kg4odx@> wrote:
> > > > >
> > > > > During the replacement of a fried VOX FIX board in my TS-820 a
> > > > burned out resistor lead shorted to chassis ground. Now nothing works
> > > > except the panel lights and cooling fan. I checked the 13vac from the
> > > > transformer it's putting out to the rectifier board. Not sure where to
> > > > go from here
> > > > >
> > > > > 73,
> > > > >
> > > > > Bill
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> > > [Non-text portions of this message have been removed]
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> > [Non-text portions of this message have been removed]
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42753. Re: TS-820 AND High Voltage SAFETY!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 19:21:51 UTC
From: Terry Wagoner
Topic: 2059 Message: 42753

Sometimes it is not the shock but the cuts that result from "flying" back. Those TV cage edges were razor sharp. The numb elbow and hand is bad but the dripping blood is not any fun. I am not proud to acknowledge how I know about that.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, W2FID <w2fid@...> wrote:
>
> ANYONE WHO HAS EVER SEEN SOMEONE GET BITTEN BY THE HIGH VOLTAGE IN A TV TRANSFORMER WILL WONDER HOW IT GOT ITS NAME.....
> IF YOU ARE NOT CAREFUL IT WILL MAKE YOU "FLY BACK"!!!
> MARSHALL
> W2FID
>
> --- On Tue, 6/11/13, Wes Will <wwill@...> wrote:
>
>
> From: Wes Will <wwill@...>
> Subject: Re: [TS-520_820_530_830] Re: TS-820 AND High Voltage SAFETY!!
> To: TS-520_820_530_830@yahoogroups.com
> Date: Tuesday, June 11, 2013, 10:26 AM
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>
> On 06/11/2013 12:17 PM, Terry Wagoner wrote:
> > Make sure you are aware of where
> > your other hand and body is at relative to the chassis.
>
> One hand on the probe, the other in your back pocket.
>
> That's how I was taught to handle high voltages. You learn QUICKLY when
> troubleshooting an old television (what I learned on, tube tv's and am
> radios) if you slip taking a high-voltage reading off a TV fly-back
> transformer and it bites you.
>
> Saw a classmate go nearly 20 feet from the muscle-spasm.
>
> B-Plus is nothing to mess with if you're tired, inattentive, worried, or
> otherwise distracted. Make sure others around you know that for
> whatever short time (and tell them when you're done) you're too busy
> with something dangerous, please no distractions.

>
> If you find yourself trying to contort and wiggle around to get the
> probe in place, STOP! and work out another way. Maybe a clip lead when
> it's powered down, or even a quick tack-job with some wire and a
> soldering iron. (Don't see that being needed in these rigs so much as
> some older gear.) If you can't reach it without being a double-jointed
> chimpanzee, something isn't right and you're very likely to slip and
> cause a serious short somewhere. Been here. Done this. It got
> expensive, and quick.
>
> And DON'T do this kind of thing in an otherwise-empty house! Make sure
> someone is around the place and looks in on you occasionally. Invite a
> friend or neighbour over if you have to. It might mean the difference
> in surviving a zap and not. Time is CRITICAL if you take a high
> amperage surge across the chest cavity and stop your heart.
>
> If you're not used to big values of voltage and amperage, stay out of
> the chassis and get help. Hams are all over the place, and a lot of
> them and in particular those of us aulde phartes who grew up with this
> stuff already know the tricks. Terry has given several good ones.
>
> Be safe, I get club notices of "Silent Keys" nearly every week from the
> local groups. Don't need more unnecessary ones from here, thanks anyway.
>
> --
> Wes Will
> N9KDY
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> [Non-text portions of this message have been removed]
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42754. Re: [TS-520_820_530_830] Re: TS-820 AND High Voltage SAFETY!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 19:41:36 UTC
From: Jim S
Topic: 2059 Message: 42754

I sometimes wonder why I am still alive today! My career lasted around 45 years, working with both high voltage and high current electronic systems. In spite of all that experience, I felt the "bite" of a flyback transformer, and the sour taste of RF in the fillings of my teeth at least once in my life. I have also had hot solder drip onto my hand, and can still show you the scar that resulted from that instance!

I agree with all the voices of experience that are admonishing the OP about his "troubleshooting skills". I have no pity for anyone who believes they know enough to badmouth a group of experienced guys, and decides that he will do better by going it on his own.

I was going to post a much harsher E-Mail than any of the other fellows did, but they beat me to the punch with much more gentle words. Now I am glad that the OP didn't turn around and kick me in the head for something I might have said !

Jim AG3Y - Retired Chief Engineer Stereo FM station, Assistant CE UHF Television station, Technical Specialist Satellite R&D Lab, etc.

On 6/11/2013 3:21 PM, Terry Wagoner wrote:
>
> Sometimes it is not the shock but the cuts that result from "flying"
> back. Those TV cage edges were razor sharp. The numb elbow and hand is
> bad but the dripping blood is not any fun. I am not proud to
> acknowledge how I know about that.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, W2FID <w2fid@...> wrote:
> >
> > ANYONE WHO HAS EVER SEEN SOMEONE GET BITTEN BY THE HIGH VOLTAGE IN A
> TV TRANSFORMER WILL WONDER HOW IT GOT ITS
> NAME.............................
> > IF YOU ARE NOT CAREFUL IT WILL MAKE YOU "FLY BACK"!!!
> > MARSHALL
> > W2FID
> >
> > -
>

[Non-text portions of this message have been removed]

42755. Re: [TS-520_820_530_830] Re: TS-820 AND High Voltage SAFETY!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 19:42:25 UTC
From: Joe - W7RKN
Topic: 2059 Message: 42755

Ah hell...you guys have never experienced REAL voltage! You don't have to worry about blood.... the high voltage cauterizes the wound! LOL I got hit diagnosing weird power outputs on a Henry 2KD. My voltage probe wasn't quite long enough and as I was probing a 500 volt circuit, I grounded my wrist as the top of my forefinger touched a voltage bridge. All I gotta say is, sure glad I follow the 'one hand behind me' rule, when I am fooling around with high voltage! My whole right arm was numb for 2 hours afterwards...no blood though....the burn sure was deep...took almost 2 months to heal/

(Terry, you are right though...I didn't have a high voltage cage to worry about...I had already removed all of that. (Although, the cat took over 2 weeks to forgive me for elbowing her across the room from the 'fly back'.) <<GRIN>>

Joe - W7RKN

----- Original Message -----
From: "Terry Wagoner" <wagstw46@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, June 11, 2013 12:21 PM
Subject: [TS-520_820_530_830] Re: TS-820 AND High Voltage SAFETY!!

Sometimes it is not the shock but the cuts that result from "flying" back. Those TV cage edges were razor sharp. The numb elbow and hand is bad but the dripping blood is not any fun. I am not proud to acknowledge how I know about that.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, W2FID <w2fid@...> wrote:
>
> ANYONE WHO HAS EVER SEEN SOMEONE GET BITTEN BY THE HIGH VOLTAGE IN A TV
> TRANSFORMER WILL WONDER HOW IT GOT ITS NAME.............................
> IF YOU ARE NOT CAREFUL IT WILL MAKE YOU "FLY BACK"!!!
> MARSHALL
> W2FID
>
> --- On Tue, 6/11/13, Wes Will <wwill@...> wrote:
>
>
> From: Wes Will <wwill@...>
> Subject: Re: [TS-520_820_530_830] Re: TS-820 AND High Voltage SAFETY!!
> To: TS-520_820_530_830@yahoogroups.com
> Date: Tuesday, June 11, 2013, 10:26 AM
>

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> On 06/11/2013 12:17 PM, Terry Wagoner wrote:
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> transformer and it bites you.
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> Saw a classmate go nearly 20 feet from the muscle-spasm.
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> B-Plus is nothing to mess with if you're tired, inattentive, worried, or
> otherwise distracted. Make sure others around you know that for
> whatever short time (and tell them when you're done) you're too busy
> with something dangerous, please no distractions.
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> If you find yourself trying to contort and wiggle around to get the
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> some older gear.) If you can't reach it without being a double-jointed
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> cause a serious short somewhere. Been here. Done this. It got
> expensive, and quick.
>
> And DON'T do this kind of thing in an otherwise-empty house! Make sure
> someone is around the place and looks in on you occasionally. Invite a
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> Be safe, I get club notices of "Silent Keys" nearly every week from the
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>
> --
> Wes Will
> N9KDY

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Yahoo! Groups Links

42756. Curious about what can be done with the TS-820 when connected to a Mac/PC

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 18:47:18 UTC
From: Barry
Topic: 42756 Message: 42756

I'm investigating what can be done when connected to a PC with my TS-820. I know the newer radios have data cables, etc. that can be connected, but what can I enjoy with the 820? Very remedial question, I know, but I can tell you guys know your stuff and can point me in the right direction.

I even have the first PowerMac 6100 that I bought in 1995. I paid $6500 for it and for the Adobe graphics programs that I needed to get up and going in Graphic Design, and rather than sell it for $20 I've just kept it at home.

I'd connect it if feasible just to have something to decode Morse code and anything else I can do with it, but I'll hook up a new(er) computer to get more features. Just curious to see what you guys think. Thanks,

Barry

Jeremiah 29:11-13 / John 3:16

42757. Re: [TS-520_820_530_830] Re: TS-820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 19:12:57 UTC
From: JIM LYNCH
Topic: 2059 Message: 42757

Bill, I have a niece that is always on Facebook preaching about the way drivers are be rude and dangerous to bike riders, the message is true enough but after a while it just gets really old. Some on this board are just religious about safety, true enough, but it does get old. So just kick back, take the really good info and let the rest slip by. Live long and prosper :)

From: kg4odx <bill.kg4odx@gmail.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 11, 2013 11:01 AM
Subject: [TS-520_820_530_830] Re: TS-820

Never mind, I'll figure this out on my own. I did not post here to flamed. Just thought some may have an idea about a fix. Gee's

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> This is another reason to learn basic electricity and electronics! don't
> mean to sound disrespectful but there are too many hams today that think
> they know but in reality they don't. Also, it has been said many times,
> there are voltages inside the hybrids that can easily KILL YOU if you do
> not use proper safety precautions and do not respect the AC and DC
> voltage that exist inside the hybrids! Some may think we are talking
> down to them or being disrespectful but that is not true!! There are too
> many hams and people in general who are now SK's because they didn't
> follow safety precuations, didn't pay attention, and/or were distracted
> by something while they were working around AC or DC voltages! Remember,
> it's not the voltage so much that does the damage but rather the
> "current"! A recent news spot talked about a man who was in a lift
> bucket that was killed when his head came in contact with "80KV". I
> suspect when the investigation is over, it will be found that he was
> "distracted" or "wasn't paying attention"! We all have made those
> mistakes, not paying attention, been distracted, etc., so we know what
> happens so don't take it personally, we are only telling you these thing
> so you won't make those mistakes!
>
> 73
> Mike W5RKL
>
> On 6/11/2013 12:26 PM, Don wrote:
> >
> > Great Advice Terry
> > I have had my hair stand up a couple of time and was lucky to survive it
> > After the shock is over i counted my lucky stars as that's some jolt
> > you get
> > Keep your left hand in your pocket

> >
> > 73
> > Don/Ve2ud
> >
> > On 11/06/2013 1:17 PM, Terry Wagoner wrote:
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> > > You are making me a little nervous, but start by going to the AF-AVR
> > > board and measuring the 14vdc input and 9 vdc regulated output and the
> > > RF-1 3.3vdc output.
> > >
> > > Anytime you are replacing boards do not plug or unplug Molex
> > > connectors with the rig powered on.
> > >
> > > When making energized measurements use a jumper lead to connect the
> > > negative lead of your measuring device to chassis ground. This way
> > > only have to control the positive test prod. Make sure you are aware
> > > of where your other hand and body is at relative to the chassis.
> > >
> > > For high voltages I would consider powering down the rig and use
> > > jumper leads to connect both test leads and then power on and take the
> > > reading and then power down to remove both test leads. Make sure you
> > > have good test leads (no frayed or cracked insulation, and/or wire
> > > ends exposed at the clips or prods). Make sure you make good positive
> > > mechanical connections so the clip leads cannot pop off and fly into
> > > the energized rig.
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> > > You must be aware of the voltages in this radio and where you can get
> > > in trouble if you make accidental hand contact or have a lead or some
> > > other conductor drop into the radio. It takes understanding of where
> > > the hazards are at in the radio and how to safely manage those hazards
> > > by employing good safe work practices. Attention to detail is a must.
> > >
> > > Not scolding you just dont want to see you get hurt.
> > >
> > > Terry K9TW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "kg4odx"
> > > <bill.kg4odx@> wrote:
> > > >
> > > > During the replacement of a fried VOX FIX board in my TS-820 a
> > > burned out resistor lead shorted to chassis ground. Now nothing works
> > > except the panel lights and cooling fan. I checked the 13vac from the
> > > transformer it's putting out to the rectifier board. Not sure where to
> > > go from here
> > > >
> > > > 73,
> > > >
> > > > Bill

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> > [Non-text portions of this message have been removed]
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Yahoo! Groups Links

[Non-text portions of this message have been removed]

42758. Re: [TS-520_820_530_830] Re: TS-820 AND High Voltage SAFETY!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 19:39:14 UTC
From: Wes Will
Topic: 2059 Message: 42758

On 06/11/2013 02:21 PM, Terry Wagoner wrote:
> Sometimes it is not the shock but the cuts that result from "flying"
> back. Those TV cage edges were razor sharp. The numb elbow and hand is
> bad but the dripping blood is not any fun. I am not proud to acknowledge
> how I know about that.

Terry: There are two kinds of people who have worked with high voltages in things like TV and radio and Ham gear. (Not talking about transmission line power workers here, just gear-head techs like us.)

One type admits that they've gotten a case of the stupids for that split second needed to learn just what it feels like. (Some of us could still spit sparks, and 110VAC is just a minor sting these days...)

The other type are called "LIARS." <-;

--
Wes Will
N9KDY

42759. Hot Dog. Got a line on a V7A Heathkit VTVM for cheap.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 19:44:39 UTC
From: Wes Will
Topic: 2059 Message: 42759

As in around fifteen clams.

Now if I can only get there (a hundred or so mile trip) before someone beats me to it....

Needs test leads, of course. Also likely needs a couple of tubes, a lot of DeOxit, and some capacitors and such. But it is mainly just neglected, it seems.

Trying to make the trip on Friday, wish me luck.

--
Wes Will
N9KDY

42760. Re: [TS-520_820_530_830] Curious about what can be done with the TS-820 when connected to a Mac/PC

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 20:00:52 UTC
From: Bob Macklin
Topic: 42756 Message: 42760

There are PC programs for decoding CW and the digital modes(RTTY, etc).

You connect the speaker output 820 to the line in jack of your PC. No mods to the radio.

But it best if you use audio isolation transformers between the radio and the computer.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: Barry
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 11, 2013 11:47 AM
Subject: [TS-520_820_530_830] Curious about what can be done with the TS-820 when connected to a Mac/PC

I'm investigating what can be done when connected to a PC with my TS-820. I know the newer radios have data cables, etc. that can be connected, but what can I enjoy with the 820? Very remedial question, I know, but I can tell you guys know your stuff and can point me in the right direction.

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I'd connect it if feasible just to have something to decode Morse code and anything else I can do with it, but I'll hook up a new(er) computer to get more features. Just curious to see what you guys think. Thanks,

Barry

Jeremiah 29:11-13 / John 3:16

[Non-text portions of this message have been removed]

42761. Re: [TS-520_820_530_830] Hot Dog. Got a line on a V7A Heathkit VTVM for cheap.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 20:03:27 UTC
From: William Houghton
Topic: 2059 Message: 42761

They are a good meter. I use one. Good luck.

From: Wes Will <wwill@siu.edu>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 11, 2013 12:44 PM
Subject: [TS-520_820_530_830] Hot Dog. Got a line on a V7A Heathkit VTVM for cheap.

As in around fifteen clams.

Now if I can only get there (a hundred or so mile trip) before someone
beats me to it....

Needs test leads, of course. Also likely needs a couple of tubes, a lot
of DeOxit, and some capacitors and such. But it is mainly just
neglected, it seems.

Trying to make the trip on Friday, wish me luck.

--
Wes Will
N9KDY

[Non-text portions of this message have been removed]

42762. Re: [TS-520_820_530_830] Re: TS-820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 20:09:39 UTC
From: Jerry Barr
Topic: 2059 Message: 42762

just to relate a little story/ i was a ships service electricion(sp?) in the navy and was very instilled in us to power down open breakes etc/I was working on a hi pressure air compressor/water cooled 440 three phase / just changing a leaky cooling solinoid turned off and tagged the breakers etc/ cut thru a lead with my tl-29 pocket knife/ and a half second later the tl-29 waas stuck in a steel bulkhead from my contortion when that third phase to ground thru my body in saltwater on the deck/knocked me silly/ I had tripped and tagged the wrong breaker and tho i checked between the leads and it was down it was still hot to ground/ so mistakes happen and it can cost u ure life i was dang lucky it didnt kill me

  and i certainly agree with being safe and noone here knoiws how much i know about electronic or eletricity /these people wont tell u to do something that can kill u without warning of the dangers because they want to know they didnt cause ure early demise/dont take it personal i shure wudnt! just my 2 cents / this is a great group of guys with lots of knowlage
Jerry KJ6NTL

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 11, 2013 12:18 PM
Subject: [TS-520_820_530_830] Re: TS-820

What in the heck is happening here recently. What kind of Hams do we have as members now?

No one called you a dumb ass or idiot or stupid. No one held you up to ridicule or made an example out of you. You came here and said a "burned out resistor lead shorted to chassis while you were troubleshooting" and now want to know where to look. Well what the heck is a burned out resistor lead and how did it contact the chassis?

No one knows anything about your knowledge or experience level so anyone with an ounce of brain would be concerned about giving you any unqualified direction where to put your fingers next into a box full of rattle snakes.

You call coaching on risks and risk management being FLAMED. That is insane. You would not have made it in Fossil or Nuclear Power electric shop for 10 minutes if you are that thin skinned. I will never assume you know anything or have any experience level and even if your were a Senior Tech with 30 years experience you would get a pre-job briefing that would include the hazards associated with the job and the required PPE and safe work practices. I would be derelict in my duties if I just assumed you knew and understood.

If you call this being Flamed then I feel sorry for you. I can put my head on the pillow tonite.

Terry K9TW

--- In mailto:TS-520_820_530_830%40yahoogroups.com, "kg4odx" <bill.kg4odx@...> wrote:
>

> Never mind, I'll figure this out on my own. I did not post here to flamed. Just thought some may have an idea about a fix. Gee's
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, Mike <w5rkl@> wrote:
> >
> > This is another reason to learn basic electricity and electronics! don't
> > mean to sound disrespectful but there are too many hams today that think
> > they know but in reality they don't. Also, it has been said many times,
> > there are voltages inside the hybrids that can easily KILL YOU if you do
> > not use proper safety precautions and do not respect the AC and DC
> > voltage that exist inside the hybrids! Some may think we are talking
> > down to them or being disrespectful but that is not true!! There are too
> > many hams and people in general who are now SK's because they didn't
> > follow safety precuations, didn't pay attention, and/or were distracted
> > by something while they were working around AC or DC voltages! Remember,
> > it's not the voltage so much that does the damage but rather the
> > "current"! A recent news spot talked about a man who was in a lift
> > bucket that was killed when his head came in contact with "80KV". I
> > suspect when the investigation is over, it will be found that he was
> > "distracted" or "wasn't paying attention"! We all have made those
> > mistakes, not paying attention, been distracted, etc., so we know what
> > happens so don't take it personally, we are only telling you these thing
> > so you won't make those mistakes!
> >
> > 73
> > Mike W5RKL
> >
> > On 6/11/2013 12:26 PM, Don wrote:
> > >
> > > Great Advice Terry
> > > I have had my hair stand up a couple of time and was lucky to survive it
> > > After the shock is over i counted my lucky stars as that's some jolt
> > > you get
> > > Keep your left hand in your pocket
> > >
> > > 73
> > > Don/Ve2ud
> > >
> > > On 11/06/2013 1:17 PM, Terry Wagoner wrote:
> > > >
> > > > You are making me a little nervous, but start by going to the AF-AVR
> > > > board and measuring the 14vdc input and 9 vdc regulated output and the
> > > > RF-1 3.3vdc output.
> > > >
> > > > Anytime you are replacing boards do not plug or unplug Molex
> > > > connectors with the rig powered on.
> > > >
> > > > When making energized measurements use a jumper lead to connect the
> > > > negative lead of your measuring device to chassis ground. This way
> > > > only have to control the positive test prod. Make sure you are aware

> > > > of where your other hand and body is at relative to the chassis.
> > > >
> > > > For high voltages I would consider powering down the rig and use
> > > > jumper leads to connect both test leads and then power on and take the
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> > > > ends exposed at the clips or prods). Make sure you make good positive
> > > > mechanical connections so the clip leads cannot pop off and fly into
> > > > the energized rig.
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> > > > You must be aware of the voltages in this radio and where you can get
> > > > in trouble if you make accidental hand contact or have a lead or some
> > > > other conductor drop into the radio. It takes understanding of where
> > > > the hazards are at in the radio and how to safely manage those hazards
> > > > by employing good safe work practices. Attention to detail is a must.
> > > >
> > > > Not scolding you just dont want to see you get hurt.
> > > >
> > > > Terry K9TW
> > > >
> > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "kg4odx"
> > > > <bill.kg4odx@> wrote:
> > > > >
> > > > > During the replacement of a fried VOX FIX board in my TS-820 a
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> > > > > Bill
> > > > >
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> > > [Non-text portions of this message have been removed]
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42763. Re: [TS-520_820_530_830] Re: TS-820 AND High Voltage SAFETY!!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 20:17:36 UTC
From: Jerry Barr
Topic: 2059 Message: 42763

hehe the Magnovox floor models were the worst for biting with the rf on the very back /that had to reach past on very pointy wire wrap terminals and th rf burns to the bone /the tissue cooks and leaves a scab into the point it enters

Jerry KJ6NTL

From: Wes Will <wwill@siu.edu>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 11, 2013 12:39 PM
Subject: Re: [TS-520_820_530_830] Re: TS-820 AND High Voltage SAFETY!!

On 06/11/2013 02:21 PM, Terry Wagoner wrote:
> Sometimes it is not the shock but the cuts that result from "flying"
> back. Those TV cage edges were razor sharp. The numb elbow and hand is
> bad but the dripping blood is not any fun. I am not proud to acknowledge
> how I know about that.

Terry: There are two kinds of people who have worked with high voltages
in things like TV and radio and Ham gear. (Not talking about
transmission line power workers here, just gear-head techs like us.)

One type admits that they've gotten a case of the stupids for that split
second needed to learn just what it feels like. (Some of us could still
spit sparks, and 110VAC is just a minor sting these days...)

The other type are called "LIARS." <-;

--
Wes Will
N9KDY

[Non-text portions of this message have been removed]

42764. Re: [TS-520_820_530_830] Curious about what can be done with the TS-820 when connected to a Mac/PC

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 20:31:29 UTC
From: Jerry Barr
Topic: 42756 Message: 42764

does the 820 have a phone patch setup

Jerry KJ6NTL

From: Barry <bonnevilleblb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 11, 2013 11:47 AM
Subject: [TS-520_820_530_830] Curious about what can be done with the TS-820 when connected to a Mac/PC

I'm investigating what can be done when connected to a PC with my TS-820. I know the newer radios have data cables, etc. that can be connected, but what can I enjoy with the 820? Very remedial question, I know, but I can tell you guys know your stuff and can point me in the right direction.

I even have the first PowerMac 6100 that I bought in 1995. I paid $6500 for it and for the Adobe graphics programs that I needed to get up and going in Graphic Design, and rather than sell it for $20 I've just kept it at home.

I'd connect it if feasible just to have something to decode Morse code and anything else I can do with it, but I'll hook up a new(er) computer to get more features. Just curious to see what you guys think. Thanks,

Barry

Jeremiah 29:11-13 / John 3:16

[Non-text portions of this message have been removed]

42765. Re: [TS-520_820_530_830] Re: TS-820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 20:49:27 UTC
From: Jeff Blaine
Topic: 2059 Message: 42765

Flame?

They don’t know if you have any experience at all with HV. And none of these comments have been insulting. In fact, they are making suggestions that will help you stay alive.

73/jeff/ac0c
www.ac0c.com
alpha-charlie-zero-charlie

From: kg4odx
Sent: Wednesday, June 12, 2013 4:01 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS-820

Never mind, I'll figure this out on my own. I did not post here to flamed. Just thought some may have an idea about a fix. Gee's

--- In mailto:TS-520_820_530_830%40yahoogroups.com, Mike <w5rkl@...> wrote:
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> > > >
> > > > Bill
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42766. Re: [TS-520_820_530_830] Curious about what can be done with the TS-820 when connected to a Mac/PC

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 20:59:14 UTC
From: Mike
Topic: 42756 Message: 42766

Jerry,

The TS-820 has both Phone Patch IN and Phone Patch OUT sockets on the rear panel. See theTS- 820's operator's manual, page 14 and 23 for details on using these sockets.

73
Mike W5RKL

On 6/11/2013 3:31 PM, Jerry Barr wrote:
>
> does the 820 have a phone patch setup
>
> Jerry KJ6NTL
>
> From: Barry <bonnevilleblb@... <mailto:bonnevilleblb%40yahoo.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Tuesday, June 11, 2013 11:47 AM
> Subject: [TS-520_820_530_830] Curious about what can be done with the
> TS-820 when connected to a Mac/PC
>
>
> I'm investigating what can be done when connected to a PC with my
> TS-820. I know the newer radios have data cables, etc. that can be
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> I know, but I can tell you guys know your stuff and can point me in
> the right direction.
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> I even have the first PowerMac 6100 that I bought in 1995. I paid
> $6500 for it and for the Adobe graphics programs that I needed to get
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> Jeremiah 29:11-13 / John 3:16

>
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42767. Re: [TS-520_820_530_830] Curious about what can be done with the TS-820 when connected to a Mac/PC

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 21:09:18 UTC
From: Jerry Barr
Topic: 42756 Message: 42767

well i dont have the 820 but my understanding is u can use the phone patch for rtty and thusly maybe for psk etc thru a program like hrd/ but like someone said use audio transformers for coupling or the ic,s that couple with photocells and such dont need to use thr hrd radio control since the 820 has none/ gosh getting old cant remember the ic's name or number lm 410 417 /opto isolaters thas it gezz old sucks

Jerry KJ6NTL

From: Mike <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 11, 2013 1:59 PM
Subject: Re: [TS-520_820_530_830] Curious about what can be done with the TS-820 when connected to a Mac/PC

Jerry,

The TS-820 has both Phone Patch IN and Phone Patch OUT sockets on the
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Mike W5RKL

On 6/11/2013 3:31 PM, Jerry Barr wrote:
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> To: mailto:TS-520_820_530_830%40yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Tuesday, June 11, 2013 11:47 AM
> Subject: [TS-520_820_530_830] Curious about what can be done with the
> TS-820 when connected to a Mac/PC
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> I'm investigating what can be done when connected to a PC with my
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> connected, but what can I enjoy with the 820? Very remedial question,
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42768. Re: [TS-520_820_530_830] Curious about what can be done with the TS-820 when connected to a Mac/PC

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 21:12:41 UTC
From: Cliff White
Topic: 42756 Message: 42768

I use the phone patch all the time for PSK31. I just run straight cables from the computer to the radio. I use fldigi for the software. The only tricky part is the stability of the VFO, I'm considering buying a crystal for the PSK frequency to lock it down.

Respectfully,
Cliff White, W5CNW
w5cnw@... <mailto:w5cnw@...>
On 06/11/2013 04:09 PM, Jerry Barr wrote:
> well i dont have the 820 but my understanding is u can use the phone patch for rtty and thusly maybe for psk etc thru a program like hrd/ but like someone said use audio transformers for coupling or the ic,s that couple with photocells and such dont need to use thr hrd radio control since the 820 has none/ gosh getting old cant remember the ic's name or number lm 410 417 /opto isolaters thas it gezz old sucks
>
>
> Jerry KJ6NTL
>
> From: Mike <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tuesday, June 11, 2013 1:59 PM
> Subject: Re: [TS-520_820_530_830] Curious about what can be done with the TS-820 when connected to a Mac/PC
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>
> Jerry,
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> The TS-820 has both Phone Patch IN and Phone Patch OUT sockets on the
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42769. Re: [TS-520_820_530_830] Curious about what can be done with the TS-820 when connected to a Mac/PC

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 21:32:45 UTC
From: Jerry Barr
Topic: 42756 Message: 42769

i have heard many say that run the cables direct /but i also heard lots of issues with ground loops so u need the isolation/ they knocked out my brand new ts 2000
but luckily they replaced the radio/after that always use isolation

Jerry KJ6NTL

From: Cliff White <cn.white@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 11, 2013 2:12 PM
Subject: Re: [TS-520_820_530_830] Curious about what can be done with the TS-820 when connected to a Mac/PC

I use the phone patch all the time for PSK31. I just run straight cables
from the computer to the radio. I use fldigi for the software. The only
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> Jerry KJ6NTL
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> From: Mike <mailto:w5rkl%40yahoo.com>
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Tuesday, June 11, 2013 1:59 PM
> Subject: Re: [TS-520_820_530_830] Curious about what can be done with the TS-820 when connected to a Mac/PC
>
>
> Jerry,
>
> The TS-820 has both Phone Patch IN and Phone Patch OUT sockets on the
> rear panel. See theTS- 820's operator's manual, page 14 and 23 for
> details on using these sockets.
>
> 73
> Mike W5RKL

>
> On 6/11/2013 3:31 PM, Jerry Barr wrote:
>> does the 820 have a phone patch setup
>>
>> Jerry KJ6NTL
>>
>> From: Barry <mailto:bonnevilleblb%40yahoo.com <mailto:bonnevilleblb%40yahoo.com>>
>> To: mailto:TS-520_820_530_830%40yahoogroups.com
>> <mailto:TS-520_820_530_830%40yahoogroups.com>
>> Sent: Tuesday, June 11, 2013 11:47 AM
>> Subject: [TS-520_820_530_830] Curious about what can be done with the
>> TS-820 when connected to a Mac/PC
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>> I'm investigating what can be done when connected to a PC with my
>> TS-820. I know the newer radios have data cables, etc. that can be
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>> the right direction.
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>> I even have the first PowerMac 6100 that I bought in 1995. I paid
>> $6500 for it and for the Adobe graphics programs that I needed to get
>> up and going in Graphic Design, and rather than sell it for $20 I've
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42770. Re: [TS-520_820_530_830] Curious about what can be done with the TS-820 when connected to a Mac/PC

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 21:37:01 UTC
From: Mike
Topic: 42756 Message: 42770

That's what a lot of hams do, order a crystal and select "FIX" on the
FUNCTION switch.

The crystal, when installed and selected, replaces the VFO. The
operator's manual has the formula for calculating the crystal frequency.

For example, if one wanted to transmit and receive, crystal control
(Function switch FIX position) on 20 meters at 14.070Mhz, the crystal
frequency would be 5.430Mhz. The formula and simple examples are on page
21 in the TS-820 operator's manual.

The "5.5" in the following example is the VFO's output frequency at the
bottom of ALL bands. The "14" is the Band Switch setting for 20 meters.
The "14.070" is the transmit and receive frequency you plan on using.
The same crystal can be used on other bands as well, again, see the
operator's manual for details. The crystal frequency ranges are from
5.500Mhz to 4.999Mhz, same frequency range the internal and external
VFO's operate on, regardless of the band switch setting.

5.5 + 14 - 14.070 = 5.43Mhz

When using "FIX", the internal VFO is "disabled" in both transmit and
receive. The crystal controls both transmit and receive.

International Crystals in Oklahoma City, OK can provide the crystal.
They have an 800 number and they take all major credit cards.

http://www.icmfg.com/hamradio.html

73
Mike W5RKL

On 6/11/2013 4:12 PM, Cliff White wrote:
>
> I use the phone patch all the time for PSK31. I just run straight cables
> from the computer to the radio. I use fldigi for the software. The only
> tricky part is the stability of the VFO, I'm considering buying a
> crystal for the PSK frequency to lock it down.
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> Respectfully,
> Cliff White, W5CNW
> w5cnw@... <mailto:w5cnw%40arrl.net> <mailto:w5cnw@...
> <mailto:w5cnw%40arrl.net>>
> On 06/11/2013 04:09 PM, Jerry Barr wrote:
> > well i dont have the 820 but my understanding is u can use the phone
> patch for rtty and thusly maybe for psk etc thru a program like hrd/

> but like someone said use audio transformers for coupling or the ic,s
> that couple with photocells and such dont need to use thr hrd radio
> control since the 820 has none/ gosh getting old cant remember the
> ic's name or number lm 410 417 /opto isolaters thas it gezz old sucks
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> > Sent: Tuesday, June 11, 2013 1:59 PM
> > Subject: Re: [TS-520_820_530_830] Curious about what can be done
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42771. Re: [TS-520_820_530_830] Curious about what can be done with the TS-820 when connected to a Mac/PC

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 21:42:30 UTC
From: Mike
Topic: 42756 Message: 42771

The sound card circuits are simple and easy to build. The parts can be purchased from Mouser or on eBay and built on a Radio Shack solder perf board. No power is required if VOX is used to key the transmitter. There are websites that show simple sound card audio interface circuits.

73
Mike W5RKL

On 6/11/2013 4:32 PM, Jerry Barr wrote:
>
> i have heard many say that run the cables direct /but i also heard
> lots of issues with ground loops so u need the isolation/ they knocked
> out my brand new ts 2000
> but luckily they replaced the radio/after that always use isolation
>
> Jerry KJ6NTL
>
> From: Cliff White <cn.white@...
> <mailto:cn.white%40sunbelt-plb.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Tuesday, June 11, 2013 2:12 PM
> Subject: Re: [TS-520_820_530_830] Curious about what can be done with
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> I use the phone patch all the time for PSK31. I just run straight cables
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> tricky part is the stability of the VFO, I'm considering buying a
> crystal for the PSK frequency to lock it down.
>
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> Cliff White, W5CNW
> mailto:w5cnw%40arrl.net <mailto:mailto:w5cnw%40arrl.net>
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> but like someone said use audio transformers for coupling or the ic,s
> that couple with photocells and such dont need to use thr hrd radio
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> >
> > Jerry KJ6NTL

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> > From: Mike <mailto:w5rkl%40yahoo.com>
> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > Sent: Tuesday, June 11, 2013 1:59 PM
> > Subject: Re: [TS-520_820_530_830] Curious about what can be done
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> >> Sent: Tuesday, June 11, 2013 11:47 AM
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> >> TS-820 when connected to a Mac/PC
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42772. Re: Curious about what can be done with the TS-820 when connected to a Mac/PC

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-11 22:49:17 UTC
From: kd8hmo_us
Topic: 42756 Message: 42772

I am thinking about doing this with my 520S too. Do I have to order a crystal using the formula for CW or USB?

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> That's what a lot of hams do, order a crystal and select "FIX" on the
> FUNCTION switch.
>
> The crystal, when installed and selected, replaces the VFO. The
> operator's manual has the formula for calculating the crystal frequency.
>
> For example, if one wanted to transmit and receive, crystal control
> (Function switch FIX position) on 20 meters at 14.070Mhz, the crystal
> frequency would be 5.430Mhz. The formula and simple examples are on page
> 21 in the TS-820 operator's manual.
>
> The "5.5" in the following example is the VFO's output frequency at the
> bottom of ALL bands. The "14" is the Band Switch setting for 20 meters.
> The "14.070" is the transmit and receive frequency you plan on using.
> The same crystal can be used on other bands as well, again, see the
> operator's manual for details. The crystal frequency ranges are from
> 5.500Mhz to 4.999Mhz, same frequency range the internal and external
> VFO's operate on, regardless of the band switch setting.
>
> 5.5 + 14 - 14.070 = 5.43Mhz
>
> When using "FIX", the internal VFO is "disabled" in both transmit and
> receive. The crystal controls both transmit and receive.
>
> International Crystals in Oklahoma City, OK can provide the crystal.
> They have an 800 number and they take all major credit cards.
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> http://www.icmfg.com/hamradio.html
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> > > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Tuesday, June 11, 2013 1:59 PM
> > > Subject: Re: [TS-520_820_530_830] Curious about what can be done
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> > > The TS-820 has both Phone Patch IN and Phone Patch OUT sockets on the
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> > > details on using these sockets.
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42773. Re: [TS-520_820_530_830] Re: Curious about what can be done with the TS-820 when connected to a Mac/PC

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-12 12:31:20 UTC
From: Mike
Topic: 42756 Message: 42773

Common sense would say you order the crystal in the MODE you operate in.
If you operate in USB then use the USB formula, LSB use the LSB formula.
The crystal, regardless what position the FUNCTION switch crystal
control setting is set to, replaces the VFO.

The Function switch crystal control settings operate as follows:

FIX = crystal control in both receive AND transmit
FIX R= crystal control in receive, VFO control in transmit
VFO R = crystal control in transmit, VFO control in receive

Once the Function switch is set to the desired position, the FIX Channel
crystal select switch determines which crystal is used. Naturally, the
operator should remember what socket the crystal they want is plugged
into. All of this is discussed in the 520 operator's manual.

73
Mike W5RKL

On 6/11/2013 5:49 PM, kd8hmo_us wrote:
>
> I am thinking about doing this with my 520S too. Do I have to order a
> crystal using the formula for CW or USB?
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> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@...> wrote:
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42774. BS-8 conversion to BS-5

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-12 13:28:14 UTC
From: n3kvl
Topic: 42774 Message: 42774

Hello All,

I am about to buy the parts necessary to convert the BS-* to the BS-5 spec for use with my TS520S.

I don't seem to be able to find a part a Kenwood p/n L31-0286-05.

This part comes up in a search with a part company http://www.pacparts.com/

Anyone have any luck with this seller?

Thanks
Archie

42775. Re: [TS-520_820_530_830] Re: Curious about what can be done with the TS-820 when connected to a Mac/PC

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-12 13:38:56 UTC
From: Mike
Topic: 42756 Message: 42775

For those who are deciding what formula to use when ordering a crystal
for FIX'd operation using your TS-520 or TS-820 on "PSK-31", the
following is provided.

BPSK-31, the typical PSK-31 mode used today, doesn't matter what
sideband you are using. You can operate on LSB even if the other BPSK31
station(s) are operating on USB and neither one will know the difference
unless you tell them.

QPSK, on the other hand, requires that BOTH stations use the same
sideband. If one station is using LSB and the other station is using
USB, they will not be able to communicate. For the 2 stations to
communicate using QPSK-31, they both MUST use the same sideband, USB/USB
or LSB/LSB.

Simply select the desired/required sideband Mode and configure your
sound card software accordingly and have fun.

73
Mike W5RKL

On 6/11/2013 5:49 PM, kd8hmo_us wrote:
>
> I am thinking about doing this with my 520S too. Do I have to order a
> crystal using the formula for CW or USB?
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@...> wrote:
> >
> > That's what a lot of hams do, order a crystal and select "FIX" on the
> > FUNCTION switch.
> >
> > The crystal, when installed and selected, replaces the VFO. The
> > operator's manual has the formula for calculating the crystal frequency.
> >
> > For example, if one wanted to transmit and receive, crystal control
> > (Function switch FIX position) on 20 meters at 14.070Mhz, the crystal
> > frequency would be 5.430Mhz. The formula and simple examples are on
> page
> > 21 in the TS-820 operator's manual.
> >
> > The "5.5" in the following example is the VFO's output frequency at the
> > bottom of ALL bands. The "14" is the Band Switch setting for 20 meters.
> > The "14.070" is the transmit and receive frequency you plan on using.
> > The same crystal can be used on other bands as well, again, see the

> > operator's manual for details. The crystal frequency ranges are from
> > 5.500Mhz to 4.999Mhz, same frequency range the internal and external
> > VFO's operate on, regardless of the band switch setting.
> >
> > 5.5 + 14 - 14.070 = 5.43Mhz
> >
> > When using "FIX", the internal VFO is "disabled" in both transmit and
> > receive. The crystal controls both transmit and receive.
> >
> > International Crystals in Oklahoma City, OK can provide the crystal.
> > They have an 800 number and they take all major credit cards.
> >
> > http://www.icmfg.com/hamradio.html
> >
> > 73
> > Mike W5RKL
> >
> >
> >
> > On 6/11/2013 4:12 PM, Cliff White wrote:
> > >
> > > I use the phone patch all the time for PSK31. I just run straight
> cables
> > > from the computer to the radio. I use fldigi for the software. The
> only
> > > tricky part is the stability of the VFO, I'm considering buying a
> > > crystal for the PSK frequency to lock it down.
> > >
> > > Respectfully,
> > > Cliff White, W5CNW
> > > w5cnw@... <mailto:w5cnw%40arrl.net> <mailto:w5cnw@...
> > > <mailto:w5cnw%40arrl.net>>
> > > On 06/11/2013 04:09 PM, Jerry Barr wrote:
> > > > well i dont have the 820 but my understanding is u can use the
> phone
> > > patch for rtty and thusly maybe for psk etc thru a program like hrd/
> > > but like someone said use audio transformers for coupling or the ic,s
> > > that couple with photocells and such dont need to use thr hrd radio
> > > control since the 820 has none/ gosh getting old cant remember the
> > > ic's name or number lm 410 417 /opto isolaters thas it gezz old sucks
> > > >
> > > >
> > > > Jerry KJ6NTL
> > > >
> > > > From: Mike <w5rkl@... <mailto:w5rkl%40yahoo.com>>
> > > > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > Sent: Tuesday, June 11, 2013 1:59 PM
> > > > Subject: Re: [TS-520_820_530_830] Curious about what can be done

> > > with the TS-820 when connected to a Mac/PC
> > > >
> > > >
> > > > Jerry,
> > > >
> > > > The TS-820 has both Phone Patch IN and Phone Patch OUT sockets
> on the
> > > > rear panel. See theTS- 820's operator's manual, page 14 and 23 for
> > > > details on using these sockets.
> > > >
> > > > 73
> > > > Mike W5RKL
> > > >
> > > > On 6/11/2013 3:31 PM, Jerry Barr wrote:
> > > >> does the 820 have a phone patch setup
> > > >>
> > > >> Jerry KJ6NTL
> > > >>
> > > >> From: Barry <mailto:bonnevilleblb%40yahoo.com
> > > <mailto:bonnevilleblb%40yahoo.com>>
> > > >> To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >> Sent: Tuesday, June 11, 2013 11:47 AM
> > > >> Subject: [TS-520_820_530_830] Curious about what can be done
> with the
> > > >> TS-820 when connected to a Mac/PC
> > > >>
> > > >>
> > > >> I'm investigating what can be done when connected to a PC with my
> > > >> TS-820. I know the newer radios have data cables, etc. that can be
> > > >> connected, but what can I enjoy with the 820? Very remedial
> question,
> > > >> I know, but I can tell you guys know your stuff and can point me in
> > > >> the right direction.
> > > >>
> > > >> I even have the first PowerMac 6100 that I bought in 1995. I paid
> > > >> $6500 for it and for the Adobe graphics programs that I needed
> to get
> > > >> up and going in Graphic Design, and rather than sell it for $20
> I've
> > > >> just kept it at home.
> > > >>
> > > >> I'd connect it if feasible just to have something to decode
> Morse code
> > > >> and anything else I can do with it, but I'll hook up a new(er)
> > > >> computer to get more features. Just curious to see what you guys
> > > >> think. Thanks,
> > > >>
> > > >> Barry
> > > >>

> > > >> ----------
> > > >>
> > > >> Jeremiah 29:11-13 / John 3:16
> > > >>
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42776. Re: [TS-520_820_530_830] Re: Curious about what can be done with the TS-820 when connected to a Mac/PC

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-13 00:16:59 UTC
From: Wes Will
Topic: 42756 Message: 42776

On 06/12/2013 07:31 AM, Mike wrote:
> Naturally,the operator should remember what socket the crystal they want is plugged

"Remembering" it is a great way to have to yank the cover off every now
and again to look inside to see which crystal is where.

WRITING IT DOWN somewhere, like a log book or such, is another possible
option which might save some wear and tear on the case screws, don't you
think?

<-;

--
Wes Will
N9KDY

42777. FS TS830s w/MC-50 Mic

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-13 12:21:50 UTC
From: w0szv
Topic: 42777 Message: 42777

I have a nice working TS830s woth MC50 mice for sale all original , only mod was to cut the wire to allow the WARK bands to work. does NOT have the extra CW filter. Asking $400.00 plus shipping. please contact off list if interested. My address is good in QRZ.
thanks
Eldon
w0szv

42778. Re: FS TS830s w/MC-50 Mic

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-13 13:42:56 UTC
From: w0szv
Topic: 42777 Message: 42778

The rig is sold. Thanks to all of those who inquired about it.
Eldon
w0szv

--- In TS-520_820_530_830@yahoogroups.com, "w0szv" <skip4450@...> wrote:
>
> I have a nice working TS830s woth MC50 mice for sale all original , only mod was to cut the wire to allow the WARK bands to work. does NOT have the extra CW filter. Asking $400.00 plus shipping. please contact off list if interested. My address is good in QRZ.
> thanks
> Eldon
> w0szv
>

42779. "New"TS-530S dead on 3 bands

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-13 15:03:13 UTC
From: Craig Roberts
Topic: 42777 Message: 42779

I've apparently become an addict. Not satisfied with my nicely working (except for a glitchy VOX) TS-530S, I acquired another one. As you will soon understand, I couldn't pass this one up. It arrived in its original, unmolested boxes (outer and inner) and appears to have been used very little, if at all. There's not a mark on it, inside or out. And that, predictably, is the problem.

The radio works fine on 80, 20 and 15 with full output. On 160, 40 and 10, however, the thing's stone cold dead. (I didn't check out the WARC bands, come to think of it). Nothing, nada, zip, zero on receive and transmit. Given the fact that this rig apparently sat on a shelf for nigh onto 30 years, I suspect tarnished bandswitch contacts or some such. Is there anything else that might cause this anomaly and are all the contacts I need to attend to accessible without undue disassembly of the radio? I'm not afraid of diving in, but saving time and effort is attractive.

Thanks and 73,

Craig
W3CRR

[Non-text portions of this message have been removed]

42780. 820 No ALC on 28-29

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-13 10:19:06 UTC
From: contactsherwood
Topic: 42780 Message: 42780

Hi have a 820 with DG-1 fitted.

Fault is at TUNE up - 1.8 3.5 7 14 21 are great. great ALC peak & IP Dip.
Switch to any 10 meter no ALC. Digital display OK when cold but all over the shop when warm - Transmit Freq rock sold on HP Counter - not to fussed about it at this stage - it is isolated from radio for now.
Any pointers on where to start - I'm thinking my 10m band crystal osc are not firing up.
Radio has new driver and finals and nuetralised on 10m earlier this.

Stuart
VK4HDA

42781. Re: [TS-520_820_530_830] 820 No ALC on 28-29

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-13 16:10:16 UTC
From: Dale Parfitt
Topic: 42780 Message: 42781

Can you hear the 10M oscillator when you couple a general coverage RX into that area?

Dale W4OP
----- Original Message -----
From: contactsherwood
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, June 13, 2013 6:19 AM
Subject: [TS-520_820_530_830] 820 No ALC on 28-29

Hi have a 820 with DG-1 fitted.

Fault is at TUNE up - 1.8 3.5 7 14 21 are great. great ALC peak & IP Dip.
Switch to any 10 meter no ALC. Digital display OK when cold but all over the shop when warm - Transmit Freq rock sold on HP Counter - not to fussed about it at this stage - it is isolated from radio for now.
Any pointers on where to start - I'm thinking my 10m band crystal osc are not firing up.
Radio has new driver and finals and nuetralised on 10m earlier this.

Stuart
VK4HDA

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.2904 / Virus Database: 3199/6404 - Release Date: 06/12/13

[Non-text portions of this message have been removed]

42782. Re: [TS-520_820_530_830] "New"TS-530S dead on 3 bands

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-13 16:30:00 UTC
From: Joseph Stiles
Topic: 42777 Message: 42782

Craig,

The rig should STILL receive the "WARC" bands...it will not transmit.on them until either way of activating them is done.

I suspect that you have no/poor contact on one or more of the "band switch wafers," due to oxidation...common problem. The first thing you should do is obtain a good contact cleaner/lube...I use DEOXIT D5 and some "canned air" or "air duster" to blow off the residue...others have their favorites. Remove the top and bottom covers...do this with power OFF and rig UNPLUGGED!!! Remove the screws holding the cover over the final amplifier cage. Short to ground from the top of the plate choke...that tall white ceramic do-hicky...with the fine wire wrapping on it...it between both final amp tubes. USE INSULATED TOOL!! Then check with volt meter...to make sure that there is NO voltage...otherwise you'll get a rather shocking surprise. Remove both final amp tubes. Use cleaner/lube according to directions on the "wafers" on the RF board and in the final cage. Rotate switch through its travel numerous times...spray cleaner/lube again...rotate band switch through travel...blow off all wafers...Make sure all of what ever you may use has evaporated...some of the cleaner/lube stuff is flammable!

73 Joe
WB7UQU

From: Craig Roberts <crgrbrts@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, June 13, 2013 8:03 AM
Subject: [TS-520_820_530_830] "New"TS-530S dead on 3 bands

I've apparently become an addict. Not satisfied with my nicely working (except for a glitchy VOX) TS-530S, I acquired another one. As you will soon understand, I couldn't pass this one up. It arrived in its original, unmolested boxes (outer and inner) and appears to have been used very little, if at all. There's not a mark on it, inside or out. And that, predictably, is the problem.

The radio works fine on 80, 20 and 15 with full output. On 160, 40 and 10, however, the thing's stone cold dead. (I didn't check out the WARC bands, come to think of it). Nothing, nada, zip, zero on receive and transmit. Given the fact that this rig apparently sat on a shelf for nigh onto 30 years, I suspect tarnished bandswitch contacts or some such. Is there anything else that might cause this anomaly and are all the contacts I need to attend to accessible without undue disassembly of the radio? I'm not afraid of diving in, but saving time and effort is attractive.

Thanks and 73,

Craig
W3CRR

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[Non-text portions of this message have been removed]

42783. Re: [TS-520_820_530_830] "New"TS-530S dead on 3 bands

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-13 16:46:04 UTC
From: Craig Roberts
Topic: 42777 Message: 42783

I suspected as much. Thank you, Joe.

As for HV precautions, I appreciate you reiterating them. I used to repair CRT-type televisions so I know ALL about the dangers of muscular currents -- but it never hurts (literally) to be reminded.

Here's an entry in DL9AI's online "Kenwood TS-830 Survival Guide" that may prove useful to me as well as the correspondent with the ALC glitch on 10 meters. I just discovered this great resource a few minutes ago:

/Problem: Intermittent ALC indication [TX] on only one band /

/The bandswitch is usually the culprit. This occurs most often on the 7 MHz band-switch position, on the two, rear-most bandswitch sections in the RF Unit. /
/
Cause: The bandswitch (also) has dissimilar-metal crimp-connections that turn into semi-insulators due to electrolysis. This takes place between the bandswitch's riveted-on,, tin-plated, stationary contacts and the copper-foil on the printed circuit board [PCB]. /
/
Fix: Apply a small amount of conductive-paint where the stationary switch contact touches the copper-foil on the PCB. The conductive-paint will be drawn, by capillary-action, into the problemarea where the two, dissimilar-metals touch each other.
/

Anybody tried this?

[Non-text portions of this message have been removed]

42784. Re: [TS-520_820_530_830] "New"TS-530S dead on 3 bands

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-13 17:26:11 UTC
From: Joe - W7RKN
Topic: 42777 Message: 42784

There is a rule I ***follow*** when working with high voltage....and it has saved my bacon several times...The good old
'one hand rule . When working in or around high voltage, **ALWAYS** keep one hand behind your back! The theory behind this rule (From my commercial FM station engineering days!) is to be dangerous, voltage has to flow through you...if it does, it can affect your heart...and it usually stops it..ie: death. If you get hit only on one hand...your arm may go numb (read dead!), and you may suffer some pretty serious burns, but you will be alive to do it again!

Joe - W7RKN

----- Original Message -----
From: "Craig Roberts" <crgrbrts@...>
Subject: Re: [TS-520_820_530_830] "New"TS-530S dead on 3 bands

> As for HV precautions, I appreciate you reiterating them. I used to
> repair CRT-type televisions so I know ALL about the dangers of muscular
> currents -- but it never hurts (literally) to be reminded.

[Non-text portions of this message have been removed]

42785. Re: [TS-520_820_530_830] "New"TS-530S dead on 3 bands

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-13 17:29:37 UTC
From: John Schroeder
Topic: 42777 Message: 42785

DO IT AGAIN!!!??? I think once would be more than enough for me! John ... KB9PBM ...

From: Joe - W7RKN <w7rkn.7@gmail.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, June 13, 2013 12:26 PM
Subject: Re: [TS-520_820_530_830] "New"TS-530S dead on 3 bands

There is a rule I ***follow*** when working with high voltage....and it has saved my bacon several times...The good old
'one hand rule . When working in or around high voltage, **ALWAYS** keep one hand behind your back! The theory behind this rule (From my commercial FM station engineering days!) is to be dangerous, voltage has to flow through you...if it does, it can affect your heart...and it usually stops it..ie: death. If you get hit only on one hand...your arm may go numb (read dead!), and you may suffer some pretty serious burns, but you will be alive to do it again!

Joe - W7RKN

----- Original Message -----
From: "Craig Roberts" <mailto:crgrbrts%40verizon.net>
Subject: Re: [TS-520_820_530_830] "New"TS-530S dead on 3 bands

> As for HV precautions, I appreciate you reiterating them. I used to
> repair CRT-type televisions so I know ALL about the dangers of muscular
> currents -- but it never hurts (literally) to be reminded.

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

42786. Re: [TS-520_820_530_830] "New"TS-530S dead on 3 bands

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-13 17:48:46 UTC
From: Joe - W7RKN
Topic: 42777 Message: 42786

I have been working with high voltage for nie on 60 years....TV's, amplifiers, (both amateur and commercial) and old tube type radios. One is gonna get hit, at least a few times in their life...don't know of a tech that hasn't, and if a tech has been involved with H.V. as long as I have, and they try and tell me they have never experienced the 'tingle', I will say they are full of shite! <<GRIN>>

Joe - W7RKN

----- Original Message -----
From: "John Schroeder" <dmir2001@...>
Subject: Re: [TS-520_820_530_830] "New"TS-530S dead on 3 bands

DO IT AGAIN!!!??? I think once would be more than enough for me! John ... KB9PBM ...

42787. Re: [TS-520_820_530_830] "New"TS-530S dead on 3 bands

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-13 17:52:42 UTC
From: John Schroeder
Topic: 42777 Message: 42787

Thanks Joe:

I tend to stay away from the HV stuff... However, Am going to have to do something with my Valiant... Heard a crack, then the fuse blew... Haven't taken it apart yet... Guess I would rather sell it, "as is"... Takes up way too much room on the desk... Very 73 ... John ... KB9PBM ...

From: Joe - W7RKN <w7rkn.7@...m>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, June 13, 2013 12:48 PM
Subject: Re: [TS-520_820_530_830] "New"TS-530S dead on 3 bands

I have been working with high voltage for nie on 60 years....TV's, amplifiers, (both amateur and commercial) and old tube type radios. One is gonna get hit, at least a few times in their life...don't know of a tech that hasn't, and if a tech has been involved with H.V. as long as I have, and they try and tell me they have never experienced the 'tingle', I will say they are full of shite! <<GRIN>>

Joe - W7RKN

----- Original Message -----
From: "John Schroeder" <mailto:dmir2001%40yahoo.com>
Subject: Re: [TS-520_820_530_830] "New"TS-530S dead on 3 bands

DO IT AGAIN!!!??? I think once would be more than enough for me! John ... KB9PBM ...

[Non-text portions of this message have been removed]

42788. Re: [TS-520_820_530_830] "New"TS-530S dead on 3 bands

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-13 18:17:51 UTC
From: Jim S
Topic: 42777 Message: 42788

We used to call it the "left hand in pocket" rule, for all the reasons
below!

Jim AG3Y

On 6/13/2013 1:26 PM, Joe - W7RKN wrote:
>
> There is a rule I ***follow*** when working with high voltage....and
> it has saved my bacon several times...The good old
> 'one hand rule . When working in or around high voltage, **ALWAYS**
> keep one hand behind your back! The theory behind this rule (From my
> commercial FM station engineering days!) is to be dangerous, voltage
> has to flow through you...if it does, it can affect your heart...and
> it usually stops it..ie: death. If you get hit only on one hand...your
> arm may go numb (read dead!), and you may suffer some pretty serious
> burns, but you will be alive to do it again!
>
> Joe - W7RKN
>
> ----- Original Message -----
> From: "Craig Roberts" <crgrbrts@...
> <mailto:crgrbrts%40verizon.net>>
> Subject: Re: [TS-520_820_530_830] "New"TS-530S dead on 3 bands
>
> > As for HV precautions, I appreciate you reiterating them. I used to
> > repair CRT-type televisions so I know ALL about the dangers of muscular
> > currents -- but it never hurts (literally) to be reminded.
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

42789. Re: [TS-520_820_530_830] "New"TS-530S dead on 3 bands

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-13 18:18:10 UTC
From: Joe - W7RKN
Topic: 42777 Message: 42789

Heh.......

I worked with a fellow once, that you learned very quickly, that if he was under the hood of a car, and it was running, you kept an arm's length away from him. He would grab a spark plug and then grab you as you walked by. I can assure you, it was an uplifting...no...HAIR-RAISING, experience!

Joe - W7RKN
----- Original Message -----
From: Craig Roberts
Subject: Re: [TS-520_820_530_830] "New"TS-530S dead on 3 bands

Thanks to his other two vocations, my uncle's hands were so thickly calloused that he could (and did) handle 120 and even 220 volt live wires with little apparent distress. In fact, he would test live circuits by touching contacts and wires to detect the tell-tale "tingle." They were of such a minor nature to him that he would re-wire switches and sockets without cutting power to them, though -- to be fair -- while warning me strongly not to follow suit.

[Non-text portions of this message have been removed]

42790. Re: [TS-520_820_530_830] "New"TS-530S dead on 3 bands

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-13 18:02:23 UTC
From: Craig Roberts
Topic: 42777 Message: 42790

My late, favorite uncle was a farmer, carpenter and electrician --
highly experienced and skilled in all three disciplines. He taught me
basic electrical theory and household wiring when I was about 10 or so,
cautioning me repeatedly about the magic force's dangers. In practice,
however, his methods were of the "do as I say, not as I do" variety.
Thanks to his other two vocations, my uncle's hands were so thickly
calloused that he could (and did) handle 120 and even 220 volt live
wires with little apparent distress. In fact, he would test live
circuits by touching contacts and wires to detect the tell-tale
"tingle." They were of such a minor nature to him that he would re-wire
switches and sockets without cutting power to them, though -- to be fair
-- while warning me strongly not to follow suit.

Nevertheless (and predictably) I was determined to imitate my hero and
so -- well -- you can guess...

I did this exactly once! That is not to say that I haven't been bitten
a few times since, but certainly not so deliberately.

73,

Craig
W3CRR
> <http://groups.yahoo.com/;_ylc=X3oDMTJkOHFnMHJsBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc
3BJZAMxNzA1MDYzMTA4BHNlYwNmdHIEc2xrA2dmcARzdGltZQMxMzcxMTQ1NzI2>
>
> Switch to: Text-Only
> <mailto:TS-520_820_530_830-traditional@yahoogroups.com?subject=Change%20Delivery%20Forma
t:%20Traditional>,
> Daily Digest
> <mailto:TS-520_820_530_830-digest@yahoogroups.com?subject=Email%20Delivery:%20Digest>
> . Unsubscribe
> <mailto:TS-520_820_530_830-unsubscribe@yahoogroups.com?subject=Unsubscribe>
> . Terms of Use <http://docs.yahoo.com/info/terms/> . Send us Feedback
> <mailto:ygroupsnotifications@yahoogroups.com?subject=Feedback%20on%20the%20redesigned%20
individual%20mail%20v1>
> .
>
>

[Non-text portions of this message have been removed]

42791. Re: [TS-520_820_530_830] "New"TS-530S dead on 3 bands

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-13 19:57:29 UTC
From: Bob Lazarow
Topic: 42777 Message: 42791

re: That fellow who complained about being "flamed" - imagine how ANY of us would feel when dealing with unknown strangers, us giving advice without knowing their skills, tools, or background, if we DIDN'T warn about lethal HV techniques, and then heard about an"SK" or other serious accident happening?

My mother used to say" a wise man can learn from a fool; a fool can't learn from anyone"...if the shoe fits... Better SAFE than sorry..... My thanks to Terry, Mike, and all of the others who help us in this group, even if it's only to remind me of something I knew all about 50+ years ago, when ALL rigs had HV!!!

Bob / WA2JAJ

On 6/13/2013 2:17 PM, Jim S wrote:
>
> We used to call it the "left hand in pocket" rule, for all the reasons
> below!
>
> Jim AG3Y
>
> On 6/13/2013 1:26 PM, Joe - W7RKN wrote:
> >
> > There is a rule I ***follow*** when working with high voltage....and
> > it has saved my bacon several times...The good old
> > 'one hand rule . When working in or around high voltage, **ALWAYS**
> > keep one hand behind your back! The theory behind this rule (From my
> > commercial FM station engineering days!) is to be dangerous, voltage
> > has to flow through you...if it does, it can affect your heart...and
> > it usually stops it..ie: death. If you get hit only on one hand...your
> > arm may go numb (read dead!), and you may suffer some pretty serious
> > burns, but you will be alive to do it again!
> >
> > Joe - W7RKN
> >
> > ----- Original Message -----
> > From: "Craig Roberts" <crgrbrts@...
> <mailto:crgrbrts%40verizon.net>
> > <mailto:crgrbrts%40verizon.net>>
> > Subject: Re: [TS-520_820_530_830] "New"TS-530S dead on 3 bands
> >
> > > As for HV precautions, I appreciate you reiterating them. I used to
> > > repair CRT-type televisions so I know ALL about the dangers of
> muscular
> > > currents -- but it never hurts (literally) to be reminded.
> >

> > [Non-text portions of this message have been removed]
> >
> >
>
> [Non-text portions of this message have been removed]
>
>
>
> No virus found in this message.
> Checked by AVG - www.avg.com <http://www.avg.com>
> Version: 2013.0.3345 / Virus Database: 3199/6407 - Release Date: 06/13/13
>

[Non-text portions of this message have been removed]

42792. Re: 820 No ALC on 28-29

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-13 21:58:02 UTC
From: adrian.langford@ymail.com
Topic: 42780 Message: 42792

Hi Stuart

I have a 520SP which had same symptoms - ALC fine on all bands except 10m.

What transmit frequency do you see on the HP if you try to tune on 10m (I appreciate you don't have ALC to help set Drive, but you can get it close peaking background noise on receive)? What power out are you getting on 10m compared with other bands?

Terry K9TW here was incredibly helpful walking me through measurements to try to diagnose problem (I am an old electronics and radio hobbyist, but missed the valve era!). In my case though the problem was that the 28MHz drive coil on the RF coil board had ferrite slug in completely wrong position, near base of former. When I unscrewed the slug (having freed it up with tri-flo penetrant) and moved it up the former the ALC sprang to life. After peaking it I could get full scale ALC with the carrier just past the 12o'clock position. Before I was only getting a few watts RF out on 10m, but after aligning Drive coil I am getting around 100W.

Your issue may not be the same (another possibility is 12BY7A Driver which when it dies loses the 10m band first - I replaced mine when first trying to fix problem but of course made no difference) but worth checking that Drive coil. Make sure you have a correct plastic hex tool for the slugs.

73 Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "contactsherwood" <contactsherwood@...> wrote:
>
> Hi have a 820 with DG-1 fitted.
>
> Fault is at TUNE up - 1.8 3.5 7 14 21 are great. great ALC peak & IP Dip.
> Switch to any 10 meter no ALC. Digital display OK when cold but all over the shop when warm - Transmit Freq rock sold on HP Counter - not to fussed about it at this stage - it is isolated from radio for now.
> Any pointers on where to start - I'm thinking my 10m band crystal osc are not firing up. Radio has new driver and finals and nuetralised on 10m earlier this.
>
> Stuart
> VK4HDA
>

42793. Re: 820 No ALC on 28-29

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 00:49:51 UTC
From: Terry Wagoner
Topic: 42780 Message: 42793

Stuart:

Can you peak ALC with RX back ground noise or Marker signal and then load into dummy load for approx 80-100 watts out on any or all of the 10 meter bandswitch positions? Since you say TX frequency is rock solid you must have some RF output into dummy load on each of 10 meter bandswitch positions? If you have accurate TX output freq on all 10 meter bands you have to have some level of VCO signal at Transmit Mixer to mix with the TIF signal to produce the 10 meter TX signals.

If you had one 10 meter band position out I would suggest you look at the associated Het Osc crystal on the PD board. It is possible to have a bad xtal or bad solder connections at the xtal.

However very unlikely to have all the 10 meter Het Osc xtals to be bad. Need to ask yourself what is common and one thing would be 9 vdc switched to Conn PLL-3 from the bandswitch. Without good 9vdc at this connector you can have problems with these Het Oscillators and with B1 thru B4 feed to the Counter Assembly board. B1 thru B4 control the bandswitch filters at the output of the 2nd mixer on the counter assembly board. If B1 thru B4 are not getting approx 8.4 vdc they wont switch on the BPF switching diodes.

The required 9vdc comes from the wiper of the bandswitch S3 and is applied to each of the 10 meter switch contacts. Very unusual to have all the 10 meter bandswitch positions to have bad contacts. The wiper cant be bad as it also supplies the other bandswitch positions that you report as working.

You can measure the 9vdc at PLL-3 Pins 2 thru 5 and if low can temporarily apply 9vdc bench supply or transistor battery to see if it corrects the problem.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "contactsherwood" <contactsherwood@...> wrote:
>
> Hi have a 820 with DG-1 fitted.
>
> Fault is at TUNE up - 1.8 3.5 7 14 21 are great. great ALC peak & IP Dip.
> Switch to any 10 meter no ALC. Digital display OK when cold but all over the shop when warm - Transmit Freq rock sold on HP Counter - not to fussed about it at this stage - it is isolated from radio for now.
> Any pointers on where to start - I'm thinking my 10m band crystal osc are not firing up. Radio has new driver and finals and nuetralised on 10m earlier this.
>
> Stuart
> VK4HDA
>

42794. Re: TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 11:55:24 UTC
From: <tsnarcher@...>
Topic: 42650 Message: 42794

Good Morning All,

I finally had time to get back down to the shack, and do more testing, her is what I found>

I started by changing jumpers, and checking the dummy load., which is a 1 quart oil filled, paint can type.

SWR-1.02:1
Resistance-49.1 ohms

Everything seems ok there.

Initial rig settings:

Mode-Tune
Mic Gain 6
Car at 10 o'clock
AGC slow
Load CCW
Plate approx. band
Drive 12 O’clock

Checked bias-60 Ma

Tuning into the dummy load, staying in the “Tune” position.

Trying several different bands.

On 20m:

Drive-Peaks normally
Plate-Dips in the 12 m band range
Load- Peaks barely off of CCW

160 m

Drive peaks normally
Plate almost imperceptible dip way CCW
Load peaks at about 11 O’clock

80 m

Drive- In order to peak the drive Car needed to be raised to just barely past 12:00
Plate- No Dip
Load-Very little peak

40 m

Car up to 3 o’clock to get peak
Plate no dip at all

This is where I got nervous and just stopped. I know this is a lot of information, but does it seem to point in any direction to anyone?

Tom

[Non-text portions of this message have been removed]

42795. Re: TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 12:25:17 UTC
From: Terry Wagoner
Topic: 42650 Message: 42795

I think you are saying only tried loading in Tune Position. Is that correct?

If so, try in CW position. Just need to have meter on Ip position and hand on Plate Tune and tune to minimum plate current (dip) quickly. If you have high plate current and cant dip return to standby position quickly. Can reduce CAR Level and then try again,

If you can get normal loading in CW you may have problem with R15 56K ohm SG dropping resistor that supplies reduced screen grid voltage to your finals.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, <tsnarcher@...> wrote:
>
> Good Morning All,
>
> I finally had time to get back down to the shack, and do more testing, her is what I found>
>
> I started by changing jumpers, and checking the dummy load., which is a 1 quart oil filled, paint can type.
>
> SWR-1.02:1
> Resistance-49.1 ohms
>
> Everything seems ok there.
>
> Initial rig settings:
>
> Mode-Tune
> Mic Gain 6
> Car at 10 o'clock
> AGC slow
> Load CCW
> Plate approx. band
> Drive 12 Oâ□□clock
>
> Checked bias-60 Ma
>
> Tuning into the dummy load, staying in the â□□Tuneâ□□ position.
>
> Trying several different bands.
>
> On 20m:
>
> Drive-Peaks normally
> Plate-Dips in the 12 m band range
> Load- Peaks barely off of CCW

>
> 160 m
>
> Drive peaks normally
> Plate almost imperceptible dip way CCW
> Load peaks at about 11 Oâ□□clock
>
> 80 m
>
> Drive- In order to peak the drive Car needed to be raised to just barely past 12:00
> Plate- No Dip
> Load-Very little peak
>
> 40 m
>
> Car up to 3 oâ□□clock to get peak
> Plate no dip at all
>
> This is where I got nervous and just stopped. I know this is a lot of information, but does it seem to point in any direction to anyone?
>
> Tom
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

42796. Re: TS-530s Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 12:27:35 UTC
From: <tsnarcher@...>
Topic: 42650 Message: 42796

Thanks Terry I will give it a try, this has been very frustrating.

[Non-text portions of this message have been removed]

42797. Re: 820 No ALC on 28-29

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 12:28:48 UTC
From: Terry Wagoner
Topic: 42780 Message: 42797

I did not tell you to wiggle or unplug and plug PLL-3 connector on PD board because I believe you report normal 21mhz operation and the Het Osc for 15 meters gets its 9vdc from this same plug as all the 10 meter Het Osc do.

Terry K9TW

>

42798. Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 12:40:10 UTC
From: Terry Wagoner
Topic: 42798 Message: 42798

Hey Folks:

In the hospital here. Not by plan or desire! Looks like I am going to be a Coumadin man (rat poison! Better than the alternative!

My wife brought my lap top up last nite, but they are keeping me busy so I will be slowing down the help I can give for awhile. Hope to get out by Monday or so. Been here since Weds morning.

Very behind on my other email account messages and for those helping off list sorry I may have to wait until get home to resume our work together as I have no access to any of my notes so dont want to advise you strictly off top of my head.

Take care
73s Terry K9TW

42799. Re: [TS-520_820_530_830] Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 12:47:57 UTC
From: Louis Wilen
Topic: 42798 Message: 42799

Terry,

Please take it easy and get well quickly.

Best wishes for a speedy recovery,

Louis
W3LMW

From: Terry Wagoner
Sent: Friday, June 14, 2013 8:40 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Hospital

Hey Folks:

In the hospital here. Not by plan or desire! Looks like I am going to be a Coumadin man (rat poison! Better than the alternative!

My wife brought my lap top up last nite, but they are keeping me busy so I will be slowing down the help I can give for awhile. Hope to get out by Monday or so. Been here since Weds morning.

Very behind on my other email account messages and for those helping off list sorry I may have to wait until get home to resume our work together as I have no access to any of my notes so dont want to advise you strictly off top of my head.

Take care
73s Terry K9TW

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.3345 / Virus Database: 3199/6408 - Release Date: 06/13/13

[Non-text portions of this message have been removed]

42800. RE: [TS-520_820_530_830] Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 13:02:11 UTC
From: Rick
Topic: 42798 Message: 42800

Take care of yourself, Terry. Needless to say, you will be sorely missed, but your health is the most important issue at this time. Get well soon.

Rick/K5IAR

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
Sent: Friday, June 14, 2013 7:40 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Hospital

Hey Folks:

In the hospital here. Not by plan or desire! Looks like I am going to be a Coumadin man (rat poison! Better than the alternative!

My wife brought my lap top up last nite, but they are keeping me busy so I will be slowing down the help I can give for awhile. Hope to get out by Monday or so. Been here since Weds morning.

Very behind on my other email account messages and for those helping off list sorry I may have to wait until get home to resume our work together as I have no access to any of my notes so dont want to advise you strictly off top of my head.

Take care
73s Terry K9TW

[Non-text portions of this message have been removed]

42801. Re: [TS-520_820_530_830] Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 13:06:23 UTC
From: Jerry Barr
Topic: 42798 Message: 42801

hey Terry u focus on getting ureself better/ not fixing radios /they can wait / my prayers for u and yours

Jerry KJ6NTL

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, June 14, 2013 5:40 AM
Subject: [TS-520_820_530_830] Hospital

Hey Folks:

In the hospital here. Not by plan or desire! Looks like I am going to be a Coumadin man (rat poison! Better than the alternative!

My wife brought my lap top up last nite, but they are keeping me busy so I will be slowing down the help I can give for awhile. Hope to get out by Monday or so. Been here since Weds morning.

Very behind on my other email account messages and for those helping off list sorry I may have to wait until get home to resume our work together as I have no access to any of my notes so dont want to advise you strictly off top of my head.

Take care
73s Terry K9TW

[Non-text portions of this message have been removed]

42802. Re: [TS-520_820_530_830] Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 13:14:09 UTC
From: KB1TCD
Topic: 42798 Message: 42802

Terry,

Our prayers are with you!
Maybe your YL can sneak a radio in for you...

Best of 73

Jose Douglas KB1TCD

42803. Re: [TS-520_820_530_830] Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 13:15:36 UTC
From: Bob Lazarow
Topic: 42798 Message: 42803

Best wishes and Good Luck Terry

Bob /WA2JAJ

On 6/14/2013 8:40 AM, Terry Wagoner wrote:
>
> Hey Folks:
>
> In the hospital here. Not by plan or desire! Looks like I am going to
> be a Coumadin man (rat poison! Better than the alternative!
>
> My wife brought my lap top up last nite, but they are keeping me busy
> so I will be slowing down the help I can give for awhile. Hope to get
> out by Monday or so. Been here since Weds morning.
>
> Very behind on my other email account messages and for those helping
> off list sorry I may have to wait until get home to resume our work
> together as I have no access to any of my notes so dont want to advise
> you strictly off top of my head.
>
> Take care
> 73s Terry K9TW
>
>
>
> No virus found in this message.
> Checked by AVG - www.avg.com <http://www.avg.com>
> Version: 2013.0.3345 / Virus Database: 3199/6408 - Release Date: 06/13/13
>

[Non-text portions of this message have been removed]

42804. Re: [TS-520_820_530_830] Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 13:17:37 UTC
From: Denise Hargreaves
Topic: 42798 Message: 42804

Terry.....Sorry to hear about health issues....Blood thinners / anti clot agents definitely take some getting used too for sure....but benefits can be dramatic in regards to long term preventive care.....I am an example of that.....Take care of yourself....be cool.....please have a speedy recovery.....

Regards....Wes....VA6DWH

On 2013-06-14, at 6:40 AM, Terry Wagoner wrote:

> Hey Folks:
>
> In the hospital here. Not by plan or desire! Looks like I am going to be a Coumadin man (rat poison! Better than the alternative!
>
> My wife brought my lap top up last nite, but they are keeping me busy so I will be slowing down the help I can give for awhile. Hope to get out by Monday or so. Been here since Weds morning.
>
> Very behind on my other email account messages and for those helping off list sorry I may have to wait until get home to resume our work together as I have no access to any of my notes so dont want to advise you strictly off top of my head.
>
> Take care
> 73s Terry K9TW
>
>

[Non-text portions of this message have been removed]

42805. Re: [TS-520_820_530_830] Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 13:25:14 UTC
From: Joseph Stiles
Topic: 42798 Message: 42805

Terry,

   Get better soon!!

73 Joe
WB7UQU

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, June 14, 2013 5:40 AM
Subject: [TS-520_820_530_830] Hospital

Hey Folks:

In the hospital here. Not by plan or desire! Looks like I am going to be a Coumadin man (rat poison! Better than the alternative!

My wife brought my lap top up last nite, but they are keeping me busy so I will be slowing down the help I can give for awhile. Hope to get out by Monday or so. Been here since Weds morning.

Very behind on my other email account messages and for those helping off list sorry I may have to wait until get home to resume our work together as I have no access to any of my notes so dont want to advise you strictly off top of my head.

Take care
73s Terry K9TW

[Non-text portions of this message have been removed]

42806. Re: [TS-520_820_530_830] Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 13:42:34 UTC
From: Thomas Archer
Topic: 42798 Message: 42806

Get better soon Terry!!!

[Non-text portions of this message have been removed]

42807. Re: Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 14:13:40 UTC
From: coyoteinventor@ymail.com
Topic: 42798 Message: 42807

Terry,

Feel better soon!

Hope you are back to normal in no time! :-)

--Cesar-- K1TNT

--- In TS-520_820_530_830@yahoogroups.com, "Louis Wilen" <louis.wilen@...> wrote:
>
> Terry,
>
> Please take it easy and get well quickly.
>
> Best wishes for a speedy recovery,
>
> Louis
> W3LMW
>
> From: Terry Wagoner
> Sent: Friday, June 14, 2013 8:40 AM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Hospital
>
>
> Hey Folks:
>
> In the hospital here. Not by plan or desire! Looks like I am going to be a Coumadin man (rat poison! Better than the alternative!
>
> My wife brought my lap top up last nite, but they are keeping me busy so I will be slowing down the help I can give for awhile. Hope to get out by Monday or so. Been here since Weds morning.
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> Very behind on my other email account messages and for those helping off list sorry I may have to wait until get home to resume our work together as I have no access to any of my notes so dont want to advise you strictly off top of my head.
>
> Take care
> 73s Terry K9TW
>
>
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> Version: 2013.0.3345 / Virus Database: 3199/6408 - Release Date: 06/13/13
>
>
> [Non-text portions of this message have been removed]
>

42808. Re: [TS-520_820_530_830] Re: Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 14:30:48 UTC
From: ravi sumith
Topic: 42798 Message: 42808

Hi Terry.

Take it easy..Get some rest.

I'll pray for you for speedy recovery.

73's de 4S6RAV (Ravi-Sri Lanka)

From: "coyoteinventor@..." <coyoteinventor@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, 14 June 2013 7:43 PM
Subject: [TS-520_820_530_830] Re: Hospital

Terry,

Feel better soon!

Hope you are back to normal in no time! :-)

--Cesar-- K1TNT

--- In TS-520_820_530_830@yahoogroups.com, "Louis Wilen" <louis.wilen@...> wrote:
>
> Terry,
>
> Please take it easy and get well quickly.
>
> Best wishes for a speedy recovery,
>
> Louis
> W3LMW
>
> From: Terry Wagoner
> Sent: Friday, June 14, 2013 8:40 AM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Hospital
>
>
> Hey Folks:
>
> In the hospital here. Not by plan or desire! Looks like I am going to be a Coumadin man (rat poison! Better than the alternative!
>
> My wife brought my lap top up last nite, but they are keeping me busy so I will be slowing down the help I can give for awhile. Hope to get out by Monday or so. Been here since Weds morning.

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> Version: 2013.0.3345 / Virus Database: 3199/6408 - Release Date: 06/13/13
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

42809. Re: [TS-520_820_530_830] Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 16:11:47 UTC
From: Jim
Topic: 42798 Message: 42809

Hope you recover quickly. You'll be in our prayers. Nothing helps recovery quicker than a good nurse, good meds and a lot of good QSO's.
73
Jim
WA8SDF
Sent via BlackBerry from T-Mobile

-----Original Message-----
From: "Terry Wagoner" <wagstw46@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Fri, 14 Jun 2013 12:40:10
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Hospital

Hey Folks:

In the hospital here. Not by plan or desire! Looks like I am going to be a Coumadin man (rat poison! Better than the alternative!

My wife brought my lap top up last nite, but they are keeping me busy so I will be slowing down the help I can give for awhile. Hope to get out by Monday or so. Been here since Weds morning.

Very behind on my other email account messages and for those helping off list sorry I may have to wait until get home to resume our work together as I have no access to any of my notes so dont want to advise you strictly off top of my head.

Take care
73s Terry K9TW

[Non-text portions of this message have been removed]

42810. RE: [TS-520_820_530_830] Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 16:22:50 UTC
From: Rob
Topic: 42798 Message: 42810

Take care Terry and a speedy recovery,

73s Rob VK3BRS

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
Sent: Friday, 14 June 2013 10:40 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Hospital

Hey Folks:

In the hospital here. Not by plan or desire! Looks like I am going to be a Coumadin man (rat poison! Better than the alternative!

My wife brought my lap top up last nite, but they are keeping me busy so I will be slowing down the help I can give for awhile. Hope to get out by Monday or so. Been here since Weds morning.

Very behind on my other email account messages and for those helping off list sorry I may have to wait until get home to resume our work together as I have no access to any of my notes so dont want to advise you strictly off top of my head.

Take care
73s Terry K9TW

[Non-text portions of this message have been removed]

42811. Re: [TS-520_820_530_830] Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 16:33:10 UTC
From: Joe Loverti
Topic: 42798 Message: 42811

Hope you're outta there soon Terry! Feel better and recover fast!

73'

Joe
WS8X

Sent from my electronic leash.

On Jun 14, 2013, at 7:40 AM, "Terry Wagoner" <wagstw46@...> wrote:

> Hey Folks:
>
> In the hospital here. Not by plan or desire! Looks like I am going to be a Coumadin man (rat poison! Better than the alternative!
>
> My wife brought my lap top up last nite, but they are keeping me busy so I will be slowing down the help I can give for awhile. Hope to get out by Monday or so. Been here since Weds morning.
>
> Very behind on my other email account messages and for those helping off list sorry I may have to wait until get home to resume our work together as I have no access to any of my notes so dont want to advise you strictly off top of my head.
>
> Take care
> 73s Terry K9TW
>
>

[Non-text portions of this message have been removed]

42812. Re: [TS-520_820_530_830] Re: 820 No ALC on 28-29

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 08:33:31 UTC
From: Contact Sherwood
Topic: 42780 Message: 42812

I set my signal generator to 28.000mhz with 1000hz test tone 5uV and was able to receive and peak rx with drive.
Set 820 to tune and a tiny amount of RF is making out to my Freq Counter and 28Mhz
Still no ALC function just for the 4 10m segments all othe bands OK.
I think it will be a dry joint or something mechanical in a switch as this fault has only just happened

All my valves / tubes are new or old new

Stuart
VK4HDA

From: "adrian.langford@..." <adrian@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, 14 June 2013 7:58 AM
Subject: [TS-520_820_530_830] Re: 820 No ALC on 28-29

Hi Stuart

I have a 520SP which had same symptoms - ALC fine on all bands except 10m.

What transmit frequency do you see on the HP if you try to tune on 10m (I appreciate you don't have ALC to help set Drive, but you can get it close peaking background noise on receive)? What power out are you getting on 10m compared with other bands?

Terry K9TW here was incredibly helpful walking me through measurements to try to diagnose problem (I am an old electronics and radio hobbyist, but missed the valve era!). In my case though the problem was that the 28MHz drive coil on the RF coil board had ferrite slug in completely wrong position, near base of former. When I unscrewed the slug (having freed it up with tri-flo penetrant) and moved it up the former the ALC sprang to life. After peaking it I could get full scale ALC with the carrier just past the 12o'clock position. Before I was only getting a few watts RF out on 10m, but after aligning Drive coil I am getting around 100W.

Your issue may not be the same (another possibility is 12BY7A Driver which when it dies loses the 10m band first - I replaced mine when first trying to fix problem but of course made no difference) but worth checking that Drive coil. Make sure you have a correct plastic hex tool for the slugs.

73 Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "contactsherwood" <contactsherwood@...> wrote:
>
> Hi have a 820 with DG-1 fitted.
>
> Fault is at TUNE up - 1.8 3.5 7 14 21 are great. great ALC peak & IP Dip.

> Switch to any 10 meter no ALC. Digital display OK when cold but all over the shop when warm - Transmit Freq rock sold on HP Counter - not to fussed about it at this stage - it is isolated from radio for now.
> Any pointers on where to start - I'm thinking my 10m band crystal osc are not firing up. Radio has new driver and finals and nuetralised on 10m earlier this.
>
> Stuart
> VK4HDA
>

Yahoo! Groups Links

[Non-text portions of this message have been removed]

42813. Re: [TS-520_820_530_830] Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 12:50:45 UTC
From: Nick Norman
Topic: 42798 Message: 42813

On 14/06/13 13:47, Louis Wilen wrote:
> Terry,
>
> Please take it easy and get well quickly.
>
> Best wishes for a speedy recovery,
>
> Louis
> W3LMW
>

+1

Nick
M0HGU

--
There was no such thing as a dwarfish female pronoun or,
once the children were on solids, any such thing as women's
work.
(The Fifth Elephant)
13:50:01 up 2:27, 6 users, load average: 0.55, 0.64, 0.70

[Non-text portions of this message have been removed]

42814. RE: [TS-520_820_530_830] Re: Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 14:57:19 UTC
From: Jim Best
Topic: 42798 Message: 42814

Hello Terry,

We have never met but I encourage you to keep your chin up. I speak from experience

as I have had a triple by-pass and have 13 stents. My age here is 75. My advice after you recover; exercise,

exercise, exercise; if your doctor allows it. We have an excellent cardiac rehab program

here and I’m pretty much a life member. I have been told that walking is the best exercise and it

is cumulative. Ten minutes here and 20 minutes there all adds up. My 13th stent was

memorial day and I start back in rehab today. Good luck and God bless…

73 Jim

WU7G

Hi Terry.

Take it easy..Get some rest.

I'll pray for you for speedy recovery.

73's de 4S6RAV (Ravi-Sri Lanka)

From: "coyoteinventor@... <mailto:coyoteinventor%40ymail.com> " <coyoteinventor@... <mailto:coyoteinventor%40hotmail.com> >
To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Friday, 14 June 2013 7:43 PM
Subject: [TS-520_820_530_830] Re: Hospital

Terry,

Feel better soon!

Hope you are back to normal in no time! :-)

--Cesar-- K1TNT

--- In TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> , "Louis Wilen" <louis.wilen@...> wrote:
>
> Terry,
>
> Please take it easy and get well quickly.

>
> Best wishes for a speedy recovery,
>
> Louis
> W3LMW
>
> From: Terry Wagoner
> Sent: Friday, June 14, 2013 8:40 AM
> To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: [TS-520_820_530_830] Hospital
>
>
> Hey Folks:
>
> In the hospital here. Not by plan or desire! Looks like I am going to be a Coumadin man (rat poison! Better than the alternative!
>
> My wife brought my lap top up last nite, but they are keeping me busy so I will be slowing down the help I can give for awhile. Hope to get out by Monday or so. Been here since Weds morning.
>
> Very behind on my other email account messages and for those helping off list sorry I may have to wait until get home to resume our work together as I have no access to any of my notes so dont want to advise you strictly off top of my head.
>
> Take care
> 73s Terry K9TW
>
>
>
>
> No virus found in this message.
> Checked by AVG - www.avg.com
> Version: 2013.0.3345 / Virus Database: 3199/6408 - Release Date: 06/13/13
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

42815. Re: [TS-520_820_530_830] Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 15:03:35 UTC
From: <zen18531@...>
Topic: 42798 Message: 42815

Terry

Hoping for a speedy recovery for you. Hope the stay is as short and as pleasant as possible.

But in the meantime, lie back, relax, and STAY OFF THE LIST and recover, darn you!

Alan
M6XRE

-- Original Message --
From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Send: Fri, 14 Jun 2013 12:40:10 -0000
Subject: [TS-520_820_530_830] Hospital

Hey Folks:

In the hospital here. Not by plan or desire! Looks like I am going to be a Coumadin man (rat poison! Better than the alternative!

My wife brought my lap top up last nite, but they are keeping me busy so I will be slowing down the help I can give for awhile. Hope to get out by Monday or so. Been here since Weds morning.

Very behind on my other email account messages and for those helping off list sorry I may have to wait until get home to resume our work together as I have no access to any of my notes so dont want to advise you strictly off top of my head.

Take care
73s Terry K9TW

42816. Re: Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 15:33:43 UTC
From: Barry
Topic: 42798 Message: 42816

Sorry to hear that, Terry, but I sure will be praying that you get better in a hurry!

Barry

Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Hey Folks:
>
> In the hospital here. Not by plan or desire! Looks like I am going to be a Coumadin man (rat poison! Better than the alternative!
>
> My wife brought my lap top up last nite, but they are keeping me busy so I will be slowing down the help I can give for awhile. Hope to get out by Monday or so. Been here since Weds morning.
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> Very behind on my other email account messages and for those helping off list sorry I may have to wait until get home to resume our work together as I have no access to any of my notes so dont want to advise you strictly off top of my head.
>
> Take care
> 73s Terry K9TW
>

42817. RE: [TS-520_820_530_830] Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 16:48:23 UTC
From: Les Zwiebel WB6ORZ
Topic: 42798 Message: 42817

Get well soon, Terry, and, as always, thanks for all the invaluable tech help and psychological support you give to the group!
   (((73)))
   Les

-------- Original message --------
From: Terry Wagoner <wagstw46@...>
Date: 06/14/2013 5:40 AM (GMT-08:00)
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Hospital

Hey Folks:

In the hospital here. Not by plan or desire! Looks like I am going to be a Coumadin man (rat poison! Better than the alternative!

My wife brought my lap top up last nite, but they are keeping me busy so I will be slowing down the help I can give for awhile. Hope to get out by Monday or so. Been here since Weds morning.

Very behind on my other email account messages and for those helping off list sorry I may have to wait until get home to resume our work together as I have no access to any of my notes so dont want to advise you strictly off top of my head.

Take care
73s Terry K9TW

[Non-text portions of this message have been removed]

42818. Re: [TS-520_820_530_830] Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 17:50:20 UTC
From: Jim Stanicek
Topic: 42798 Message: 42818

Ask about Xarelto, Terry. Modern replacement for Cumadin , and you don't have to get those PT/INR test all the time!

73 Jim AG3Y

Sent from my iPhone

On Jun 14, 2013, at 8:40 AM, "Terry Wagoner" <wagstw46@...> wrote:

> Hey Folks:
>
> In the hospital here. Not by plan or desire! Looks like I am going to be a Coumadin man (rat poison! Better than the alternative!
>
> My wife brought my lap top up last nite, but they are keeping me busy so I will be slowing down the help I can give for awhile. Hope to get out by Monday or so. Been here since Weds morning.
>
> Very behind on my other email account messages and for those helping off list sorry I may have to wait until get home to resume our work together as I have no access to any of my notes so dont want to advise you strictly off top of my head.
>
> Take care
> 73s Terry K9TW
>
>

[Non-text portions of this message have been removed]

42819. TS-530s Plate Shaft Coupler

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 19:14:48 UTC
From: ThomasA
Topic: 42819 Message: 42819

Hello All,

Well after much good advice from this group I think maybe I am making progress on the problem with my rig.

Suddenly last week when tuning I noticed that the pointer on the "Plate" knob was no longer pointing in the 20 m range as it normally did.

Being new to the hybrid rig, I instantly thought that I had smoked something while trying to tune.

I consulted this forum and have received loads of helpful advice.

I followed one bit of advice and took the top off of the rig, the shaft couplers on the "Plate" control are both loose.

Loose enough I can hold the shaft easily with my fingers, and turn the knob. I was happy to make this discovery.

My next question is of course, what are the proper steps to do in order to correct this?

I am sure everything is way out of line by now, neither of the couplers look cracked, just loose.

Tom

42820. Re: [TS-520_820_530_830] Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 19:36:18 UTC
From: Don
Topic: 42798 Message: 42820

Wishing you a speedy recovery
You will be chasing those nurse's around in no time

73
Don/Ve2ud/Ve2dzo

On 14/06/2013 8:40 AM, Terry Wagoner wrote:
>
> Hey Folks:
>
> In the hospital here. Not by plan or desire! Looks like I am going to
> be a Coumadin man (rat poison! Better than the alternative!
>
> My wife brought my lap top up last nite, but they are keeping me busy
> so I will be slowing down the help I can give for awhile. Hope to get
> out by Monday or so. Been here since Weds morning.
>
> Very behind on my other email account messages and for those helping
> off list sorry I may have to wait until get home to resume our work
> together as I have no access to any of my notes so dont want to advise
> you strictly off top of my head.
>
> Take care
> 73s Terry K9TW
>
>

[Non-text portions of this message have been removed]

42821. Re: [TS-520_820_530_830] TS-530s Plate Shaft Coupler

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 19:46:13 UTC
From: Joseph Stiles
Topic: 42819 Message: 42821

Tom,

Several choices here:

Tighten up a couple of the set screws...one on the far end..one on the near end...tune up on.... say around 14.175(please use dummy load)....loosen one or both set screws on the near side...rotate knob/pointer to about mid scale for 20meters...while holding the far end from moving....snug up all screws.
or

Remove top and bottom covers...remove final amplifier cage cover...power OFF and rig UNPLUGGED FIRST! Rotate the air variable cap.
so the plates are approx 50% meshed...ie. the movable part is an approx 90degree angle...with the plates to the left...open space to the right.
Loosen screws on shaft...hold far end from moving...rotate knob/pointer to approx middle of the 20meter(14Mhz) band...SNUG up the set screws.

I prefer the first myself

73 Joe
WB7UQU

From: ThomasA <tsnarcher@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, June 14, 2013 12:14 PM
Subject: [TS-520_820_530_830] TS-530s Plate Shaft Coupler

Hello All,

Well after much good advice from this group I think maybe I am making progress on the problem with my rig.

Suddenly last week when tuning I noticed that the pointer on the "Plate" knob was no longer pointing in the 20 m range as it normally did.

Being new to the hybrid rig, I instantly thought that I had smoked something while trying to tune.

I consulted this forum and have received loads of helpful advice.

I followed one bit of advice and took the top off of the rig, the shaft couplers on the "Plate" control are both loose.

Loose enough I can hold the shaft easily with my fingers, and turn the knob. I was happy to make this discovery.

My next question is of course, what are the proper steps to do in order to correct this?

I am sure everything is way out of line by now, neither of the couplers look cracked, just loose.

Tom

[Non-text portions of this message have been removed]

42822. Re: Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 20:43:50 UTC
From: adrian.langford@ymail.com
Topic: 42798 Message: 42822

Wish you a smooth and speedy recovery Terry. Resist the temptation to fix any of the medical electronics gear!

Best 73s Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Hey Folks:
>
> In the hospital here. Not by plan or desire! Looks like I am going to be a Coumadin man (rat poison! Better than the alternative!
>
> My wife brought my lap top up last nite, but they are keeping me busy so I will be slowing down the help I can give for awhile. Hope to get out by Monday or so. Been here since Weds morning.
>
> Very behind on my other email account messages and for those helping off list sorry I may have to wait until get home to resume our work together as I have no access to any of my notes so dont want to advise you strictly off top of my head.
>
> Take care
> 73s Terry K9TW
>

42823. TS-900 and Kenwood pot styles

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 20:38:13 UTC
From: Dale Parfitt
Topic: 42823 Message: 42823

I am repairing a TS-900 and have the service manual. The RF Gain pot is described as dual gang 1K (A). Some Other pots are listed as (B). The audio gain pot is listed as (A).
If Kenwood carried this description to other more common radios, does anyone know if (A) is audio taper?
The resistive elements are broken and vaporized or else I would measure them.

Dale W4OP
----- Original Message -----
From: Jim
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, June 14, 2013 12:11 PM
Subject: Re: [TS-520_820_530_830] Hospital

Hope you recover quickly. You'll be in our prayers. Nothing helps recovery quicker than a good nurse, good meds and a lot of good QSO's.
73
Jim
WA8SDF
Sent via BlackBerry from T-Mobile

-----Original Message-----
From: "Terry Wagoner" <wagstw46@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Fri, 14 Jun 2013 12:40:10
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Hospital

Hey Folks:

In the hospital here. Not by plan or desire! Looks like I am going to be a Coumadin man (rat poison! Better than the alternative!

My wife brought my lap top up last nite, but they are keeping me busy so I will be slowing down the help I can give for awhile. Hope to get out by Monday or so. Been here since Weds morning.

Very behind on my other email account messages and for those helping off list sorry I may have to wait until get home to resume our work together as I have no access to any of my notes so dont want to advise you strictly off top of my head.

Take care
73s Terry K9TW

[Non-text portions of this message have been removed]

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.2904 / Virus Database: 3199/6404 - Release Date: 06/12/13

[Non-text portions of this message have been removed]

42824. Re: [TS-520_820_530_830] Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 21:18:26 UTC
From: Robert Carter
Topic: 42798 Message: 42824

Hi Terry, all the best and hope to see your wise comments again soon.

Been there for three years and still here.

Bob

42825. Re: TS-530s Plate Shaft Coupler

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 21:39:15 UTC
From: ThomasA
Topic: 42819 Message: 42825

Many Thanks Joe!

I can hardly wait to get up & running again!

Have a super weekend!

TOm

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Tom,
>
> Â Several choices here:
>
> Â Â Â Â Â Tighten up a couple of the set screws...one on the far end..one on the near end...tune up on.... say around 14.175(please use dummy load)....loosen one or both
> set screws on the near side...rotate knob/pointer to about mid scale for 20meters...while holding the far end from moving....snug up all screws.
> Â or
>
> Â Â Â Â Â Remove top and bottom covers...remove final amplifier cage cover...power OFF and rig UNPLUGGED FIRST!Â Rotate the air variable cap.
> so the plates are approx 50% meshed...ie. the movable part is an approx 90degree angle...with the plates to the left...open space to the right.
> Loosen screws on shaft...hold far end from moving...rotate knob/pointer to approx middle of the 20meter(14Mhz) band...SNUG up the set screws.
>
> Â I prefer the first myself
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: ThomasA <tsnarcher@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Friday, June 14, 2013 12:14 PM
> Subject: [TS-520_820_530_830] TS-530s Plate Shaft Coupler
>
>
>
> Â
> Hello All,

>
> Well after much good advice from this group I think maybe I am making progress on the problem with my rig.
>
> Suddenly last week when tuning I noticed that the pointer on the "Plate" knob was no longer pointing in the 20 m range as it normally did.
>
> Being new to the hybrid rig, I instantly thought that I had smoked something while trying to tune.
>
> I consulted this forum and have received loads of helpful advice.
>
> I followed one bit of advice and took the top off of the rig, the shaft couplers on the "Plate" control are both loose.
>
> Loose enough I can hold the shaft easily with my fingers, and turn the knob. I was happy to make this discovery.
>
> My next question is of course, what are the proper steps to do in order to correct this?
>
> I am sure everything is way out of line by now, neither of the couplers look cracked, just loose.
>
> Tom
>
>
>
>
> [Non-text portions of this message have been removed]
>

42826. Re: [TS-520_820_530_830] TS-900 and Kenwood pot styles

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 21:50:29 UTC
From: Jerry Barr
Topic: 42823 Message: 42826

dual gang means two pots one behind the other a and b/if i am wrong someone correct me

Jerry KJ6NTL

From: Dale Parfitt <parinc1@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, June 14, 2013 1:38 PM
Subject: [TS-520_820_530_830] TS-900 and Kenwood pot styles

I am repairing a TS-900 and have the service manual. The RF Gain pot is described as dual gang 1K (A). Some Other pots are listed as (B). The audio gain pot is listed as (A).
If Kenwood carried this description to other more common radios, does anyone know if (A) is audio taper?
The resistive elements are broken and vaporized or else I would measure them.

Dale W4OP
----- Original Message -----
From: Jim
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Friday, June 14, 2013 12:11 PM
Subject: Re: [TS-520_820_530_830] Hospital

Hope you recover quickly. You'll be in our prayers. Nothing helps recovery quicker than a good nurse, good meds and a lot of good QSO's.
73
Jim
WA8SDF
Sent via BlackBerry from T-Mobile

-----Original Message-----
From: "Terry Wagoner" <mailto:wagstw46%40yahoo.com>
Sender: mailto:TS-520_820_530_830%40yahoogroups.com
Date: Fri, 14 Jun 2013 12:40:10
To: <mailto:TS-520_820_530_830%40yahoogroups.com>
Reply-To: mailto:TS-520_820_530_830%40yahoogroups.com
Subject: [TS-520_820_530_830] Hospital

Hey Folks:

In the hospital here. Not by plan or desire! Looks like I am going to be a Coumadin man (rat poison! Better than the alternative!

My wife brought my lap top up last nite, but they are keeping me busy so I will be slowing down the help I can give for awhile. Hope to get out by Monday or so. Been here since Weds morning.

Very behind on my other email account messages and for those helping off list sorry I may have to wait until get home to resume our work together as I have no access to any of my notes so dont want to advise you strictly off top of my head.

Take care
73s Terry K9TW

[Non-text portions of this message have been removed]

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.2904 / Virus Database: 3199/6404 - Release Date: 06/12/13

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

42827. Re: [TS-520_820_530_830] TS-900 and Kenwood pot styles

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 21:59:56 UTC
From: Dale Parfitt
Topic: 42823 Message: 42827

Hi Jerry,
I know that. That was not the question. The nomenclature of an (A) pot or a (B) pot is my question. I am assuming one is linear and one is log taper.

Tnx,

Dale W4OP
----- Original Message -----
From: Jerry Barr
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, June 14, 2013 5:50 PM
Subject: Re: [TS-520_820_530_830] TS-900 and Kenwood pot styles

dual gang means two pots one behind the other a and b/if i am wrong someone correct me

Jerry KJ6NTL

From: Dale Parfitt <parinc1@frontier.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, June 14, 2013 1:38 PM
Subject: [TS-520_820_530_830] TS-900 and Kenwood pot styles

I am repairing a TS-900 and have the service manual. The RF Gain pot is described as dual gang 1K (A). Some Other pots are listed as (B). The audio gain pot is listed as (A).
If Kenwood carried this description to other more common radios, does anyone know if (A) is audio taper?
The resistive elements are broken and vaporized or else I would measure them.

Dale W4OP
----- Original Message -----
From: Jim
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Friday, June 14, 2013 12:11 PM
Subject: Re: [TS-520_820_530_830] Hospital

Hope you recover quickly. You'll be in our prayers. Nothing helps recovery quicker than a good nurse, good meds and a lot of good QSO's.
73
Jim
WA8SDF
Sent via BlackBerry from T-Mobile

-----Original Message-----
From: "Terry Wagoner" <mailto:wagstw46%40yahoo.com>
Sender: mailto:TS-520_820_530_830%40yahoogroups.com
Date: Fri, 14 Jun 2013 12:40:10
To: <mailto:TS-520_820_530_830%40yahoogroups.com>

Reply-To: mailto:TS-520_820_530_830%40yahoogroups.com
Subject: [TS-520_820_530_830] Hospital

Hey Folks:

In the hospital here. Not by plan or desire! Looks like I am going to be a Coumadin man (rat poison! Better than the alternative!

My wife brought my lap top up last nite, but they are keeping me busy so I will be slowing down the help I can give for awhile. Hope to get out by Monday or so. Been here since Weds morning.

Very behind on my other email account messages and for those helping off list sorry I may have to wait until get home to resume our work together as I have no access to any of my notes so dont want to advise you strictly off top of my head.

Take care
73s Terry K9TW

[Non-text portions of this message have been removed]

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Checked by AVG - www.avg.com
Version: 2013.0.2904 / Virus Database: 3199/6404 - Release Date: 06/12/13

[Non-text portions of this message have been removed]

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[Non-text portions of this message have been removed]

42828. Re: Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 22:11:27 UTC
From: ec4ach
Topic: 42798 Message: 42828

Hi Terry,

My best whishes to you and I hope that you have a speedy recovery. Take care of you that this is the most important thing now.

I am not a very active member for the moment because I must learn a lot from persons like you, reading all the good explanations and helping so much to solve the problems that may affect our Kenwood's. I am a proud ownwer of a TS-830S Gold Label and an AT-230 tuner.

God bless you and your family.

David, EC4ACH, from Spain.

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Hey Folks:
>
> In the hospital here. Not by plan or desire! Looks like I am going to be a Coumadin man (rat poison! Better than the alternative!
>
> My wife brought my lap top up last nite, but they are keeping me busy so I will be slowing down the help I can give for awhile. Hope to get out by Monday or so. Been here since Weds morning.
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>
> Take care
> 73s Terry K9TW
>

42829. RE: [TS-520_820_530_830] TS-530s Plate Shaft Coupler

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 22:48:33 UTC
From: fpath fpath
Topic: 42819 Message: 42829

Tom,

Good find! Just remember that you are going to tighten the grub screws into nylon that has most prob gone a little hard and will be subject to splitting if you over tighten the screws. Once you have aligned check all bands and see how it goes from there, don't screw the covers back on until your happy with position of indicators on front panel.

73's

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: stilesjoseph@yahoo.com
Date: Fri, 14 Jun 2013 12:46:13 -0700
Subject: Re: [TS-520_820_530_830] TS-530s Plate Shaft Coupler

Tom,

Several choices here:

Tighten up a couple of the set screws...one on the far end..one on the near end...tune up on.... say around 14.175(please use dummy load)....loosen one or both
set screws on the near side...rotate knob/pointer to about mid scale for 20meters...while holding the far end from moving....snug up all screws.
or

Remove top and bottom covers...remove final amplifier cage cover...power OFF and rig UNPLUGGED FIRST! Rotate the air variable cap.
so the plates are approx 50% meshed...ie. the movable part is an approx 90degree angle...with the plates to the left...open space to the right.
Loosen screws on shaft...hold far end from moving...rotate knob/pointer to approx middle of the 20meter(14Mhz) band...SNUG up the set screws.

I prefer the first myself

73 Joe
WB7UQU

_____
From: ThomasA <tsnarcher@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, June 14, 2013 12:14 PM
Subject: [TS-520_820_530_830] TS-530s Plate Shaft Coupler

Hello All,

Well after much good advice from this group I think maybe I am making progress on the problem with my rig.

Suddenly last week when tuning I noticed that the pointer on the "Plate" knob was no longer pointing in the 20 m range as it normally did.

Being new to the hybrid rig, I instantly thought that I had smoked something while trying to tune.

I consulted this forum and have received loads of helpful advice.

I followed one bit of advice and took the top off of the rig, the shaft couplers on the "Plate" control are both loose.

Loose enough I can hold the shaft easily with my fingers, and turn the knob. I was happy to make this discovery.

My next question is of course, what are the proper steps to do in order to correct this?

I am sure everything is way out of line by now, neither of the couplers look cracked, just loose.

Tom

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

42830. Re: [TS-520_820_530_830] TS-900 and Kenwood pot styles

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 22:59:23 UTC
From: Jerry Barr
Topic: 42823 Message: 42830

they do that in my ts 520se as well indicating to me a- pot is audo pot and the b section is the rf gain pot/so u cud be very correct /but nothing in the part # indicates to me/sorry misinterpretted ure question

Jerry KJ6NTL

From: Dale Parfitt <parinc1@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, June 14, 2013 2:59 PM
Subject: Re: [TS-520_820_530_830] TS-900 and Kenwood pot styles

Hi Jerry,
I know that. That was not the question. The nomenclature of an (A) pot or a (B) pot is my question. I am assuming one is linear and one is log taper.

Tnx,

Dale W4OP
----- Original Message -----
From: Jerry Barr
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Friday, June 14, 2013 5:50 PM
Subject: Re: [TS-520_820_530_830] TS-900 and Kenwood pot styles

dual gang means two pots one behind the other a and b/if i am wrong someone correct me

Jerry KJ6NTL

From: Dale Parfitt <mailto:parinc1%40frontier.com>
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Friday, June 14, 2013 1:38 PM
Subject: [TS-520_820_530_830] TS-900 and Kenwood pot styles

I am repairing a TS-900 and have the service manual. The RF Gain pot is described as dual gang 1K (A). Some Other pots are listed as (B). The audio gain pot is listed as (A).
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The resistive elements are broken and vaporized or else I would measure them.

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From: Jim
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Friday, June 14, 2013 12:11 PM
Subject: Re: [TS-520_820_530_830] Hospital

Hope you recover quickly. You'll be in our prayers. Nothing helps recovery quicker than a good nurse, good meds and a lot of good QSO's.

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Sent via BlackBerry from T-Mobile

-----Original Message-----
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Sender: mailto:TS-520_820_530_830%40yahoogroups.com
Date: Fri, 14 Jun 2013 12:40:10
To: <mailto:TS-520_820_530_830%40yahoogroups.com>
Reply-To: mailto:TS-520_820_530_830%40yahoogroups.com
Subject: [TS-520_820_530_830] Hospital

Hey Folks:

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My wife brought my lap top up last nite, but they are keeping me busy so I will be slowing down the help I can give for awhile. Hope to get out by Monday or so. Been here since Weds morning.

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Take care
73s Terry K9TW

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42831. Thanks to All

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 23:36:25 UTC
From: Terry Wagoner
Topic: 42831 Message: 42831

Thanks to all for your words of encouragement. It is very touching to realize how many friends I have on this forum. I am lucky to be alive and to have found this group. I had multiple pulmonary embolism in both lungs. My family doctor of 40 years started me on Heparin and Coumadin.

I asked him about the new blood thinners and he just dismissed them as too expensive and that he had successfully administered Coumadin for years with many patients. I appreciate that he is comfortable with this 1950s protocol.

Well my cardiologist showed up late afternoon and is taking me off the Coumadin and starting me on Xarelto. Just took my first one.

So I am happy camper and looks like may get to go home tomorrow. Still no smoking gun found. Usually caused by deep vain thrombosis in legs but ultra sounds were negative and no signs of AFIB. So important thing now is to prevent recurrence as this is a killer.

So will take the exercise advice to heart literally and good advice from Jim regards the Xarelto.

Once again thanks to all of you.

I will be back once get this behind me. There are plenty of you to help each other keep these Kenwoods we all love running.

Got to go now and try to get the cover put back on this Spectrum Sigma Infusion Pump. I dont think it is caled correctly !!!

Best 73s
Terry K9TW

42832. Re: [TS-520_820_530_830] Thanks to All

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-15 00:05:23 UTC
From: Jerry Barr
Topic: 42831 Message: 42832

hilarrious,! fix in it! take care and prayers with you get well terry tho we have never met u have such a kind heart anyone can see / and can feel u are a friend one wud want to be around

Jerry KJ6NTL

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, June 14, 2013 4:36 PM
Subject: [TS-520_820_530_830] Thanks to All

Thanks to all for your words of encouragement. It is very touching to realize how many friends I have on this forum. I am lucky to be alive and to have found this group. I had multiple pulmonary embolism in both lungs. My family doctor of 40 years started me on Heparin and Coumadin.

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42833. Re: [TS-520_820_530_830] TS-900 and Kenwood pot styles

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-14 23:06:47 UTC
From: Dale Parfitt
Topic: 42823 Message: 42833

My post could have been more clear Jerry. Guess that's why I am an engineer and not a lit major!
- tnx,

Dale W4OP
----- Original Message -----
From: Jerry Barr
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, June 14, 2013 6:59 PM
Subject: Re: [TS-520_820_530_830] TS-900 and Kenwood pot styles

they do that in my ts 520se as well indicating to me a- pot is audo pot and the b section is the rf gain pot/so u cud be very correct /but nothing in the part # indicates to me/sorry misinterpretted ure question

Jerry KJ6NTL

From: Dale Parfitt <parinc1@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, June 14, 2013 2:59 PM
Subject: Re: [TS-520_820_530_830] TS-900 and Kenwood pot styles

Hi Jerry,
I know that. That was not the question. The nomenclature of an (A) pot or a (B) pot is my question. I am assuming one is linear and one is log taper.

Tnx,

Dale W4OP
----- Original Message -----
From: Jerry Barr
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Friday, June 14, 2013 5:50 PM
Subject: Re: [TS-520_820_530_830] TS-900 and Kenwood pot styles

dual gang means two pots one behind the other a and b/if i am wrong someone correct me

Jerry KJ6NTL

From: Dale Parfitt <mailto:parinc1%40frontier.com>
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Friday, June 14, 2013 1:38 PM
Subject: [TS-520_820_530_830] TS-900 and Kenwood pot styles

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----- Original Message -----
From: Jim
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Friday, June 14, 2013 12:11 PM
Subject: Re: [TS-520_820_530_830] Hospital

Hope you recover quickly. You'll be in our prayers. Nothing helps recovery quicker than a good nurse, good meds and a lot of good QSO's.
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Jim
WA8SDF
Sent via BlackBerry from T-Mobile

-----Original Message-----
From: "Terry Wagoner" <mailto:wagstw46%40yahoo.com>
Sender: mailto:TS-520_820_530_830%40yahoogroups.com
Date: Fri, 14 Jun 2013 12:40:10
To: <mailto:TS-520_820_530_830%40yahoogroups.com>
Reply-To: mailto:TS-520_820_530_830%40yahoogroups.com
Subject: [TS-520_820_530_830] Hospital

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Very behind on my other email account messages and for those helping off list sorry I may have to wait until get home to resume our work together as I have no access to any of my notes so dont want to advise you strictly off top of my head.

Take care
73s Terry K9TW

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No virus found in this message.
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Version: 2013.0.2904 / Virus Database: 3199/6404 - Release Date: 06/12/13

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42834. Re: [TS-520_820_530_830] TS-900 and Kenwood pot styles

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-15 01:02:38 UTC
From: Jerry Barr
Topic: 42823 Message: 42834

ohhhh whooo is me a engineer lol so is my bro on power stuff /damms etc/ me i jus play at stuff old and decrepit/takes too much study for my blood 73s

Jerry KJ6NTL

From: Dale Parfitt <parinc1@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, June 14, 2013 4:06 PM
Subject: Re: [TS-520_820_530_830] TS-900 and Kenwood pot styles

My post could have been more clear Jerry. Guess that's why I am an engineer and not a lit major!
- tnx,

Dale W4OP
----- Original Message -----
From: Jerry Barr
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Friday, June 14, 2013 6:59 PM
Subject: Re: [TS-520_820_530_830] TS-900 and Kenwood pot styles

they do that in my ts 520se as well indicating to me a- pot is audo pot and the b section is the rf gain pot/so u cud be very correct /but nothing in the part # indicates to me/sorry misinterpretted ure question

Jerry KJ6NTL

From: Dale Parfitt <mailto:parinc1%40frontier.com>
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Friday, June 14, 2013 2:59 PM
Subject: Re: [TS-520_820_530_830] TS-900 and Kenwood pot styles

Hi Jerry,
I know that. That was not the question. The nomenclature of an (A) pot or a (B) pot is my question. I am assuming one is linear and one is log taper.

Tnx,

Dale W4OP
----- Original Message -----
From: Jerry Barr
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Friday, June 14, 2013 5:50 PM
Subject: Re: [TS-520_820_530_830] TS-900 and Kenwood pot styles

dual gang means two pots one behind the other a and b/if i am wrong someone correct me

Jerry KJ6NTL

From: Dale Parfitt <mailto:parinc1%40frontier.com>
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Friday, June 14, 2013 1:38 PM
Subject: [TS-520_820_530_830] TS-900 and Kenwood pot styles

I am repairing a TS-900 and have the service manual. The RF Gain pot is described as dual gang 1K (A). Some Other pots are listed as (B). The audio gain pot is listed as (A).
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The resistive elements are broken and vaporized or else I would measure them.

Dale W4OP
----- Original Message -----
From: Jim
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Friday, June 14, 2013 12:11 PM
Subject: Re: [TS-520_820_530_830] Hospital

Hope you recover quickly. You'll be in our prayers. Nothing helps recovery quicker than a good nurse, good meds and a lot of good QSO's.
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Jim
WA8SDF
Sent via BlackBerry from T-Mobile

-----Original Message-----
From: "Terry Wagoner" <mailto:wagstw46%40yahoo.com>
Sender: mailto:TS-520_820_530_830%40yahoogroups.com
Date: Fri, 14 Jun 2013 12:40:10
To: <mailto:TS-520_820_530_830%40yahoogroups.com>
Reply-To: mailto:TS-520_820_530_830%40yahoogroups.com
Subject: [TS-520_820_530_830] Hospital

Hey Folks:

In the hospital here. Not by plan or desire! Looks like I am going to be a Coumadin man (rat poison! Better than the alternative!

My wife brought my lap top up last nite, but they are keeping me busy so I will be slowing down the help I can give for awhile. Hope to get out by Monday or so. Been here since Weds morning.

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Take care
73s Terry K9TW

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[Non-text portions of this message have been removed]

42835. RE: [TS-520_820_530_830] Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-15 01:24:13 UTC
From: Walter Milton
Topic: 42798 Message: 42835

Hi Terry,

From My house, Walt & Jenny, we wish you a speedy recovery and a short stay in the hospital. PLEASE do not chase the Nurses they will have enough on their hands.

Gods' speed,

Walt KA2NJF

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
Sent: Friday, June 14, 2013 8:40 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Hospital

Hey Folks:

In the hospital here. Not by plan or desire! Looks like I am going to be a Coumadin man (rat poison! Better than the alternative!

My wife brought my lap top up last nite, but they are keeping me busy so I will be slowing down the help I can give for awhile. Hope to get out by Monday or so. Been here since Weds morning.

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42836. Re: [TS-520_820_530_830] TS-900 and Kenwood pot styles

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-15 02:07:33 UTC
From: Jerry Barr
Topic: 42823 Message: 42836

hy dont take that sa stuff to heart jus kidding but my bro isa also i jus didnt have what it takes

Jerry KJ6NTL

From: Dale Parfitt <parinc1@frontier.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, June 14, 2013 4:06 PM
Subject: Re: [TS-520_820_530_830] TS-900 and Kenwood pot styles

My post could have been more clear Jerry. Guess that's why I am an engineer and not a lit major!
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Dale W4OP
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Subject: Re: [TS-520_820_530_830] TS-900 and Kenwood pot styles

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Dale W4OP
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From: Jerry Barr
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Friday, June 14, 2013 5:50 PM
Subject: Re: [TS-520_820_530_830] TS-900 and Kenwood pot styles

dual gang means two pots one behind the other a and b/if i am wrong someone correct me

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Date: Fri, 14 Jun 2013 12:40:10
To: <mailto:TS-520_820_530_830%40yahoogroups.com>
Reply-To: mailto:TS-520_820_530_830%40yahoogroups.com
Subject: [TS-520_820_530_830] Hospital

Hey Folks:

In the hospital here. Not by plan or desire! Looks like I am going to be a Coumadin man (rat poison! Better than the alternative!

My wife brought my lap top up last nite, but they are keeping me busy so I will be slowing down the help I can give for awhile. Hope to get out by Monday or so. Been here since Weds morning.

Very behind on my other email account messages and for those helping off list sorry I may have to wait until get home to resume our work together as I have no access to any of my notes so dont want to advise you strictly off top of my head.

Take care
73s Terry K9TW

[Non-text portions of this message have been removed]

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.2904 / Virus Database: 3199/6404 - Release Date: 06/12/13

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.2904 / Virus Database: 3199/6404 - Release Date: 06/12/13

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.2904 / Virus Database: 3199/6404 - Release Date: 06/12/13

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

42837. Re: Thanks to All

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-15 02:56:52 UTC
From: M. J. Synowiec
Topic: 42831 Message: 42837

Hi Terry,

My usual salutation is "I hope this finds you well" but in this case let me join others in wishing (and praying) that you are soon better.

In regards your initial post; my guts tell me that you "operating off the top-of-your-head" is as good as most techs operating with their whole reference library. It is also curious to note that the group members on this reflector are now collaborating to fix the guys who fix the rigs. Good luck and God-Speed in your recovery. My best regards to you and those you hold dear.

Vy 73,
Mike
K8SYN

[Non-text portions of this message have been removed]

42838. Re: [TS-520_820_530_830] Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-15 09:32:20 UTC
From: Michel van der Walle
Topic: 42798 Message: 42838

Hi Terry,

So you are in hospital. Indeed. Nah, we can't have that. What are you doing mate. The whole forum will go south. Hundreds of Kenwood hybrid owners will be tearing out their hair. Knarling of teeth will be heard worlwide. I am going to shut down my TS-830S and cover it with a black cloth covered in ashes whilst in mourning.
Can't do anything more.
Get better quick mate.
From a friend " Down Under "
Michel
vk3kvw

----- Original Message -----
From: Terry Wagoner
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, June 14, 2013 10:40 PM
Subject: [TS-520_820_530_830] Hospital

Hey Folks:

In the hospital here. Not by plan or desire! Looks like I am going to be a Coumadin man (rat poison! Better than the alternative!

My wife brought my lap top up last nite, but they are keeping me busy so I will be slowing down the help I can give for awhile. Hope to get out by Monday or so. Been here since Weds morning.

Very behind on my other email account messages and for those helping off list sorry I may have to wait until get home to resume our work together as I have no access to any of my notes so dont want to advise you strictly off top of my head.

Take care
73s Terry K9TW

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 9.1.0.2900, Virus/Spyware Database: 6.21100)
http://www.pctools.com
=======

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 9.1.0.2900, Virus/Spyware Database: 6.21100)
http://www.pctools.com/
=======

[Non-text portions of this message have been removed]

42839. Re: [TS-520_820_530_830] Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-15 12:10:17 UTC
From: Guy Morgan
Topic: 42798 Message: 42839

Agreed. Best wishes from the other side of the pond Terry. Your wise and insightful contributions will be sorely missed until you return to full health.

Guy - G3POM

-----Original Message-----
From: Rick
Sent: Friday, June 14, 2013 2:02 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] Hospital

Take care of yourself, Terry. Needless to say, you will be sorely missed, but your health is the most important issue at this time. Get well soon.

Rick/K5IAR

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
Sent: Friday, June 14, 2013 7:40 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Hospital

Hey Folks:

In the hospital here. Not by plan or desire! Looks like I am going to be a Coumadin man (rat poison! Better than the alternative!

My wife brought my lap top up last nite, but they are keeping me busy so I will be slowing down the help I can give for awhile. Hope to get out by Monday or so. Been here since Weds morning.

Very behind on my other email account messages and for those helping off list sorry I may have to wait until get home to resume our work together as I have no access to any of my notes so dont want to advise you strictly off top of my head.

Take care
73s Terry K9TW

[Non-text portions of this message have been removed]

Yahoo! Groups Links

42840. Re: [TS-520_820_530_830] Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-15 15:33:36 UTC
From: Robert Reyes
Topic: 42798 Message: 42840

Hi Terry,

My wife and I are praying for you and hope for the best.

--- On Fri, 6/14/13, Terry Wagoner wrote:

From: Terry Wagoner
Subject: [TS-520_820_530_830] Hospital
To: TS-520_820_530_830@yahoogroups.com
Date: Friday, June 14, 2013, 12:40 PM

Hey Folks:

In the hospital here. Not by plan or desire! Looks like I am going to be a Coumadin man (rat poison! Better than the alternative!

My wife brought my lap top up last nite, but they are keeping me busy so I will be slowing down the help I can give for awhile. Hope to get out by Monday or so. Been here since Weds morning.

Very behind on my other email account messages and for those helping off list sorry I may have to wait until get home to resume our work together as I have no access to any of my notes so dont want to advise you strictly off top of my head.

Take care
73s Terry K9TW

Yahoo! Groups Links

<*> To visit your group on the web, go to:
    http://groups.yahoo.com/group/TS-520_820_530_830/

<*> Your email
settings:
    Individual Email | Traditional

<*> To change settings online go to:
    http://groups.yahoo.com/group/TS-520_820_530_830/join
    (Yahoo! ID required)

<*> To change settings via email:
    TS-520_820_530_830-digest@yahoogroups.com
    TS-520_820_530_830-fullfeatured@yahoogroups.com

<*> To unsubscribe from this group, send an email to:
    TS-520_820_530_830-unsubscribe@yahoogroups.com

<*> Your use of Yahoo! Groups is subject to:
    http://docs.yahoo.com/info/terms/

42841. Re: [TS-520_820_530_830] Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-15 16:18:31 UTC
From: Joseph Stiles
Topic: 42798 Message: 42841

Terry,

  As before..GET WELL SOON!....but, do you think that you may be able to get one of those new fangled... bleeping...beeping...heart monitors
and possibly adapt it to monitor IF/AF./RF......output from our hybrids???

   Just a thought....and some(?) humor   GET BETTER SOON!

73 Joe
WB7UQU

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, June 14, 2013 5:40 AM
Subject: [TS-520_820_530_830] Hospital

Hey Folks:

In the hospital here. Not by plan or desire! Looks like I am going to be a Coumadin man (rat poison! Better than the alternative!

My wife brought my lap top up last nite, but they are keeping me busy so I will be slowing down the help I can give for awhile. Hope to get out by Monday or so. Been here since Weds morning.

Very behind on my other email account messages and for those helping off list sorry I may have to wait until get home to resume our work together as I have no access to any of my notes so dont want to advise you strictly off top of my head.

Take care
73s Terry K9TW

[Non-text portions of this message have been removed]

42842. Re: [TS-520_820_530_830] Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-15 16:33:22 UTC
From: Jim S
Topic: 42798 Message: 42842

This is not a joke. Some years ago, I was hospitalized, and a friend brought in a two meter handheld for me to play with while I was recuperating. EVERY TIME I hit the transmit button, the monitor in my room would start BEEPING an alarm !

I had to be content just to listen to what was going on. Not fun !

Maybe things are a bit more immune to RF now days.

Jim AG3Y

On 6/15/2013 12:18 PM, Joseph Stiles wrote:
>
> Terry,
>
> As before..GET WELL SOON!....but, do you think that you may be able
> to get one of those new fangled... bleeping...beeping...heart monitors
> and possibly adapt it to monitor IF/AF./RF......output from our hybrids???
>
> Just a thought....and some(?) humor GET BETTER SOON!
>
>
> 73 Joe
> WB7UQU
>
> _
>

[Non-text portions of this message have been removed]

42843. Re: [TS-520_820_530_830] Thanks to All

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-15 06:59:17 UTC
From: <zen18531@...>
Topic: 42831 Message: 42843

Now why doesn't that surprise me - Terry, I'm half expecting you to have assembled a rig from "spare" hospital equipment that you "happened" to find "laying around" hihi

Just dont try using the bed frame as an antenna!

Speedy recover!

-- Original Message --
From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Send: Fri, 14 Jun 2013 23:36:25 -0000
Subject: [TS-520_820_530_830] Thanks to All

Got to go now and try to get the cover put back on this Spectrum Sigma Infusion Pump. I dont think it is caled correctly !!!

Best 73s
Terry K9TW

42844. How firm/stiff should the drive and plate knobs turn?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-15 07:23:03 UTC
From: chipthome
Topic: 42844 Message: 42844

Greetings all!

I did a search and found others had a similar situation, firm/stiff drive and or plate knobs.

My radio sat for the last 30 years before I bought it from the guy who never used it. He got it from a friend, my guess is, when it was 3-5-ish years old.

I opened it up and it looks remarkably clean inside. There was only a tiny amount of black grease on the shaft where a tensioner rides. There were no signs of excess grease, dirt etc. I did spray DeOxIt at all rod connections/bushings/bearing etc. I can see no grease at all on the ball bearings at the vari caps' shafts and they look very clean.

I was told not to get any oil/grease on the vari caps, so didn't. I can't see anywhere to DEOxIt, or lube, that isn't already moving at what appears to be as freely as it is going to.

When completely assembled, both knobs take some force/torque to turn. I was expecting something about as free wheeling as the volume knob on my Honda...but it's not even close.

So, is this normal, or do I still have issues here ???

Thanks for your help,

Chip

42845. Re: [TS-520_820_530_830] How firm/stiff should the drive and plate knobs turn?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-15 17:07:03 UTC
From: Joseph Stiles
Topic: 42844 Message: 42845

Chip,

First..what rig do you have?

The VAST majority of the hybrids have a kind of a gear reduction for the "PLATE" control and a rather straight forward shaft/chain drive arrangement for the "load" & "drive" controls.
The "plate" control can be "freed up" by partly disassembling the "reduction drive" It's packed with grease...and after that long a time of no operation...it turns into semi set concrete. Ask any TEN-TEC owner! The other controls...it's OK to apply a SMALL amount of a non-contaminating oil to the bearings...just NOT on any of the "wipers" on any of the air variable caps.

I suggest that you download a service manual for what ever rig that you have...you can find good ones at: n6wk.com that is Gordon's web site..a member/moderator of this board. It will show you an "exploded view" of the "reduction drive." There are small ball bearings in the reduction drive. I can give you some more specific info...when I know the model of your rig

73 Joe
WB7UQU

From: chipthome <chip@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, June 15, 2013 12:23 AM
Subject: [TS-520_820_530_830] How firm/stiff should the drive and plate knobs turn?

Greetings all!

I did a search and found others had a similar situation, firm/stiff drive and or plate knobs.

My radio sat for the last 30 years before I bought it from the guy who never used it. He got it from a friend, my guess is, when it was 3-5-ish years old.

I opened it up and it looks remarkably clean inside. There was only a tiny amount of black grease on the shaft where a tensioner rides. There were no signs of excess grease, dirt etc. I did spray DeOxIt at all rod connections/bushings/bearing etc. I can see no grease at all on the ball bearings at the vari caps' shafts and they look very clean.

I was told not to get any oil/grease on the vari caps, so didn't. I can't see anywhere to DEOxIt, or lube, that isn't already moving at what appears to be as freely as it is going to.

When completely assembled, both knobs take some force/torque to turn. I was expecting something about as free wheeling as the volume knob on my Honda...but it's not even close.

So, is this normal, or do I still have issues here ???

Thanks for your help,

Chip

[Non-text portions of this message have been removed]

42846. Re: [TS-520_820_530_830] Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-15 17:34:15 UTC
From: Joseph Stiles
Topic: 42798 Message: 42846

My post wasNOT meant as a joke...it WAS meant, as a "light-hearted" attempt to cheer up Terry. It wasobviously misinterpreted by AG3Y...I know full well about these things. I have spent most of my adult life(34 years) as a Firefighter/Paramedic, unfortunately...guess what.....some "other ham radio operator" was talking on his radio(mobile).... was NOT paying attention....could not SEE or HEAR the big fire engine...with it's lights and sirens going...ran through an intersection and hit right where I was sitting. So now, I have a plate and six screw holding my neck together, my right shoulder will NEVER be the same...I have limited function of my right arm.....and a back that will NEVER be right, spent a few months learning how to walk again.....I hobble around in the shape of the letter "V" and have to use a canes to even move from one room to the other. I was forced to retire...because as you always hear...about cell phones and, texting...how about "hams" "talking and driving."

Again, my prior post was HUMOR and, OBVIOUSLY...by some persons standards, NOT humorous. I have probably created a "fecal matter storm" and really
don't care. So, I can cover all the bases: Apologies if I offended anyone in the slightest.

73 Joe
WB7UQU

From: Jim S <jimstan@myactv.net>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, June 15, 2013 9:33 AM
Subject: Re: [TS-520_820_530_830] Hospital

This is not a joke. Some years ago, I was hospitalized, and a friend
brought in a two meter handheld for me to play with while I was
recuperating. EVERY TIME I hit the transmit button, the monitor in my
room would start BEEPING an alarm !

I had to be content just to listen to what was going on. Not fun !

Maybe things are a bit more immune to RF now days.

Jim AG3Y

On 6/15/2013 12:18 PM, Joseph Stiles wrote:
>
> Terry,
>
> As before..GET WELL SOON!....but, do you think that you may be able
> to get one of those new fangled... bleeping...beeping...heart monitors
> and possibly adapt it to monitor IF/AF./RF......output from our hybrids???
>
> Just a thought....and some(?) humor GET BETTER SOON!

>
>
> 73 Joe
> WB7UQU
>
> _
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

42847. Re: How firm/stiff should the drive and plate knobs turn?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-15 18:05:15 UTC
From: chipthome
Topic: 42844 Message: 42847

Thanks for the response Joe !

I guess I forgot to mention, this is a TS-520, my apologies for that screw up.

Right now after reshooting DeOxIt, the Load is the smoothest and most easily turned, feeling closer to what I might expect. Then the Plate is the next smoothest, followed by the Drive which is the stiffest. None are as free as a radio volume switch, to give a comparison. Visually examining, everything appears to be straight line shafts leading to the "business end" of the caps etc. The Drive has that overhead rod with the chains leading to the caps. Disassembly of that scares the crap outta me as I doubt I'd get everything lined back up correctly again.

Chip

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Chip,
>
> Â First..what rig do you have?
>
> Â Â The VAST majority of the hybrids have a kind of a gear reduction for the "PLATE" control andÂ a rather straight forward shaft/chain drive arrangement for the "load" & "drive" controls.
> The "plate" control can be "freed up" by partly disassembling the "reduction drive" It's packed with grease...and after that long a time of no operation...it turns into
> semi set concrete. Ask any TEN-TEC owner!Â The other controls...it's OK to apply a SMALL amount of a non-contaminating oil to the bearings...just NOT on any of the "wipers" on any of the air variable caps.
>
> Â Â I suggest that you download a service manual for what ever rig that you have...you can find good ones at:Â Â n6wk.comÂ Â that is Gordon's web site..a member/moderator
> of this board. It will show you an "exploded view" of the "reduction drive." There are small ball bearings in the reduction drive. I can give you some more specific
> info...when I know the modelÂ of your rig
>
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: chipthome <chip@...>
> To: TS-520_820_530_830@yahoogroups.com

> Sent: Saturday, June 15, 2013 12:23 AM
> Subject: [TS-520_820_530_830] How firm/stiff should the drive and plate knobs turn?
>
>
>
> Â
> Greetings all!
>
> I did a search and found others had a similar situation, firm/stiff drive and or plate knobs.
>
> My radio sat for the last 30 years before I bought it from the guy who never used it. He got it from a friend, my guess is, when it was 3-5-ish years old.
>
> I opened it up and it looks remarkably clean inside. There was only a tiny amount of black grease on the shaft where a tensioner rides. There were no signs of excess grease, dirt etc. I did spray DeOxIt at all rod connections/bushings/bearing etc. I can see no grease at all on the ball bearings at the vari caps' shafts and they look very clean.
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> I was told not to get any oil/grease on the vari caps, so didn't. I can't see anywhere to DEOxIt, or lube, that isn't already moving at what appears to be as freely as it is going to.
>
> When completely assembled, both knobs take some force/torque to turn. I was expecting something about as free wheeling as the volume knob on my Honda...but it's not even close.
>
> So, is this normal, or do I still have issues here ???
>
> Thanks for your help,
>
> Chip
>
>
>
>
> [Non-text portions of this message have been removed]
>

42848. Re: [TS-520_820_530_830] Re: How firm/stiff should the drive and plate knobs turn?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-15 18:46:35 UTC
From: Louis Wilen
Topic: 42844 Message: 42848

It is entirely normal for the Drive control to be stiff. I should turn smoothly, but it should be relatively firm compared to load. Plate should also be firm but smooth. Load should have the least turning resistance, almost as free as a volume control.

Louis W3LMW

From: chipthome
Sent: Saturday, June 15, 2013 2:05 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: How firm/stiff should the drive and plate knobs turn?

Thanks for the response Joe !

I guess I forgot to mention, this is a TS-520, my apologies for that screw up.

Right now after reshooting DeOxIt, the Load is the smoothest and most easily turned, feeling closer to what I might expect. Then the Plate is the next smoothest, followed by the Drive which is the stiffest. None are as free as a radio volume switch, to give a comparison. Visually examining, everything appears to be straight line shafts leading to the "business end" of the caps etc. The Drive has that overhead rod with the chains leading to the caps. Disassembly of that scares the crap outta me as I doubt I'd get everything lined back up correctly again.

Chip

--- In mailto:TS-520_820_530_830%40yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Chip,
>
> Â First..what rig do you have?
>
> Â Â The VAST majority of the hybrids have a kind of a gear reduction for the "PLATE" control andÂ a rather straight forward shaft/chain drive arrangement for the "load" & "drive" controls.
> The "plate" control can be "freed up" by partly disassembling the "reduction drive" It's packed with grease...and after that long a time of no operation...it turns into
> semi set concrete. Ask any TEN-TEC owner!Â The other controls...it's OK to apply a SMALL amount of a non-contaminating oil to the bearings...just NOT on any of the "wipers" on any of the air variable caps.
>
> Â Â I suggest that you download a service manual for what ever rig that you have...you can find good ones at:Â Â n6wk.comÂ Â that is Gordon's web site..a member/moderator
> of this board. It will show you an "exploded view" of the "reduction drive." There are small ball bearings in the reduction drive. I can give you some more specific

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> _____
> From: chipthome <chip@...>
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Saturday, June 15, 2013 12:23 AM
> Subject: [TS-520_820_530_830] How firm/stiff should the drive and plate knobs turn?
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> When completely assembled, both knobs take some force/torque to turn. I was expecting something about as free wheeling as the volume knob on my Honda...but it's not even close.
>
> So, is this normal, or do I still have issues here ???
>
> Thanks for your help,
>
> Chip
>
>
>
>
> [Non-text portions of this message have been removed]
>

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.3345 / Virus Database: 3199/6413 - Release Date: 06/15/13

[Non-text portions of this message have been removed]

42849. Re: [TS-520_820_530_830] Re: How firm/stiff should the drive and plate knobs turn?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-15 19:31:20 UTC
From: Joseph Stiles
Topic: 42844 Message: 42849

Chip,

....the controls should offer "some" resistance..and operate smoothly....it is difficult to say from one to the next what "hard to turn, stiff"...etc...really means. The "radio volume
control" really can not be used as an apples to apples comparison....if all the controls operate smoothly...no binding...don't cause "noise" or other problems.. when operated...etc...why worry...operate the rig! I don't know..but maybe this rig(s) is/are older than your children....I know mine are

No screw up Chip. A word of warning...IF you plan on doing some service on this rig...especially adjusting the various coils...PLEASE ask some questions here..or go to the "files" section and look for info on those darn coils..before you break them......

73 Joe
WB7UQU

From: Louis Wilen <louis.wilen@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, June 15, 2013 11:46 AM
Subject: Re: [TS-520_820_530_830] Re: How firm/stiff should the drive and plate knobs turn?

It is entirely normal for the Drive control to be stiff. I should turn smoothly, but it should be relatively firm compared to load. Plate should also be firm but smooth. Load should have the least turning resistance, almost as free as a volume control.

Louis W3LMW

From: chipthome
Sent: Saturday, June 15, 2013 2:05 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: How firm/stiff should the drive and plate knobs turn?

Thanks for the response Joe !

I guess I forgot to mention, this is a TS-520, my apologies for that screw up.

Right now after reshooting DeOxIt, the Load is the smoothest and most easily turned, feeling closer to what I might expect. Then the Plate is the next smoothest, followed by the Drive which is the stiffest. None are as free as a radio volume switch, to give a comparison. Visually examining, everything appears to be straight line shafts leading to the "business end" of the caps etc. The Drive has that overhead rod with the chains leading to the caps. Disassembly of that scares the crap outta me as I doubt I'd get everything lined back up correctly again.

Chip

--- In mailto:TS-520_820_530_830%40yahoogroups.com, Joseph Stiles <stilesjoseph@...>
wrote:
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> Chip,
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> Â First..what rig do you have?
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"drive" controls.
> The "plate" control can be "freed up" by partly disassembling the "reduction drive" It's
packed with grease...and after that long a time of no operation...it turns into
> semi set concrete. Ask any TEN-TEC owner!Â The other controls...it's OK to apply a SMALL
amount of a non-contaminating oil to the bearings...just NOT on any of the "wipers" on any
of the air variable caps.
>
> Â Â I suggest that you download a service manual for what ever rig that you have...you
can find good ones at:Â Â n6wk.comÂ Â that is Gordon's web site..a member/moderator
> of this board. It will show you an "exploded view" of the "reduction drive." There are
small ball bearings in the reduction drive. I can give you some more specific
> info...when I know the modelÂ of your rig
>
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: chipthome <chip@...>
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Saturday, June 15, 2013 12:23 AM
> Subject: [TS-520_820_530_830] How firm/stiff should the drive and plate knobs turn?
>
>
>
> Â
> Greetings all!
>
> I did a search and found others had a similar situation, firm/stiff drive and or plate
knobs.
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> My radio sat for the last 30 years before I bought it from the guy who never used it. He
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> I opened it up and it looks remarkably clean inside. There was only a tiny amount of
black grease on the shaft where a tensioner rides. There were no signs of excess grease,

dirt etc. I did spray DeOxIt at all rod connections/bushings/bearing etc. I can see no grease at all on the ball bearings at the vari caps' shafts and they look very clean.
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> I was told not to get any oil/grease on the vari caps, so didn't. I can't see anywhere to DEOxIt, or lube, that isn't already moving at what appears to be as freely as it is going to.
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> When completely assembled, both knobs take some force/torque to turn. I was expecting something about as free wheeling as the volume knob on my Honda...but it's not even close.
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> So, is this normal, or do I still have issues here ???
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> Thanks for your help,
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> Chip
>
>
>
>
> [Non-text portions of this message have been removed]
>

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.3345 / Virus Database: 3199/6413 - Release Date: 06/15/13

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

42850. Re: How firm/stiff should the drive and plate knobs turn?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-15 20:06:41 UTC
From: chipthome
Topic: 42844 Message: 42850

Thanks Louis and Joe!

These do move smoothly and do now move with less resistance than prior to using the DeOxIt. It's the varying resistance between the three that was sending me to question if there's more maintenance needed.

Now the next scarey thing to investigate.... why I have three "modules" in a small envelope that has 10M Cyrstals written on the outside ??? :-(

Chip

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
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> Chip,
>
> Â ....the controls should offer "some" resistance..and operate smoothly....it is difficult to say from one to the next what "hard to turn, stiff"...etc...really means. The "radio volume
> control" really can not be used as an apples to apples comparison....if all the controls operate smoothly...no binding...don't cause "noise" or other problems.. when operated...etc...why worry...operate the rig! I don't know..but maybe this rig(s) is/are older than your children....I know mine are
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> Â No screw up Chip. A word of warning...IF you plan on doing some service on this rig...especially adjusting the various coils...PLEASE ask some questions here..or go to
> the "files" section and look for info on those darn coils..before you break them.....
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> 73Â Joe
> WB7UQU
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>
> _____
> From: Louis Wilen <louis.wilen@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Saturday, June 15, 2013 11:46 AM
> Subject: Re: [TS-520_820_530_830] Re: How firm/stiff should the drive and plate knobs turn?
>
>
>
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> It is entirely normal for the Drive control to be stiff. I should turn smoothly, but it should be relatively firm compared to load. Plate should also be firm but smooth. Load should have the least turning resistance, almost as free as a volume control.
>

> Louis W3LMW
>
> From: chipthome
> Sent: Saturday, June 15, 2013 2:05 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: How firm/stiff should the drive and plate knobs turn?
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> Thanks for the response Joe !
>
> I guess I forgot to mention, this is a TS-520, my apologies for that screw up.
>
> Right now after reshooting DeOxIt, the Load is the smoothest and most easily turned, feeling closer to what I might expect. Then the Plate is the next smoothest, followed by the Drive which is the stiffest. None are as free as a radio volume switch, to give a comparison. Visually examining, everything appears to be straight line shafts leading to the "business end" of the caps etc. The Drive has that overhead rod with the chains leading to the caps. Disassembly of that scares the crap outta me as I doubt I'd get everything lined back up correctly again.
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> --- In mailto:TS-520_820_530_830%40yahoogroups.com, Joseph Stiles <stilesjoseph@> wrote:
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> > Chip,
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> > Ã First..what rig do you have?
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> > Ã Ã The VAST majority of the hybrids have a kind of a gear reduction for the "PLATE" control andÃ a rather straight forward shaft/chain drive arrangement for the "load" & "drive" controls.
> > The "plate" control can be "freed up" by partly disassembling the "reduction drive" It's packed with grease...and after that long a time of no operation...it turns into
> > semi set concrete. Ask any TEN-TEC owner!Ã The other controls...it's OK to apply a SMALL amount of a non-contaminating oil to the bearings...just NOT on any of the "wipers" on any of the air variable caps.
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> > Ã Ã I suggest that you download a service manual for what ever rig that you have...you can find good ones at:Ã Ã n6wk.comÃ Ã that is Gordon's web site..a member/moderator
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> > Sent: Saturday, June 15, 2013 12:23 AM
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> > I opened it up and it looks remarkably clean inside. There was only a tiny amount of black grease on the shaft where a tensioner rides. There were no signs of excess grease, dirt etc. I did spray DeOxIt at all rod connections/bushings/bearing etc. I can see no grease at all on the ball bearings at the vari caps' shafts and they look very clean.
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> > I was told not to get any oil/grease on the vari caps, so didn't. I can't see anywhere to DEOxIt, or lube, that isn't already moving at what appears to be as freely as it is going to.
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> > When completely assembled, both knobs take some force/torque to turn. I was expecting something about as free wheeling as the volume knob on my Honda...but it's not even close.
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>
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>

42851. Re: [TS-520_820_530_830] Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-15 20:55:08 UTC
From: Jim S
Topic: 42798 Message: 42851

Nope, sorry, I did not mean for it to say that yours was not a joke. I was mentioning that MY experience was not a joke! Sorry for the poor syntax ! What I was trying to say was that this story actually happened.

Vry 73, Jim AG3Y

On 6/15/2013 1:34 PM, Joseph Stiles wrote:
>
> My post wasNOT meant as a joke...it WAS meant, as a "light-hearted"
> attempt to cheer up Terry. It wasobviously misinterpreted by AG3Y...I
> know full well about these things. I have spent most of my adult
> life(34 years) as a Firefighter/Paramedic, unfortunately...guess
> what......some "other ham radio operator" was talking on his
> radio(mobile).... was NOT paying attention....could not SEE or HEAR
> the big fire engine...with it's lights and sirens going...ran through
> an intersection and hit right where I was sitting. So now, I have a
> plate and six screw holding my neck together, my right shoulder will
> NEVER be the same...I have limited function of my right arm.....and a
> back that will NEVER be right, spent a few months learning how to walk
> again.....I hobble around in the shape of the letter "V" and have to
> use a canes to even move from one room to the other. I was forced to
> retire...because as you always hear...about cell phones and,
> texting...how about
> "hams" "talking and driving."
>
> Again, my prior post was HUMOR and, OBVIOUSLY...by some persons
> standards, NOT humorous. I have probably created a "fecal matter
> storm" and really
> don't care. So, I can cover all the bases: Apologies if I offended
> anyone in the slightest.
>
>
> 73 Joe
> WB7UQU
>

[Non-text portions of this message have been removed]

42852. Re: [TS-520_820_530_830] Re: How firm/stiff should the drive and plate knobs turn?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-15 21:29:19 UTC
From: Joseph Stiles
Topic: 42844 Message: 42852

Chip,

  I hope that your rig has not been "CB HACKED." Compare the frequency of the crystals IN the rig with the stated frequencies of the crystals
noted in the service manual.

73 Joe
WB7UQU

From: chipthome <chip@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, June 15, 2013 1:06 PM
Subject: [TS-520_820_530_830] Re: How firm/stiff should the drive and plate knobs turn?

Thanks Louis and Joe!

These do move smoothly and do now move with less resistance than prior to using the DeOxIt. It's the varying resistance between the three that was sending me to question if there's more maintenance needed.

Now the next scarey thing to investigate.... why I have three "modules" in a small envelope that has 10M Cyrstals written on the outside ??? :-(

Chip

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
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> Chip,
>
> Â ....the controls should offer "some" resistance..and operate smoothly....it is difficult to say from one to the next what "hard to turn, stiff"...etc...really means. The "radio volume
> control" really can not be used as an apples to apples comparison....if all the controls operate smoothly...no binding...don't cause "noise" or other problems.. when operated...etc...why worry...operate the rig! I don't know..but maybe this rig(s) is/are older than your children....I know mine are
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> Â No screw up Chip. A word of warning...IF you plan on doing some service on this rig...especially adjusting the various coils...PLEASE ask some questions here..or go to
> the "files" section and look for info on those darn coils..before you break them......
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> WB7UQU
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> From: Louis Wilen <louis.wilen@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Saturday, June 15, 2013 11:46 AM
> Subject: Re: [TS-520_820_530_830] Re: How firm/stiff should the drive and plate knobs turn?
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> From: chipthome
> Sent: Saturday, June 15, 2013 2:05 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: How firm/stiff should the drive and plate knobs turn?
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> > The "plate" control can be "freed up" by partly disassembling the "reduction drive" It's packed with grease...and after that long a time of no operation...it turns into

> > semi set concrete. Ask any TEN-TEC owner!Ã, The other controls...it's OK to apply a SMALL amount of a non-contaminating oil to the bearings...just NOT on any of the "wipers" on any of the air variable caps.
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> > To: mailto:TS-520_820_530_830%40yahoogroups.com
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> > So, is this normal, or do I still have issues here ???
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> > Thanks for your help,
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> > Chip
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> >
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> No virus found in this message.
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> Version: 2013.0.3345 / Virus Database: 3199/6413 - Release Date: 06/15/13
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> [Non-text portions of this message have been removed]
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42853. TS-820 not showing trasmitter output during tune procedure

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-15 21:14:42 UTC
From: Barry
Topic: 42853 Message: 42853

I passed my Tech license exam this morning and missed General by 2 questions, doggone it... but a friend of mine came over with some of his equipment this afternoon, and we're trying to go through the tuning process for my TS-820.

According to Section 4 of the Operating Instruction Manual, we've checked Table 1 and Table 2 for receiving and transmitting settings. Table 3 we're getting plate current on ip meter readings - 60 milliamp plate current - but when we go to the second step to turn to TUN, we can receive but when trying to send the ALC meter setting shows nothing. No meter movement at all.

If we skip that step and go to TUN again to the ip meter to dip the plate current, it is not showing any meter reading, either.

Skipping that step and going to CW with RF, there's no effect turning plate and load controls.

The last 3 steps of tuning procedures in Table 3 we get no response.

We do get High Voltage readings on the meter, though. There is like an 800 reading on them.

Is there something we're missing or not doing? It seems to be receiving perfectly well. We tried changing to USB and LSB to see if we could transmit and have my Yaesu unit in the same room trying to see if we can receive anything on it, but we're not getting any input on it.

This is the first time I've tried to do much with the 820. Thanks for any insight at all you can give me as to what I might can do. This is the first ham radio I've had, so go easy on me...

...and thanks very much for your help previously as well!

Barry

Jeremiah 29:11-13 / John 3:16

42854. Re: TS-820 not showing trasmitter output during tune procedure

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-15 22:08:49 UTC
From: roberteleazer@rocketmail.com
Topic: 42853 Message: 42854

Barry:

Congrats on getting your tech! Don't feel bad about missing the General, I missed Tech the first time I took the test. Of course at that time the two written exams were the same.

First realize that with SSB you are not going to get much of an IP reading with the micophone gain turned all the way down as they say to do and even after you turn up the mic gain you still have to have some audio input to goe some RF output.

The way you test SSB output levels is to inject a tone, such as 1000 hz, into the microphone jack and observe RF output levels as you transmit.

Second, different bands require different CAR settings. If you are on 10M, try turning the CAR control up past the halfway setting they recommend for an initial setting. And you need to do this even just to get some ALC.

I assume you have a dummy load of some kind?

Good Luck!

Robert

--- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@...> wrote:
>
> I passed my Tech license exam this morning and missed General by 2 questions, doggone it... but a friend of mine came over with some of his equipment this afternoon, and we're trying to go through the tuning process for my TS-820.
>
> According to Section 4 of the Operating Instruction Manual, we've checked Table 1 and Table 2 for receiving and transmitting settings. Table 3 we're getting plate current on ip meter readings - 60 milliamp plate current - but when we go to the second step to turn to TUN, we can receive but when trying to send the ALC meter setting shows nothing. No meter movement at all.
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> If we skip that step and go to TUN again to the ip meter to dip the plate current, it is not showing any meter reading, either.
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> Skipping that step and going to CW with RF, there's no effect turning plate and load controls.
>
> The last 3 steps of tuning procedures in Table 3 we get no response.
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> We do get High Voltage readings on the meter, though. There is like an 800 reading on them.
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> Is there something we're missing or not doing? It seems to be receiving perfectly well. We tried changing to USB and LSB to see if we could transmit and have my Yaesu unit in the

same room trying to see if we can receive anything on it, but we're not getting any input on it.
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> This is the first time I've tried to do much with the 820. Thanks for any insight at all you can give me as to what I might can do. This is the first ham radio I've had, so go easy on me...
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> ...and thanks very much for your help previously as well!
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> Barry
>
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> Jeremiah 29:11-13 / John 3:16
>

42855. Re: How firm/stiff should the drive and plate knobs turn?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-15 21:55:40 UTC
From: chipthome
Topic: 42844 Message: 42855

Hi Joe,

I found the other 4 crystals the schematic says there should be in here and they look exactly like these in the envelope, all made by Trio. I found these on a board on the bottom side of the radio. The four that match are closest to the outside of the board. On the inside edge of this board are three "modules" that have an aluminum "case" to them, which is different than the crystals on the board or in the envelope. On those "cases" there is stamped TS 520, nothing else I can see. The owner I got it from, the one who supposedly didn't use it, was real big into CB. He showed me his CB stuff while I was there. I took a picture of what I am talking about although it's difficult to see the aluminum "modules" on the inside of the board. If I can figure out how to upload it, I will.

Chip

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Chip,
>
> Â I hope that your rig has not been "CB HACKED." Compare the frequency of the crystals IN the rig with the stated frequencies of the crystals
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>
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> 73Â Joe
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> From: chipthome <chip@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Saturday, June 15, 2013 1:06 PM
> Subject: [TS-520_820_530_830] Re: How firm/stiff should the drive and plate knobs turn?
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> > >
> > >
> > >
> > > Ã□â□□
> > > 73Ã□â□□ Joe
> > > WB7UQU
> > >
> > >
> > >
> > > _____
> > > From: chipthome <chip@>
> > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > Sent: Saturday, June 15, 2013 12:23 AM
> > > Subject: [TS-520_820_530_830] How firm/stiff should the drive and plate knobs turn?
> > >
> > >
> > >
> > > Ã□â□□
> > > Greetings all!
> > >
> > > I did a search and found others had a similar situation, firm/stiff drive and or plate knobs.
> > >
> > > My radio sat for the last 30 years before I bought it from the guy who never used it. He got it from a friend, my guess is, when it was 3-5-ish years old.
> > >

> > > I opened it up and it looks remarkably clean inside. There was only a tiny amount of black grease on the shaft where a tensioner rides. There were no signs of excess grease, dirt etc. I did spray DeOxIt at all rod connections/bushings/bearing etc. I can see no grease at all on the ball bearings at the vari caps' shafts and they look very clean.
> > >
> > > I was told not to get any oil/grease on the vari caps, so didn't. I can't see anywhere to DEOxIt, or lube, that isn't already moving at what appears to be as freely as it is going to.
> > >
> > > When completely assembled, both knobs take some force/torque to turn. I was expecting something about as free wheeling as the volume knob on my Honda...but it's not even close.
> > >
> > > So, is this normal, or do I still have issues here ???
> > >
> > > Thanks for your help,
> > >
> > > Chip
> > >
> > >
> > >
> > >
> > > [Non-text portions of this message have been removed]
> > >
> >
> > No virus found in this message.
> > Checked by AVG - www.avg.com
> > Version: 2013.0.3345 / Virus Database: 3199/6413 - Release Date: 06/15/13
> >
> > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
>

42856. Re: How firm/stiff should the drive and plate knobs turn?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-15 22:04:16 UTC
From: chipthome
Topic: 42844 Message: 42856

Here's the image link:

http://groups.yahoo.com/group/TS-520_820_530_830/photos/album/886215059/pic/1930123854/view?picmode=original&mode=tn&order=ordinal&start=1&dir=asc

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Chip,
>
> Â I hope that your rig has not been "CB HACKED." Compare the frequency of the crystals IN the rig with the stated frequencies of the crystals
> noted in the service manual.
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: chipthome <chip@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Saturday, June 15, 2013 1:06 PM
> Subject: [TS-520_820_530_830] Re: How firm/stiff should the drive and plate knobs turn?
>
>
>
> Â
> Thanks Louis and Joe!
>
> These do move smoothly and do now move with less resistance than prior to using the DeOxIt. It's the varying resistance between the three that was sending me to question if there's more maintenance needed.
>
> Now the next scarey thing to investigate.... why I have three "modules" in a small envelope that has 10M Cyrstals written on the outside ??? :-(
>
> Chip
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@> wrote:
> >
> > Chip,
> >
> > ÃÂ ....the controls should offer "some" resistance..and operate smoothly....it is difficult to say from one to the next

what "hard to turn, stiff"...etc...really means. The "radio volume
> > control" really can not be used as an apples to apples comparison....if all the controls operate smoothly...no binding...don't cause "noise" or other problems.. when operated...etc...why worry...operate the rig! I don't know..but maybe this rig(s) is/are older than your children....I know mine are
> >
> > Ã□Â No screw up Chip. A word of warning...IF you plan on doing some service on this rig...especially adjusting the various coils...PLEASE ask some questions here..or go to
> > the "files" section and look for info on those darn coils..before you break them.....
> >
> >
> > Ã□Â
> > 73Ã□Â Joe
> > WB7UQU
> >
> >
> >
> > _____
> > From: Louis Wilen <louis.wilen@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Saturday, June 15, 2013 11:46 AM
> > Subject: Re: [TS-520_820_530_830] Re: How firm/stiff should the drive and plate knobs turn?
> >
> >
> >
> > Ã□Â
> > It is entirely normal for the Drive control to be stiff. I should turn smoothly, but it should be relatively firm compared to load. Plate should also be firm but smooth. Load should have the least turning resistance, almost as free as a volume control.
> >
> > Louis W3LMW
> >
> > From: chipthome
> > Sent: Saturday, June 15, 2013 2:05 PM
> > To: TS-520_820_530_830@yahoogroups.com
> > Subject: [TS-520_820_530_830] Re: How firm/stiff should the drive and plate knobs turn?
> >
> > Thanks for the response Joe !
> >
> > I guess I forgot to mention, this is a TS-520, my apologies for that screw up.
> >
> > Right now after reshooting DeOxIt, the Load is the smoothest and most easily turned, feeling closer to what I might expect. Then the Plate is the next smoothest, followed by the Drive which is the stiffest. None are as free as a radio volume switch, to give a comparison. Visually examining, everything appears to be straight line shafts leading to the "business end" of the caps etc. The Drive has that overhead rod with the chains leading to the caps. Disassembly of that scares the crap outta me as I doubt I'd get everything lined back up correctly again.
> >
> > Chip
> >
> > --- In mailto:TS-520_820_530_830%40yahoogroups.com, Joseph Stiles <stilesjoseph@> wrote:
> > >

> > > Chip,
> > >
> > > Ã□â□□ First..what rig do you have?
> > >
> > > Ã□â□□ Ã□â□□ The VAST majority of the hybrids have a kind of a gear reduction for the "PLATE" control andÃ□â□□ a rather straight forward shaft/chain drive arrangement for the "load" & "drive" controls.
> > > The "plate" control can be "freed up" by partly disassembling the "reduction drive" It's packed with grease...and after that long a time of no operation...it turns into
> > > semi set concrete. Ask any TEN-TEC owner!Ã□â□□ The other controls...it's OK to apply a SMALL amount of a non-contaminating oil to the bearings...just NOT on any of the "wipers" on any of the air variable caps.
> > >
> > > Ã□â□□ Ã□â□□ I suggest that you download a service manual for what ever rig that you have...you can find good ones at:Ã□â□□ Ã□â□□ n6wk.comÃ□â□□ Ã□â□□ that is Gordon's web site..a member/moderator
> > > of this board. It will show you an "exploded view" of the "reduction drive." There are small ball bearings in the reduction drive. I can give you some more specific
> > > info...when I know the modelÃ□â□□ of your rig
> > >
> > >
> > >
> > > Ã□â□□
> > > 73Ã□â□□ Joe
> > > WB7UQU
> > >
> > >
> > >
> > > _____
> > > From: chipthome <chip@>
> > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > Sent: Saturday, June 15, 2013 12:23 AM
> > > Subject: [TS-520_820_530_830] How firm/stiff should the drive and plate knobs turn?
> > >
> > >
> > >
> > > Ã□â□□
> > > Greetings all!
> > >
> > > I did a search and found others had a similar situation, firm/stiff drive and or plate knobs.
> > >
> > > My radio sat for the last 30 years before I bought it from the guy who never used it. He got it from a friend, my guess is, when it was 3-5-ish years old.
> > >
> > > I opened it up and it looks remarkably clean inside. There was only a tiny amount of black grease on the shaft where a tensioner rides. There were no signs of excess grease, dirt etc. I did spray DeOxIt at all rod connections/bushings/bearing etc. I can see no grease at all on the ball bearings at the vari caps' shafts and they look very clean.
> > >
> > > I was told not to get any oil/grease on the vari caps, so didn't. I can't see anywhere to DEOxIt, or lube, that isn't already moving at what appears to be as freely as it is going to.
> > >

> > > When completely assembled, both knobs take some force/torque to turn. I was expecting something about as free wheeling as the volume knob on my Honda...but it's not even close.
> > >
> > > So, is this normal, or do I still have issues here ???
> > >
> > > Thanks for your help,
> > >
> > > Chip
> > >
> > >
> > >
> > >
> > > [Non-text portions of this message have been removed]
> > >
> >
> > No virus found in this message.
> > Checked by AVG - www.avg.com
> > Version: 2013.0.3345 / Virus Database: 3199/6413 - Release Date: 06/15/13
> >
> > [Non-text portions of this message have been removed]
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> > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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42857. Re: TS-820 not showing trasmitter output during tune procedure

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-15 22:27:17 UTC
From: Barry
Topic: 42853 Message: 42857

Not sure if my message went through - I've had Internet trouble today for some reason.

Thanks very much, Robert! 2 questions, doggone it, and I'd have my General in the same day. I was at least happy to get the Tech!

We plugged the same endfed antenna into the 820 that my Yaesu rig uses. Its SWR was showing about 1 to 1.5 to 1 today. We weren't using a dummy load - we were going straight into the antenna, and I couldn't get any meter reading on trying to talk into the mic.

I was pretty disappointed - I was hoping to see what the 820 will do because the friend of mine has an 830. He was trying to help me get going with my 820.

Barry

Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> Barry:
>
> Congrats on getting your tech! Don't feel bad about missing the General, I missed Tech the first time I took the test. Of course at that time the two written exams were the same.
>
> First realize that with SSB you are not going to get much of an IP reading with the micophone gain turned all the way down as they say to do and even after you turn up the mic gain you still have to have some audio input to goe some RF output.
>
> The way you test SSB output levels is to inject a tone, such as 1000 hz, into the microphone jack and observe RF output levels as you transmit.
>
> Second, different bands require different CAR settings. If you are on 10M, try turning the CAR control up past the halfway setting they recommend for an initial setting. And you need to do this even just to get some ALC.
>
> I assume you have a dummy load of some kind?
>
> Good Luck!
>
> Robert

42858. Re: TS-820 not showing trasmitter output during tune procedure

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-16 00:32:57 UTC
From: Terry Wagoner
Topic: 42853 Message: 42858

Barry: A few things:

1. Do you have an external watt meter in line? If so, suggest you try final loading step using the external wattmeter and leave the TS820 meter in Ip position. After you tune tank to resonance in Tune Mode by dipping the plate current (adjusting Plate Tuning capacitor for minimum Ip reading) then place mode switch in CW and alternately adjust Plate Loading cap and Plate Tuning cap for maximum RF output on the watt meter (approx 100 watts) without exceeding approx 200ma Ip. With practice you can do this in a matter of seconds.

2. Suggest you download a copy of Ken Kempski K4EAA loading instructions as they are a little more clear than what is in your TS-820 operating manual.

3. Just dont use the RF detector meter position. In lieu of that do what I suggest in 1 above.

4. Dont be afraid to give yourself some good ALC indication to work with when you are peaking the Drive control. Open up the Carrier Level control to get something around 2/3 to 3/4 full scale meter deflection. What you are doing is tuning the Driver stage tuned circuits to resonance and not trying to set some grid current level. You cannot hurt the finals if you run the Car Level Pot up to get a good ALC indication for peaking the Drive control. It is normal for that ALC indication to fall off as you pick up load current (Ip)as the rig has negative feedback to prevent oscillation and it will cut back the drive and reduce ALC indication as you get closer to 200 ma. DO NOT look at ALC after peaking the Drive control. No reason to go back and look at it and adjust it. Just monitor Ip as you load to max rf output on your watt meter. If no watt meter you will have to use the internal RF sniffer. Just make sure you have the sensitivity pot on rear of rig turned up to get a good deflection to peak.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@...> wrote:
>
>
>
> Not sure if my message went through - I've had Internet trouble today for some reason.
>
> Thanks very much, Robert! 2 questions, doggone it, and I'd have my General in the same day. I was at least happy to get the Tech!
>
> We plugged the same endfed antenna into the 820 that my Yaesu rig uses. Its SWR was showing about 1 to 1.5 to 1 today. We weren't using a dummy load - we were going straight into the antenna, and I couldn't get any meter reading on trying to talk into the mic.
>
> I was pretty disappointed - I was hoping to see what the 820 will do because the friend of mine has an 830. He was trying to help me get going with my 820.
>

> Barry
>
> ---------------
>
> Jeremiah 29:11-13 / John 3:16
>
> --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> >
> > Barry:
> >
> > Congrats on getting your tech! Don't feel bad about missing the General, I missed Tech the first time I took the test. Of course at that time the two written exams were the same.
> >
> > First realize that with SSB you are not going to get much of an IP reading with the micophone gain turned all the way down as they say to do and even after you turn up the mic gain you still have to have some audio input to goe some RF output.
> >
> > The way you test SSB output levels is to inject a tone, such as 1000 hz, into the microphone jack and observe RF output levels as you transmit.
> >
> > Second, different bands require different CAR settings. If you are on 10M, try turning the CAR control up past the halfway setting they recommend for an initial setting. And you need to do this even just to get some ALC.
> >
> > I assume you have a dummy load of some kind?
> >
> > Good Luck!
> >
> > Robert
>

42859. Re: [TS-520_820_530_830] Re: TS-820 not showing trasmitter output during tune procedure

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-15 23:47:03 UTC
From: Sal Cerda
Topic: 42853 Message: 42859

Did you turn the heater on? Happened to me once.
On Jun 15, 2013 5:56 PM, "Barry" <bonnevilleblb@...> wrote:

> **
>
>
>
>
> Not sure if my message went through - I've had Internet trouble today for
> some reason.
>
> Thanks very much, Robert! 2 questions, doggone it, and I'd have my General
> in the same day. I was at least happy to get the Tech!
>
> We plugged the same endfed antenna into the 820 that my Yaesu rig uses.
> Its SWR was showing about 1 to 1.5 to 1 today. We weren't using a dummy
> load - we were going straight into the antenna, and I couldn't get any
> meter reading on trying to talk into the mic.
>
> I was pretty disappointed - I was hoping to see what the 820 will do
> because the friend of mine has an 830. He was trying to help me get going
> with my 820.
>
> Barry
>
> ---------------
>
> Jeremiah 29:11-13 / John 3:16
>
> --- In TS-520_820_530_830@...m, "roberteleazer@..."
> <roberteleazer@...> wrote:
> >
> > Barry:
> >
> > Congrats on getting your tech! Don't feel bad about missing the General,
> I missed Tech the first time I took the test. Of course at that time the
> two written exams were the same.
> >
> > First realize that with SSB you are not going to get much of an IP
> reading with the micophone gain turned all the way down as they say to do
> and even after you turn up the mic gain you still have to have some audio
> input to goe some RF output.
> >
> > The way you test SSB output levels is to inject a tone, such as 1000 hz,

> into the microphone jack and observe RF output levels as you transmit.
> >
> > Second, different bands require different CAR settings. If you are on
> 10M, try turning the CAR control up past the halfway setting they recommend
> for an initial setting. And you need to do this even just to get some ALC.
> >
> > I assume you have a dummy load of some kind?
> >
> > Good Luck!
> >
> > Robert
>
>
>

[Non-text portions of this message have been removed]

42860. Re: [TS-520_820_530_830] Thanks to All

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-15 23:52:26 UTC
From: Tom Pierce
Topic: 42831 Message: 42860

Terry,
Sorry to hear about your health problem. Glad YOU are better. Enjoy reading your comments, get back soon.
Tom
K0THP

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, June 14, 2013 6:36 PM
Subject: [TS-520_820_530_830] Thanks to All

Thanks to all for your words of encouragement. It is very touching to realize how many friends I have on this forum. I am lucky to be alive and to have found this group. I had multiple pulmonary embolism in both lungs. My family doctor of 40 years started me on Heparin and Coumadin.

I asked him about the new blood thinners and he just dismissed them as too expensive and that he had successfully administered Coumadin for years with many patients. I appreciate that he is comfortable with this 1950s protocol.

Well my cardiologist showed up late afternoon and is taking me off the Coumadin and starting me on Xarelto. Just took my first one.

So I am happy camper and looks like may get to go home tomorrow. Still no smoking gun found. Usually caused by deep vain thrombosis in legs but ultra sounds were negative and no signs of AFIB. So important thing now is to prevent recurrence as this is a killer.

So will take the exercise advice to heart literally and good advice from Jim regards the Xarelto.

Once again thanks to all of you.

I will be back once get this behind me. There are plenty of you to help each other keep these Kenwoods we all love running.

Got to go now and try to get the cover put back on this Spectrum Sigma Infusion Pump. I dont think it is caled correctly !!!

Best 73s
Terry K9TW

[Non-text portions of this message have been removed]

42861. Re: [TS-520_820_530_830] How firm/stiff should the drive and plate knobs turn?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-16 01:03:02 UTC
From: John Davidson
Topic: 42844 Message: 42861

M y TS520 has a straight knob/shaft/plate tuning capacitor scheme with no gear drive. The only reduction drive is the main VFO tuning control.
Slight resistance to rotating the drive, loading and plate tuning is normal , maybe because of the shaft bearings on the capacitors themselves.

From: Joseph Stiles <stilesjoseph@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@...m>
Sent: Saturday, June 15, 2013 1:07 PM
Subject: Re: [TS-520_820_530_830] How firm/stiff should the drive and plate knobs turn?

Chip,

  First..what rig do you have?

   The VAST majority of the hybrids have a kind of a gear reduction for the "PLATE" control and a rather straight forward shaft/chain drive arrangement for the "load" & "drive" controls.
The "plate" control can be "freed up" by partly disassembling the "reduction drive" It's packed with grease...and after that long a time of no operation...it turns into semi set concrete.

73 Joe
WB7UQU

From: chipthome <
Greetings all!

I did a search and found others had a similar situation, firm/stiff drive and or plate knobs.

Chip

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

42862. Re: [TS-520_820_530_830] Hospital

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-16 01:04:58 UTC
From: John Davidson
Topic: 42798 Message: 42862

From: Joseph Stiles <stilesjoseph@yahoo.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Saturday, June 15, 2013 1:34 PM
Subject: Re: [TS-520_820_530_830] Hospital

My post wasNOT meant as a joke...it WAS meant, as a "light-hearted" attempt to cheer up Terry. It wasobviously misinterpreted by AG3Y...I know full well about these things. I have spent most of my adult life(34 years) as a Firefighter/Paramedic, unfortunately...guess what.....some "other ham radio operator" was talking on his radio(mobile).... was NOT paying attention....could not SEE or HEAR the big fire engine...with it's lights and sirens going...ran through an intersection and hit right where I was sitting. So now, I have a plate and six screw holding my neck together, my right shoulder will NEVER be the same...I have limited function of my right arm.....and a back that will NEVER be right, spent a few months learning how to walk again.....I hobble around in the shape of the letter "V" and have to use a canes to even move from one room to the other. I was forced to retire...because as you always hear...about cell phones and, texting...how about "hams" "talking and driving."

Again, my prior post was HUMOR and, OBVIOUSLY...by some persons standards, NOT humorous. I have probably created a "fecal matter storm" and really don't care. So, I can cover all the bases: Apologies if I offended anyone in the slightest.

73 Joe
WB7UQU

From: Jim S <jimstan@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, June 15, 2013 9:33 AM
Subject: Re: [TS-520_820_530_830] Hospital

This is not a joke. Some years ago, I was hospitalized, and a friend brought in a two meter handheld for me to play with while I was recuperating. EVERY TIME I hit the transmit button, the monitor in my room would start BEEPING an alarm !

I had to be content just to listen to what was going on. Not fun !

Maybe things are a bit more immune to RF now days.

Jim AG3Y

On 6/15/2013 12:18 PM, Joseph Stiles wrote:
>
> Terry,

>
> As before..GET WELL SOON!....but, do you think that you may be able
> to get one of those new fangled... bleeping...beeping...heart monitors
> and possibly adapt it to monitor IF/AF./RF......output from our hybrids???
>
> Just a thought....and some(?) humor GET BETTER SOON!
>
>
> 73 Joe
> WB7UQU
>
> _
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

42863. Re: TS-820 not showing trasmitter output during tune procedure

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-16 01:38:20 UTC
From: Terry Wagoner
Topic: 42853 Message: 42863

Barry: I forgot to mention there is a standard test used to put the Driver stage thru its paces that requires no Dummy Load or Antenna. I have posted it here several times in the past. Need to put it in the Files. Here is quick re-cap.

1. Power on, Heaters on, SG switch off
2. Mode switch CW
3. Meter ALC position
4. Drive Control 1200
5. Carrier Level pot 1200 or greater
6. VFO at mid travel approx 250
7. Flip to send, peak Drive control for maximum ALC meter indication.
8. Increase Car Level Pot for full scale deflection (FSD) on the meter. If meter pegs just back pot off to bring indication back on scale.

If Drive stage is good you should have FSD on meter with Car Level pot typically no greater than approx 1000 on all bands except 10 meters may require a little more say around 1200 to 1300.

The full scale ALC indication should stay there and not slowly drift off.

Return rig to Standby (REC) position. Let it rest a few minutes and move to next band. 12BY7A is running Class A and with rig keyed it will see full Ip reading (approx 30 ma) and will get pretty hot. So need to let it rest in between long key down times.

Repeat this test on all bands. The Drive control may not peak at 1200 so make sure you swing it each side of 1200 to locate the peak.

For any band that has no ALC indication even with CAR LEVEL pot full CW then need to troubleshoot. If there are bands with low ALC indication first thing to do is perform a Coil Pack alignment as described in your operating manual maintenance section.

When done doing this Driver stage test remember to turn SG switch back to on position.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Barry: A few things:
>
> 1. Do you have an external watt meter in line? If so, suggest you try final loading step using the external wattmeter and leave the TS820 meter in Ip position. After you tune tank to resonance in Tune Mode by dipping the plate current (adjusting Plate Tuning capacitor for minimum Ip reading) then place mode switch in CW and alternately adjust Plate Loading cap and Plate Tuning cap for maximum RF output on the watt meter (approx 100 watts) without exceeding approx 200ma Ip. With practice you can do this in a matter of seconds.
>
> 2. Suggest you download a copy of Ken Kempski K4EAA loading instructions as they are a

little more clear than what is in your TS-820 operating manual.
>
> 3. Just dont use the RF detector meter position. In lieu of that do what I suggest in 1 above.
>
> 4. Dont be afraid to give yourself some good ALC indication to work with when you are peaking the Drive control. Open up the Carrier Level control to get something around 2/3 to 3/4 full scale meter deflection. What you are doing is tuning the Driver stage tuned circuits to resonance and not trying to set some grid current level. You cannot hurt the finals if you run the Car Level Pot up to get a good ALC indication for peaking the Drive control. It is normal for that ALC indication to fall off as you pick up load current (Ip)as the rig has negative feedback to prevent oscillation and it will cut back the drive and reduce ALC indication as you get closer to 200 ma. DO NOT look at ALC after peaking the Drive control. No reason to go back and look at it and adjust it. Just monitor Ip as you load to max rf output on your watt meter. If no watt meter you will have to use the internal RF sniffer. Just make sure you have the sensitivity pot on rear of rig turned up to get a good deflection to peak.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@> wrote:
> >
> >
> >
> > Not sure if my message went through - I've had Internet trouble today for some reason.
> >
> > Thanks very much, Robert! 2 questions, doggone it, and I'd have my General in the same day. I was at least happy to get the Tech!
> >
> > We plugged the same endfed antenna into the 820 that my Yaesu rig uses. Its SWR was showing about 1 to 1.5 to 1 today. We weren't using a dummy load - we were going straight into the antenna, and I couldn't get any meter reading on trying to talk into the mic.
> >
> > I was pretty disappointed - I was hoping to see what the 820 will do because the friend of mine has an 830. He was trying to help me get going with my 820.
> >
> > Barry
> >
> > ---------------
> >
> > Jeremiah 29:11-13 / John 3:16
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> > >
> > > Barry:
> > >
> > > Congrats on getting your tech! Don't feel bad about missing the General, I missed Tech the first time I took the test. Of course at that time the two written exams were the same.
> > >
> > > First realize that with SSB you are not going to get much of an IP reading with the

micophone gain turned all the way down as they say to do and even after you turn up the mic gain you still have to have some audio input to goe some RF output.
> > >
> > > The way you test SSB output levels is to inject a tone, such as 1000 hz, into the microphone jack and observe RF output levels as you transmit.
> > >
> > > Second, different bands require different CAR settings. If you are on 10M, try turning the CAR control up past the halfway setting they recommend for an initial setting. And you need to do this even just to get some ALC.
> > >
> > > I assume you have a dummy load of some kind?
> > >
> > > Good Luck!
> > >
> > > Robert
> >
>

42864. Re: [TS-520_820_530_830] Re: How firm/stiff should the drive and plate knobs turn?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-16 05:12:12 UTC
From: Joseph Stiles
Topic: 42844 Message: 42864

Barry,

From what I can see...the ones marked with the frequency and "trio" appear to be factory. I can not say for sure...but the silver colored
ones MAY be the CB HACK. See if you can look at the top to the silver cased crystals to see if there is a frequency stamped on the top.
Or....tune up on the 10meter band...with a dummy load and frequency counter...and see if it is on the correct frequency...instead say..somewhere
in the 27Mhz band.

The crystals in your picture that read 15.895 & 22.895 are correct. Check them all however...but the ones of real interest are the ones for the 10meter band.....
they should be marked 36.895 37.395 37.995

73 Joe
WB7UQU

From: chipthome <chip@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, June 15, 2013 3:04 PM
Subject: [TS-520_820_530_830] Re: How firm/stiff should the drive and plate knobs turn?

Here's the image link:

http://groups.yahoo.com/group/TS-520_820_530_830/photos/album/886215059/pic/1930123854/view?picmode=original&mode=tn&order=ordinal&start=1&dir=asc

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Chip,
>
> Â I hope that your rig has not been "CB HACKED." Compare the frequency of the crystals IN the rig with the stated frequencies of the crystals
> noted in the service manual.
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> ---
> From: chipthome <chip@...>

> To: TS-520_820_530_830@yahoogroups.com
> Sent: Saturday, June 15, 2013 1:06 PM
> Subject: [TS-520_820_530_830] Re: How firm/stiff should the drive and plate knobs turn?
>
>
>
> Â
> Thanks Louis and Joe!
>
> These do move smoothly and do now move with less resistance than prior to using the DeOxIt. It's the varying resistance between the three that was sending me to question if there's more maintenance needed.
>
> Now the next scarey thing to investigate.... why I have three "modules" in a small envelope that has 10M Cyrstals written on the outside ??? :-(
>
> Chip
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@> wrote:
> >
> > Chip,
> >
> > Ã‚Â ....the controls should offer "some" resistance..and operate smoothly....it is difficult to say from one to the next what "hard to turn, stiff"...etc...really means. The "radio volume
> > control" really can not be used as an apples to apples comparison....if all the controls operate smoothly...no binding...don't cause "noise" or other problems.. when operated...etc...why worry...operate the rig! I don't know..but maybe this rig(s) is/are older than your children....I know mine are
> >
> > Ã‚Â No screw up Chip. A word of warning...IF you plan on doing some service on this rig...especially adjusting the various coils...PLEASE ask some questions here..or go to
> > the "files" section and look for info on those darn coils..before you break them......
> >
> >
> > Ã‚Â
> > 73Ã‚Â Joe
> > WB7UQU
> >
> >
> >
> > _____
> > From: Louis Wilen <louis.wilen@>
> > To: TS-520_820_530_830@...m
> > Sent: Saturday, June 15, 2013 11:46 AM
> > Subject: Re: [TS-520_820_530_830] Re: How firm/stiff should the drive and plate knobs turn?
> >
> >
> >

> > Ã‚Â
> > It is entirely normal for the Drive control to be stiff. I should turn smoothly, but it should be relatively firm compared to load. Plate should also be firm but smooth. Load should have the least turning resistance, almost as free as a volume control.
> >
> > Louis W3LMW
> >
> > From: chipthome
> > Sent: Saturday, June 15, 2013 2:05 PM
> > To: TS-520_820_530_830@yahoogroups.com
> > Subject: [TS-520_820_530_830] Re: How firm/stiff should the drive and plate knobs turn?
> >
> > Thanks for the response Joe !
> >
> > I guess I forgot to mention, this is a TS-520, my apologies for that screw up.
> >
> > Right now after reshooting DeOxIt, the Load is the smoothest and most easily turned, feeling closer to what I might expect. Then the Plate is the next smoothest, followed by the Drive which is the stiffest. None are as free as a radio volume switch, to give a comparison. Visually examining, everything appears to be straight line shafts leading to the "business end" of the caps etc. The Drive has that overhead rod with the chains leading to the caps. Disassembly of that scares the crap outta me as I doubt I'd get everything lined back up correctly again.
> >
> > Chip
> >
> > --- In mailto:TS-520_820_530_830%40yahoogroups.com, Joseph Stiles <stilesjoseph@> wrote:
> > >
> > > Chip,
> > >
> > > Ãƒâ€š First..what rig do you have?
> > >
> > > Ãƒâ€š Ãƒâ€š The VAST majority of the hybrids have a kind of a gear reduction for the "PLATE" control andÃƒâ€š a rather straight forward shaft/chain drive arrangement for the "load" & "drive" controls.
> > > The "plate" control can be "freed up" by partly disassembling the "reduction drive" It's packed with grease...and after that long a time of no operation...it turns into
> > > semi set concrete. Ask any TEN-TEC owner!Ãƒâ€š The other controls...it's OK to apply a SMALL amount of a non-contaminating oil to the bearings...just NOT on any of the "wipers" on any of the air variable caps.
> > >
> > > Ãƒâ€š Ãƒâ€š I suggest that you download a service manual for what ever rig that you have...you can find good ones at:Ãƒâ€š Ãƒâ€š n6wk.comÃƒâ€š Ãƒâ€š that is Gordon's web site..a member/moderator
> > > of this board. It will show you an "exploded view" of the "reduction drive." There are small ball bearings in the reduction drive. I can give you some more specific
> > > info...when I know the modelÃƒâ€š of your rig
> > >
> > >

> > >
> > > Ãƒâ€š
> > > 73Ãƒâ€š Joe
> > > WB7UQU
> > >
> > >
> > >
> > > _____
> > > From: chipthome <chip@>
> > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > Sent: Saturday, June 15, 2013 12:23 AM
> > > Subject: [TS-520_820_530_830] How firm/stiff should the drive and plate knobs turn?
> > >
> > >
> > >
> > > Ãƒâ€š
> > > Greetings all!
> > >
> > > I did a search and found others had a similar situation, firm/stiff drive and or plate knobs.
> > >
> > > My radio sat for the last 30 years before I bought it from the guy who never used it. He got it from a friend, my guess is, when it was 3-5-ish years old.
> > >
> > > I opened it up and it looks remarkably clean inside. There was only a tiny amount of black grease on the shaft where a tensioner rides. There were no signs of excess grease, dirt etc. I did spray DeOxIt at all rod connections/bushings/bearing etc. I can see no grease at all on the ball bearings at the vari caps' shafts and they look very clean.
> > >
> > > I was told not to get any oil/grease on the vari caps, so didn't. I can't see anywhere to DEOxIt, or lube, that isn't already moving at what appears to be as freely as it is going to.
> > >
> > > When completely assembled, both knobs take some force/torque to turn. I was expecting something about as free wheeling as the volume knob on my Honda...but it's not even close.
> > >
> > > So, is this normal, or do I still have issues here ???
> > >
> > > Thanks for your help,
> > >
> > > Chip
> > >
> > >
> > >
> > >
> > > [Non-text portions of this message have been removed]
> > >
> >
> > No virus found in this message.
> > Checked by AVG - www.avg.com

> > Version: 2013.0.3345 / Virus Database: 3199/6413 - Release Date: 06/15/13
> >
> > [Non-text portions of this message have been removed]
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> > [Non-text portions of this message have been removed]
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42865. Home Now

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-16 13:47:15 UTC
From: Terry Wagoner
Topic: 42865 Message: 42865

Hi Gang:

Home now and tired but going to be OK so we need to end this discussion and get back to our treasured Kenwoods.

One last thing. I am on Xarelto and not Coumidin thanks to a cardiologist intervention. Not yet sure if for life. I would like to hear Off List from anyone with Xarelto experience and/or Factor V Leiden clotting disorder.

So back to Hybrid talk and thanks again to all for your support. I wont soon forget you.

73s Terry K9TW

42866. Re: [TS-520_820_530_830] Home Now

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-16 15:54:12 UTC
From: Louis Wilen
Topic: 42865 Message: 42866

Great to know that you're home, Terry. Take it easy – we want you to be around for many more sunspot cycles.

Louis
W3LMW

From: Terry Wagoner
Sent: Sunday, June 16, 2013 9:47 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Home Now

Hi Gang:

Home now and tired but going to be OK so we need to end this discussion and get back to our treasured Kenwoods.

One last thing. I am on Xarelto and not Coumidin thanks to a cardiologist intervention. Not yet sure if for life. I would like to hear Off List from anyone with Xarelto experience and/or Factor V Leiden clotting disorder.

So back to Hybrid talk and thanks again to all for your support. I wont soon forget you.

73s Terry K9TW

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.3345 / Virus Database: 3199/6415 - Release Date: 06/16/13

[Non-text portions of this message have been removed]

42867. FW: Leroy Campbell

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-16 17:34:13 UTC
From: Leroy Campbell
Topic: 42867 Message: 42867

hello! http://timelapselebanon.com/rylab/aeks/qdqj/mfo.html
Leroy Campbell

[Non-text portions of this message have been removed]

42868. Re: TS-820 not showing trasmitter output during tune procedure

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-16 10:29:56 UTC
From: Barry
Topic: 42853 Message: 42868

I am going to see what I can do possibly tomorrow since today we hope to get our family together for Father's Day. I also met some guys at the testing facility yesterday that I hope can help just to make sure I get all of these recommendations right. Thanks to everybody for always being so helpful.

Still praying for you, Terry, and glad to hear that good report that things are going well!

Barry

Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Barry: I forgot to mention there is a standard test used to put the Driver stage thru its paces that requires no Dummy Load or Antenna. I have posted it here several times in the past. Need to put it in the Files. Here is quick re-cap.
>
> 1. Power on, Heaters on, SG switch off
> 2. Mode switch CW
> 3. Meter ALC position
> 4. Drive Control 1200
> 5. Carrier Level pot 1200 or greater
> 6. VFO at mid travel approx 250
> 7. Flip to send, peak Drive control for maximum ALC meter indication.
> 8. Increase Car Level Pot for full scale deflection (FSD) on the meter. If meter pegs just back pot off to bring indication back on scale.
>
> If Drive stage is good you should have FSD on meter with Car Level pot typically no greater than approx 1000 on all bands except 10 meters may require a little more say around 1200 to 1300.
>
> The full scale ALC indication should stay there and not slowly drift off.
>
> Return rig to Standby (REC) position. Let it rest a few minutes and move to next band. 12BY7A is running Class A and with rig keyed it will see full Ip reading (approx 30 ma) and will get pretty hot. So need to let it rest in between long key down times.
>
> Repeat this test on all bands. The Drive control may not peak at 1200 so make sure you swing it each side of 1200 to locate the peak.
>
> For any band that has no ALC indication even with CAR LEVEL pot full CW then need to troubleshoot. If there are bands with low ALC indication first thing to do is perform a Coil Pack alignment as described in your operating manual maintenance section.
>

> When done doing this Driver stage test remember to turn SG switch back to on position.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Barry: A few things:
> >
> > 1. Do you have an external watt meter in line? If so, suggest you try final loading step using the external wattmeter and leave the TS820 meter in Ip position. After you tune tank to resonance in Tune Mode by dipping the plate current (adjusting Plate Tuning capacitor for minimum Ip reading) then place mode switch in CW and alternately adjust Plate Loading cap and Plate Tuning cap for maximum RF output on the watt meter (approx 100 watts) without exceeding approx 200ma Ip. With practice you can do this in a matter of seconds.
> >
> > 2. Suggest you download a copy of Ken Kempski K4EAA loading instructions as they are a little more clear than what is in your TS-820 operating manual.
> >
> > 3. Just dont use the RF detector meter position. In lieu of that do what I suggest in 1 above.
> >
> > 4. Dont be afraid to give yourself some good ALC indication to work with when you are peaking the Drive control. Open up the Carrier Level control to get something around 2/3 to 3/4 full scale meter deflection. What you are doing is tuning the Driver stage tuned circuits to resonance and not trying to set some grid current level. You cannot hurt the finals if you run the Car Level Pot up to get a good ALC indication for peaking the Drive control. It is normal for that ALC indication to fall off as you pick up load current (Ip)as the rig has negative feedback to prevent oscillation and it will cut back the drive and reduce ALC indication as you get closer to 200 ma. DO NOT look at ALC after peaking the Drive control. No reason to go back and look at it and adjust it. Just monitor Ip as you load to max rf output on your watt meter. If no watt meter you will have to use the internal RF sniffer. Just make sure you have the sensitivity pot on rear of rig turned up to get a good deflection to peak.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@> wrote:
> > >
> > >
> > >
> > > Not sure if my message went through - I've had Internet trouble today for some reason.
> > >
> > > Thanks very much, Robert! 2 questions, doggone it, and I'd have my General in the same day. I was at least happy to get the Tech!
> > >
> > > We plugged the same endfed antenna into the 820 that my Yaesu rig uses. Its SWR was showing about 1 to 1.5 to 1 today. We weren't using a dummy load - we were going straight into the antenna, and I couldn't get any meter reading on trying to talk into the mic.
> > >

> > > I was pretty disappointed - I was hoping to see what the 820 will do because the friend of mine has an 830. He was trying to help me get going with my 820.
> > >
> > > Barry
> > >
> > > ---------------
> > >
> > > Jeremiah 29:11-13 / John 3:16
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> > > >
> > > > Barry:
> > > >
> > > > Congrats on getting your tech! Don't feel bad about missing the General, I missed Tech the first time I took the test. Of course at that time the two written exams were the same.
> > > >
> > > > First realize that with SSB you are not going to get much of an IP reading with the micophone gain turned all the way down as they say to do and even after you turn up the mic gain you still have to have some audio input to goe some RF output.
> > > >
> > > > The way you test SSB output levels is to inject a tone, such as 1000 hz, into the microphone jack and observe RF output levels as you transmit.
> > > >
> > > > Second, different bands require different CAR settings. If you are on 10M, try turning the CAR control up past the halfway setting they recommend for an initial setting. And you need to do this even just to get some ALC.
> > > >
> > > > I assume you have a dummy load of some kind?
> > > >
> > > > Good Luck!
> > > >
> > > > Robert
> > >
> >
>

42869. Re: How to give your old Kenwood a significant boost in performance .

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-16 18:10:13 UTC
From: wa4axt
Topic: 42708 Message: 42869

Here are screen shots that give you a feel of how the set up described in my earlier post will work . All of the ssb and cw receiving aids worked with my TS-530s except for the dsb noise blanker which was not effective with a 1hz IF , direct conversion type set up .

SSB screen shot: bandwidth set from about 200hz to 2.9khz

http://i237.photobucket.com/albums/ff91/rtaylor0361/Capturessb_zpsa16c402f.jpg

CW screen shot :

Bandwidth set from about 400hz to 1khz with a 850hz center frequency .

http://i237.photobucket.com/albums/ff91/rtaylor0361/Capturecw_zpsc87a22d2.jpg

I hid the waterfall display , but if you wanted it, its available .
It takes a lot of tinkering to get it the way you like it ,but in the end its worth the time and effort.

42870. Re: How firm/stiff should the drive and plate knobs turn?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-16 19:27:27 UTC
From: chipthome
Topic: 42844 Message: 42870

Thanks for your help everyone !!!

A little background. For 28 years I was in the used car biz with my Dad. Being #2 in the chain of command, I got the job of figuring out why the "trade ins" that were "perfect" when the last owner traded it, now don't function like it should.

Taking what the wife told me, what the husband told me, what I observed at their home, and what the radio is telling me now, I am deducing this has been mod'd and the last time it functioned correctly was when the modder took off the case cover to do his stuff to it.

I re-assmebled last night and now realize the VFO main and sub dials are not in sync. All knobs and dials are exactly where I found them, so they haven't been in sync for a long time. The fact the husband told me he never used it, also tells me after it was modded it didn't work at that time. The wife told me she bought it from friends who were "big hams", so my assumption is a "big ham" wouldn't hack this to a CB mod'd rig because of legality and possible loss of license. All this points to someone who didn't know anything other than CB type radios, which the husband showed me his set up which he still was quite proud of.

Results, it's screwed up but probably not fatally. I also see to get in and undo the mod is past my skills and any attempt by me will most likely accentuate the list of maladies this rig currently has. So I posted it online describing what was wrong etc, and Monday it gets shipped off to it's new home where hopefully it gets resurrected as it really is in nice shape.

Thanks again for your time and help and 73s,

Chip

42871. Re: How firm/stiff should the drive and plate knobs turn?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-16 21:39:14 UTC
From: Terry Wagoner
Topic: 42844 Message: 42871

Chip: I am sorry you decided to sell the rig. Of course respect your decision to do so. Buying a 35 to 40 year old radio that has most likely passed thru many hands is always subject to risk. Going to be very hard to find one that will not have some issues.

I thought about writing a buying guide but never got around to it. Best is always local purchase where you can ask the ham to demo it. Even then it is not fool proof as it may have intermittent conditions that dont manifest during the demo or less than forthright guy will mask.

So much easier if you are an experienced hybrid owner so you can sit at the controls and put it thru its paces before purchase.

Hamfest is good in one respect as you can see the physical and cosmetic condition, but most likely wont be able to do much more than possibly power on. Cosmetic condition is important to me and if the external has been well taken care of better chance that inside has been as well, but no guarantee. Unless you are in to full restoration avoid the rigs that have been beat. Dirty and rusty radios with missing knobs and feet are going to have operational issues as well. Of course at Hamfest it is truly caveat emptor and you will get the 3 foot 30 second guarantee!

After that then QTH, EHam, QRZ and Ebay are all about the same. Maybe Ebay is a little better as seller is concerned about his ratings. I suggest never buy from any of these sources without a very clear understanding of what your right of return is and what the cost will be for that. If no right of return then no purchase. Always get the guys phone number and call him. Talk man to man and ask him to level with you on rig history and problems. You can usually tell from this call if the guy is a straight shooter. Listen for buzz words ie worked last time I tried it, only use it on 80, etc.

If you can see the rig in person here are several tests I recommend including:

1. Turn on Marker on each band and set VFO to mid range and peak Drive control at 1200 and note the S-meter levels. Should be approx S9 on all bands with 10 meters being a little lower on the 520 rigs. This tells you RF and IF amps are working, AGC is working, and Coil Pack alignment is close.

2. Perform Driver stage test in CW mode with SG switch off on all bands. Should be able to get FSD ALC indication on all bands with Car Level Pot at around 1000 with exception of 10 meters on 520 rigs. This tells you that you have TIF signal, TX mixer signal, Driver tube output, RF input to control grids of the 6146 finals, ALC is working, and no bandswitch issues.

3. If the guy has a dummy load then good to load rig on all bands and see if can get approx 100 watts output with 200 to 225ma. This assumes you know how to load the radio. If not make the owner demonstrate this. This tells you the state of the Final Tubes, HV power supply good, PA cage good, and no bandswitch issues.

4. Get a hold of the bandswitch and rock it from side to side at a band position. Should be no dead play or free play. Should have good positive detent and snap over. If there is any play can bet nylon coupler is cracked at one or more of the set of grub screws. Doesnt mean no buy, just a bargaining chip.

5. I also get a hold of the VFO knob and see how much axial and radial play. Another bargaining chip.

6. Look into fan housing and see if there is a build up of dust. Indication rig has not been cleaned out on regular basis.

7. Are there scratches and marks on top of the cabinet. Indication that things have been stored on top of rig which not only makes the scratches, but also impedes cooling air flow. I never stack my gear or place auxiliary gear on top my cabinets.

8. Try to look down inside the slots over the PA cage and see if it looks like any kind of liquid spillage has occurred.

Of course could always find intermittent conditions later when you get rig home. These are often easy to address with molex connector cleaning and relay contact cleaning or replacement.

Probably other things to look for but these are good place to start. Of course cannot do any of this if cant see the rig in person.

73s Terry K9TW
>
past my skills and any attempt by me will most likely accentuate the list of maladies this rig currently has. So I posted it online describing what was wrong etc, and Monday it gets shipped off to it's new home where hopefully it gets resurrected as it really is in nice shape.
>
> Thanks again for your time and help and 73s,
>
> Chip
>

42872. Re: [TS-520_820_530_830] Re: How firm/stiff should the drive and plate knobs turn?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-17 01:26:44 UTC
From: Joseph Stiles
Topic: 42844 Message: 42872

Chip,

  Sorry to hear that the rig was "not as described."".....been there. To undo the CB HACK mod on the 520 series..is not for the faint of heart!
Terry..k9tw...gives good council(glad your back)....are you looking for another 520 series...or higher? The 820 series and the 530 & 830 can also
have the CB HACK aka "FREE BANDING" mod done to them...it is easier to detect it on the 530/830 vs the 820. Any questions...you know where
to find us

73 Joe
WB7UQU

_____
From: chipthome <chip@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, June 16, 2013 12:27 PM
Subject: [TS-520_820_530_830] Re: How firm/stiff should the drive and plate knobs turn?

Thanks for your help everyone !!!

A little background. For 28 years I was in the used car biz with my Dad. Being #2 in the chain of command, I got the job of figuring out why the "trade ins" that were "perfect" when the last owner traded it, now don't function like it should.

Taking what the wife told me, what the husband told me, what I observed at their home, and what the radio is telling me now, I am deducing this has been mod'd and the last time it functioned correctly was when the modder took off the case cover to do his stuff to it.

I re-assmebled last night and now realize the VFO main and sub dials are not in sync. All knobs and dials are exactly where I found them, so they haven't been in sync for a long time. The fact the husband told me he never used it, also tells me after it was modded it didn't work at that time. The wife told me she bought it from friends who were "big hams", so my assumption is a "big ham" wouldn't hack this to a CB mod'd rig because of legality and possible loss of license. All this points to someone who didn't know anything other than CB type radios, which the husband showed me his set up which he still was quite proud of.

Results, it's screwed up but probably not fatally. I also see to get in and undo the mod is past my skills and any attempt by me will most likely accentuate the list of maladies this rig currently has. So I posted it online describing what was wrong etc, and Monday it gets shipped off to it's new home where hopefully it gets resurrected as it really is in nice shape.

Thanks again for your time and help and 73s,

Chip

[Non-text portions of this message have been removed]

42873. Re: How firm/stiff should the drive and plate knobs turn?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-17 13:59:22 UTC
From: Terry Wagoner
Topic: 42844 Message: 42873

Hi Joe:

I would say no one should panic. You may get lucky and be able to restore to design quite easily. I have seen them as simple as just one Het Osc crystal to a complete hack/QRO abortion. Sometimes the hack is not only ill conceived but very poorly executed. Some people have very poor workmanship skills. I didnt know you could use a beaver to chew a hole in the back panel!

I have of course gotten the real dogs and spent many hours in discovery mode and not always sure I found everything they did. I generally no longer accept them for repair as cant bill all the hours.

Good thing is you are not alone and have this group to help you, but if you have reservations about your ability or lack sufficient test gear then selling and trying to recover some of your loss is smart way to go. Might even consider parting it out to recover you purchase price. It hurts to see this happen, but reality is if we have no one parting out those rigs that have reached end of life then makes it hard for rest of us to do restorations.

73s
Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Chip,
>
> Â Sorry to hear that the rig was "not as described."".....been there. To undo the CB HACK mod on the 520 series..is not for the faint of heart!
> Terry..k9tw...gives good council(glad your back)....are you looking for another 520 series...or higher? The 820 series and the 530 & 830 can also
> have the CB HACK aka "FREE BANDING" mod done to them...it is easier to detect it on the 530/830 vs the 820. Any questions...you know where
> to find us
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: chipthome <chip@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sunday, June 16, 2013 12:27 PM
> Subject: [TS-520_820_530_830] Re: How firm/stiff should the drive and plate knobs turn?

>
>
>
> Â
> Thanks for your help everyone !!!
>
> A little background. For 28 years I was in the used car biz with my Dad. Being #2 in the chain of command, I got the job of figuring out why the "trade ins" that were "perfect" when the last owner traded it, now don't function like it should.
>
> Taking what the wife told me, what the husband told me, what I observed at their home, and what the radio is telling me now, I am deducing this has been mod'd and the last time it functioned correctly was when the modder took off the case cover to do his stuff to it.
>
> I re-assmebled last night and now realize the VFO main and sub dials are not in sync. All knobs and dials are exactly where I found them, so they haven't been in sync for a long time. The fact the husband told me he never used it, also tells me after it was modded it didn't work at that time. The wife told me she bought it from friends who were "big hams", so my assumption is a "big ham" wouldn't hack this to a CB mod'd rig because of legality and possible loss of license. All this points to someone who didn't know anything other than CB type radios, which the husband showed me his set up which he still was quite proud of.
>
> Results, it's screwed up but probably not fatally. I also see to get in and undo the mod is past my skills and any attempt by me will most likely accentuate the list of maladies this rig currently has. So I posted it online describing what was wrong etc, and Monday it gets shipped off to it's new home where hopefully it gets resurrected as it really is in nice shape.
>
> Thanks again for your time and help and 73s,
>
> Chip
>
>
>
>
> [Non-text portions of this message have been removed]
>

42874. Looking for the schematic for the 3-diode (1N34a?) RF probe

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-17 06:41:06 UTC
From: n9kdy
Topic: 42874 Message: 42874

Checked the archives first, then did a search of the message store, and found lots of mentions of a 3-diode RF probe. Can't seem to find a circuit to go with it, though. Is it much different than the one-diode stock version that N5ESE has to his name on the web?

Can't be too tricky, it's just an RF probe, fast (germanium?) diode to rectify the RF without loading the oscillator and such too heavily.

--
Wes Will
N9KDY

42876. Re: TS-820 not showing trasmitter output during tune procedure

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-17 15:10:15 UTC
From: Barry
Topic: 42853 Message: 42876

Yeah, I meant to reply the other day, Sal - the heater was on (with all due respect to Glenn Frey and his "The Heat is On" song). ;-)

Barry

Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, Sal Cerda <sal.cerda@...> wrote:
>
> Did you turn the heater on? Happened to me once.

42877. Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-17 16:27:16 UTC
From: Craig
Topic: 42877 Message: 42877

In an attempt to cure my stubborn TS-530S VOX problem (Anti-Vox has no effect, no matter what VOX Gain and VOX Delay settings are used unless the speaker is muted or headphones are used), I plan to dive into the AF Board to renew the 'lytics along the line.

Any hints about board removal? Obviously, connectors must be gently unplugged and screws removed, but what about the wires soldered on topside? The reason I am asking is that -- more than once -- I have gone to great pains to access wiring or remove components in unfamiliar radios only to learn later that there was an easy, painless way to accomplish the same task known to the experienced, but not to me.

Also, what are your views on completely recapping the 530 (or 830, for that matter, since I have one of those on the way, too)? Good practice? Unnecessary if symptoms of unpleasantness have not appeared? I already did the HV caps, but that was dead simple and quick.

Thanks, gurus.

73,

Craig
W3CRR

42878. Re: [TS-520_820_530_830] Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-17 16:39:59 UTC
From: John Davidson
Topic: 42877 Message: 42878

If you have an external speaker connected, try reversing the two wires going to it.

From: Craig <crgrbrts@verizon.net>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 17, 2013 12:27 PM
Subject: [TS-520_820_530_830] Any TS-530S disassembly tips?

In an attempt to cure my stubborn TS-530S VOX problem (Anti-Vox has no effect, no matter what VOX Gain and VOX Delay settings are used unless the speaker is muted or headphones are used), I plan to dive into the AF Board to renew the 'lytics along the line.

Any hints about board removal? Obviously, connectors must be gently unplugged and screws removed, but what about the wires soldered on topside? The reason I am asking is that -- more than once -- I have gone to great pains to access wiring or remove components in unfamiliar radios only to learn later that there was an easy, painless way to accomplish the same task known to the experienced, but not to me.

Also, what are your views on completely recapping the 530 (or 830, for that matter, since I have one of those on the way, too)? Good practice? Unnecessary if symptoms of unpleasantness have not appeared? I already did the HV caps, but that was dead simple and quick.

Thanks, gurus.

73,

Craig
W3CRR

[Non-text portions of this message have been removed]

42879. Re: [TS-520_820_530_830] Re: TS-820 not showing trasmitter output during tune procedure

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-17 16:43:03 UTC
From: John Davidson
Topic: 42853 Message: 42879

* CAN you actually see the orange glow from the center of each tube, (VERY important) this should be visible looking thru the vent slots on the side of the cabinet.

_____
From: Barry <bonnevilleblb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 17, 2013 11:10 AM
Subject: [TS-520_820_530_830] Re: TS-820 not showing trasmitter output during tune procedure

Yeah, I meant to reply the other day, Sal - the heater was on (with all due respect to Glenn Frey and his "The Heat is On" song). ;-)

Barry

Jeremiah 29:11-13 / John 3:16

--- In mailto:TS-520_820_530_830%40yahoogroups.com, Sal Cerda <sal.cerda@...> wrote:
>
> Did you turn the heater on? Happened to me once.

  filaments lit in the center of the tubes ?!

[Non-text portions of this message have been removed]

42880. Re: [TS-520_820_530_830] Looking for the schematic for the 3-diode (1N34a?) RF probe

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-17 16:56:14 UTC
From: Ken Winterling
Topic: 42874 Message: 42880

Wes,

Google is your friend. Look here for a schematic of the Heathkit PK-3:
http://tubularelectronics.com/Heath_Manual_Collection/Heath_Manuals_O-RX/PK-3/heathkit_schema_pk3a.gif

You should be able to get the entirer manual here:
http://elektrotanya.com/heathkit_pk-3_etched_probe_sch.pdf/download.html

Ken
WA2LBI

On Mon, Jun 17, 2013 at 2:41 AM, n9kdy <wwill@...> wrote:

> **
>
>
> Checked the archives first, then did a search of the message store, and
> found lots of mentions of a 3-diode RF probe. Can't seem to find a circuit
> to go with it, though. Is it much different than the one-diode stock
> version that N5ESE has to his name on the web?
>
> Can't be too tricky, it's just an RF probe, fast (germanium?) diode to
> rectify the RF without loading the oscillator and such too heavily.
>
> --
> Wes Will
> N9KDY
>
>

[Non-text portions of this message have been removed]

42881. Re: [TS-520_820_530_830] Looking for the schematic for the 3-diode (1N34a?) RF probe

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-17 17:00:48 UTC
From: Mike
Topic: 42874 Message: 42881

Will,

/*"Is it much different than the one-diode stock version.."*/

The only difference is the RF probe has "3" diodes connected in series
verses the RF probe with only "1" diode. That's all there is to it.

73
Mike W5RKL

On 6/17/2013 1:41 AM, n9kdy wrote:
>
> Checked the archives first, then did a search of the message store,
> and found lots of mentions of a 3-diode RF probe. Can't seem to find a
> circuit to go with it, though. Is it much different than the one-diode
> stock version that N5ESE has to his name on the web?
>
> Can't be too tricky, it's just an RF probe, fast (germanium?) diode to
> rectify the RF without loading the oscillator and such too heavily.
>
> --
> Wes Will
> N9KDY
>
>

[Non-text portions of this message have been removed]

42882. kenwood ts 830 Frequency watch external

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-17 16:57:03 UTC
From: Patrick Payet
Topic: 42882 Message: 42882

hi all ,
My Kenwood TS 830 Internal Frequency watch is dead.
can i put on an external frquencemetre .
Where connect the hot spot Frequency on the kenwood.
i see on you tube : http://www.youtube.com/watch?v=_DCUxvyT-eE
THK

42883. Re: [TS-520_820_530_830] Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-17 17:17:09 UTC
From: Craig Roberts
Topic: 42877 Message: 42883

On 6/17/2013 12:39 PM, John Davidson wrote:
>
> If you have an external speaker connected, try reversing the two wires
> going to it.
>
Thanks, John. Yeah, I tried that with the internal speaker and an external one as well. No joy.

I have another TS-530S (in absolutely mint cosmetic condition with original, unblemished boxes) that works perfectly in VOX mode with the same microphone, so I know that's not an issue, either.

My cunning plan is to get the one with the VOX problem up to snuff (it's about an 8+ cosmetically with a couple of minor scratches on the covers - front panel is flawless) and sell it in order to cover the cost of the TS-830S I just bought. I got overly excited as a new hybrid junkie and bought three radios when I actually just need one. I'm keeping two, however.

I did the same thing with Drake TR-7s a few years ago.

73,

Craig
W3CRR

[Non-text portions of this message have been removed]

42884. Re: [TS-520_820_530_830] kenwood ts 830 Frequency watch external

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-17 17:19:23 UTC
From: Mike
Topic: 42882 Message: 42884

Patrick,

What do you mean when you say you Kenwood "TS-830 Internal Frequency watch is dead."

Are you saying the TS-830's internal VFO has failed (dead)?

73
Mike W5RKL

On 6/17/2013 11:57 AM, Patrick Payet wrote:
>
> hi all ,
> My Kenwood TS 830 Internal Frequency watch is dead.
> can i put on an external frquencemetre .
> Where connect the hot spot Frequency on the kenwood.
> i see on you tube : http://www.youtube.com/watch?v=_DCUxvyT-eE
> THK
>
>

[Non-text portions of this message have been removed]

42885. Re: [TS-520_820_530_830] Looking for the schematic for the 3-diode (1N34a?) RF probe

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-17 17:44:53 UTC
From: Dale Parfitt
Topic: 42874 Message: 42885

Hi Will,
I have a nice Eico RF probe here- $21 shipped USPS.

Dale W4OP

----- Original Message -----
From: n9kdy
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 17, 2013 2:41 AM
Subject: [TS-520_820_530_830] Looking for the schematic for the 3-diode (1N34a?) RF probe

Checked the archives first, then did a search of the message store, and found lots of mentions of a 3-diode RF probe. Can't seem to find a circuit to go with it, though. Is it much different than the one-diode stock version that N5ESE has to his name on the web?

Can't be too tricky, it's just an RF probe, fast (germanium?) diode to rectify the RF without loading the oscillator and such too heavily.

--
Wes Will
N9KDY

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.2904 / Virus Database: 3199/6404 - Release Date: 06/12/13

[Non-text portions of this message have been removed]

42886. Re: kenwood ts 830 Frequency watch external

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-17 17:47:55 UTC
From: Patrick Payet
Topic: 42882 Message: 42886

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> Patrick,
>
> What do you mean when you say you Kenwood "TS-830 Internal Frequency
> watch is dead."
>
> Are you saying the TS-830's internal VFO has failed (dead)?
>
> 73
> Mike W5RKL
>
> On 6/17/2013 11:57 AM, Patrick Payet wrote:
> >
> > hi all ,
> > My Kenwood TS 830 Internal Frequency watch is dead.
> > can i put on an external frquencemetre .
> > Where connect the hot spot Frequency on the kenwood.
> > i see on you tube : http://www.youtube.com/watch?v=_DCUxvyT-eE
> > THK
> >
greeting,
my display counter is dead ..
I test moddk: to pin 16 on Q10 to check the blanking, to one side of L4 the choke in the -6v line, to both sides of R10, the 220 ohm resistor carrying 12v to the 5.1v zener D1, and lastly to pin 16 of Q6 to check that the 5v was getting to the I.C.'s

But i have 12v on R10 - 5V to Q6 , i see schematic -24V but i have -7v ????? My frequency counter on kenwood not work i c'an't see my frequency .
So I'm looking for a X54-1540-00 block replacement.
But I have a Frequency watch external 0 to 50 mhz.
I would like to use it on the TS-830M .
For see my kenwood receive frequency and emition.
Sorry for my english i'am french in reunion island (indian ocean)
THK

42887. Re: kenwood ts 830 Frequency watch external

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-17 17:54:36 UTC
From: Patrick Payet
Topic: 42882 Message: 42887

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> Patrick,
>
> What do you mean when you say you Kenwood "TS-830 Internal Frequency
> watch is dead."
>
> Are you saying the TS-830's internal VFO has failed (dead)?
>
> 73
> Mike W5RKL
>
> On 6/17/2013 11:57 AM, Patrick Payet wrote:
> >
> > hi all ,
> > My Kenwood TS 830 Internal Frequency watch is dead.
> > can i put on an external frquencemetre .
> > Where connect the hot spot Frequency on the kenwood.
> > i see on you tube : http://www.youtube.com/watch?v=_DCUxvyT-eE
> > THK
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>
Yes internal frequency counter failled .
R10 12v ok Q6 5V ok but -24v i see -7V ????

42888. Re: [TS-520_820_530_830] Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-17 18:08:54 UTC
From: Mike
Topic: 42877 Message: 42888

Craig,

I mean no disrespect but you said and asked for advice for:

"/*Also, what are your views on completely recapping the 530 (or 830,
for*//*
*//*that matter, since I have one of those on the way, too)? Good*//*
*//*practice?*/ "

My advice to you is /*NO*//**//*don't do that*/! Many hams have been convinced by sellers of capacitor replacement kits and other hams that you should replace ALL capacitors at once. They hide behind or use the excuse, *"/the capacitors are old so they should be replaced plus it's good insurance for the future/."*, which is pure non-sense and very very poor troubleshooting and repair techniques!! You can easily end up with cracked/broken foil runs on the PC board! The foil runs on the PC board of the hybrids are very thin and easily cracked by desoldering and soldering heat. Again, I /*DO NOT*/ recommend following the misguided "shot gun" replace of all electrolytic capacitors at once concept!! The only time any component or components should be replaced, regardless of the component(s), is if proper troubleshooting techniques have been used and have identified a component or components that is/are bad.

73
Mike W5RKL

On 6/17/2013 11:27 AM, Craig wrote:
>
> In an attempt to cure my stubborn TS-530S VOX problem (Anti-Vox has no
> effect, no matter what VOX Gain and VOX Delay settings are used unless
> the speaker is muted or headphones are used), I plan to dive into the
> AF Board to renew the 'lytics along the line.
>
> Any hints about board removal? Obviously, connectors must be gently
> unplugged and screws removed, but what about the wires soldered on
> topside? The reason I am asking is that -- more than once -- I have
> gone to great pains to access wiring or remove components in
> unfamiliar radios only to learn later that there was an easy, painless
> way to accomplish the same task known to the experienced, but not to me.
>
> Also, what are your views on completely recapping the 530 (or 830, for
> that matter, since I have one of those on the way, too)? Good
> practice? Unnecessary if symptoms of unpleasantness have not appeared?
> I already did the HV caps, but that was dead simple and quick.
>
> Thanks, gurus.

>
> 73,
>
> Craig
> W3CRR
>
>

[Non-text portions of this message have been removed]

42889. Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-17 18:42:04 UTC
From: Terry Wagoner
Topic: 42877 Message: 42889

Intuitively it would seem like good thing to replace all the electrolytics in a 40 year old radio same as replacing all the carbon resistors and changing all the active devices especially front end Mosfet who some believe degrade with ESD exposure.

In practice most of these changes are really feel good changes that do not produce any measurable performance improvements. Almost all will report quieter operation etc. Not everyone has a discriminating ear. Also how can you measure the effectiveness of preventing a failure that did not occur. In the PM world of passenger airplanes and nuclear power they do reliability based preventive maintenance and it is OK to let some components run to failure. That would be case of most electrolytics that do not cause any collateral damage if they fail.

All of these changes you need to weigh the risk vs the reward. Easy to pull molex pins off the boards and to lift PC foils. These old phenolic boards have poor plating and cant handle many desolder/resolder cycles. I now use a Hakko 808 which is salty for average ham, but makes desoldering childs play.

Be very careful replacing electrolytics in your hybrid. Make sure you re-install as you found the polarity was oriented. There are two or three places on the 530/830s where they are reverse polarity with positive on the ground foil. This is not a mistake. The silk screen and the schematic are wrong and the as built config is correct. Electrolytics are similar to diodes and cannot tolerate very much reverse polarity. If you are unsure look at the schematic to see if there is negative voltage being applied in the circuit. This may be done to back bias a detector diode or to bias a FET that requires negative bias voltage on the gate.

Replacing the HV and medium voltage filter caps and perhaps the 14vdc, 12vdc and 9vdc power supply electrolytics is OK but I personally would not wholesale change all of them.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Craig" <crgrbrts@...> wrote:
>
> In an attempt to cure my stubborn TS-530S VOX problem (Anti-Vox has no
> effect, no matter what VOX Gain and VOX Delay settings are used unless the speaker is muted or headphones are used), I plan to dive into the AF Board to renew the 'lytics along the line.
>
> Any hints about board removal? Obviously, connectors must be gently
> unplugged and screws removed, but what about the wires soldered on
> topside? The reason I am asking is that -- more than once -- I have
> gone to great pains to access wiring or remove components in unfamiliar radios only to learn later that there was an easy, painless way to accomplish the same task known to the experienced, but not to me.
>
> Also, what are your views on completely recapping the 530 (or 830, for

> that matter, since I have one of those on the way, too)? Good
> practice? Unnecessary if symptoms of unpleasantness have not appeared?
> I already did the HV caps, but that was dead simple and quick.
>
> Thanks, gurus.
>
> 73,
>
> Craig
> W3CRR
>

42890. Re: [TS-520_820_530_830] Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-17 18:49:55 UTC
From: Craig Roberts
Topic: 42877 Message: 42890

Mike, thank you. That is precisely the kind of sensible advice I was after.

I had never heard anyone recommend this shotgun approach to recapping except, perhaps, electrolytics in older power supply sections and, of course, ancient wax paper caps in antique gear.

It seemed like a clever but perhaps specious marketing ploy (possibly well intentioned in some cases and certainly self serving) but it got me to wondering if there was something universally amiss in the supply of electrolytics installed in the Kenwood hybrids. I was suspicious in part because the widely accepted Kenwood hybrid guru, K4EAA, does NOT sell "a complete recap kit."

73 and thanks again,

Craig
W3CRR

[Non-text portions of this message have been removed]

42891. Re: Looking for the schematic for the 3-diode (1N34a?) RF probe

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-17 18:51:15 UTC
From: Terry Wagoner
Topic: 42874 Message: 42891

I have posted a couple of times why you need two RF probes and how to select diodes for RF probes and where to use them in your hybrid and cautions about exceeding reverse voltage.

You need a single diode germanium probe and a 3 diode probe. Any brand single diode probe will work just fine.

The Heath kit PK-3 used 1N191 gold bonded point contact diodes. You can find them but salty around $5.00 each. You do not need gold bond diodes. You are going to be measuring RF voltage at the plate of the Driver tube and the control grids of the Finals with it. You will use the single diode probe for all other measurements such as Carrier Osc and Het Osc levels. Just make sure the coupling/blocking capacitor has at least 500wvdc.

Your 1N34s will be just fine and simply place 3 in series observing polarity. If you buy a PK-3 off Ebay you need to remove back cover and shine lite in and see how many diodes are in series as it was a builder option to install 1 or 3. I have seen them with only one diode and if you run TX Level Diagrams you will be replacing that diode!

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Ken Winterling <wa2lbi@...> wrote:
>
> Wes,
>
> Google is your friend. Look here for a schematic of the Heathkit PK-3:
> http://tubularelectronics.com/Heath_Manual_Collection/Heath_Manuals_O-RX/PK-3/heathkit_schema_pk3a.gif
>
> You should be able to get the entirer manual here:
> http://elektrotanya.com/heathkit_pk-3_etched_probe_sch.pdf/download.html
>
>
> Ken
> WA2LBI
>
>
> On Mon, Jun 17, 2013 at 2:41 AM, n9kdy <wwill@...> wrote:
>
> > **
> > >
> > >
> > Checked the archives first, then did a search of the message store, and
> > found lots of mentions of a 3-diode RF probe. Can't seem to find a circuit
> > to go with it, though. Is it much different than the one-diode stock
> > version that N5ESE has to his name on the web?
> > >
> > Can't be too tricky, it's just an RF probe, fast (germanium?) diode to

> > rectify the RF without loading the oscillator and such too heavily.
> >
> > --
> > Wes Will
> > N9KDY
> >
> >
>
>
> [Non-text portions of this message have been removed]
>

42892. Re: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-17 18:55:56 UTC
From: Louis Wilen
Topic: 42877 Message: 42892

What are your feelings about using an ESR meter to test caps in-circuit?

Also – would it be of value (no pun intended) to create and publish a list of measured, in-circuit ESR values for the major electrolytic caps in the various hybrids? Those who have ESR meters could then compare values of suspected bad caps to the values in the list while not risking any damage by unsoldering.

Louis
W3LMW

From: Terry Wagoner
Sent: Monday, June 17, 2013 2:42 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

Intuitively it would seem like good thing to replace all the electrolytics in a 40 year old radio same as replacing all the carbon resistors and changing all the active devices especially front end Mosfet who some believe degrade with ESD exposure.

In practice most of these changes are really feel good changes that do not produce any measurable performance improvements. Almost all will report quieter operation etc. Not everyone has a discriminating ear. Also how can you measure the effectiveness of preventing a failure that did not occur. In the PM world of passenger airplanes and nuclear power they do reliability based preventive maintenance and it is OK to let some components run to failure. That would be case of most electrolytics that do not cause any collateral damage if they fail.

All of these changes you need to weigh the risk vs the reward. Easy to pull molex pins off the boards and to lift PC foils. These old phenolic boards have poor plating and cant handle many desolder/resolder cycles. I now use a Hakko 808 which is salty for average ham, but makes desoldering childs play.

Be very careful replacing electrolytics in your hybrid. Make sure you re-install as you found the polarity was oriented. There are two or three places on the 530/830s where they are reverse polarity with positive on the ground foil. This is not a mistake. The silk screen and the schematic are wrong and the as built config is correct. Electrolytics are similar to diodes and cannot tolerate very much reverse polarity. If you are unsure look at the schematic to see if there is negative voltage being applied in the circuit. This may be done to back bias a detector diode or to bias a FET that requires negative bias voltage on the gate.

Replacing the HV and medium voltage filter caps and perhaps the 14vdc, 12vdc and 9vdc power supply electrolytics is OK but I personally would not wholesale change all of them.

Terry K9TW

--- In mailto:TS-520_820_530_830%40yahoogroups.com, "Craig" <crgrbrts@...> wrote:
>
> In an attempt to cure my stubborn TS-530S VOX problem (Anti-Vox has no
> effect, no matter what VOX Gain and VOX Delay settings are used unless the speaker is muted or headphones are used), I plan to dive into the AF Board to renew the 'lytics along the line.
>
> Any hints about board removal? Obviously, connectors must be gently
> unplugged and screws removed, but what about the wires soldered on
> topside? The reason I am asking is that -- more than once -- I have
> gone to great pains to access wiring or remove components in unfamiliar radios only to learn later that there was an easy, painless way to accomplish the same task known to the experienced, but not to me.
>
> Also, what are your views on completely recapping the 530 (or 830, for
> that matter, since I have one of those on the way, too)? Good
> practice? Unnecessary if symptoms of unpleasantness have not appeared?
> I already did the HV caps, but that was dead simple and quick.
>
> Thanks, gurus.
>
> 73,
>
> Craig
> W3CRR
>

[Non-text portions of this message have been removed]

42893. Re: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-17 19:08:44 UTC
From: Craig Roberts
Topic: 42877 Message: 42893

Again, great and logical advice. I had read elsewhere of the fragility of the circuit board traces -- another factor that was giving me pause since I like to leave a repaired device in as good or better shape than it was in when it arrived.

This, of course, brings me back to the inoperative Anti-VOX question. Has anyone troubleshot this problem at component level? Speaker and microphone wiring have been ruled out as culprits. Cleaning of the Anti-VOX pot has proven ineffectual as well.
>
Thanks,

Craig
W3CRR

[Non-text portions of this message have been removed]

42894. Re: [TS-520_820_530_830] Re: How firm/stiff should the drive and plate knobs turn?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-17 19:21:35 UTC
From: Joseph Stiles
Topic: 42844 Message: 42894

Hey Terry.....welcome back!

I know how Chip feels/felt about the "hack." Looking at the procedure..of what you have to do to get some of those boards out..IS not for the faint of heart...especially...when we love these "older women," and don't want to treat them bad! When I first started..really looking into the "girls" some of them were...more than I had experience with....that's why I joined this board......so.....glad u r home...and feeling better. I wasn't trying to scare Chip...just giving a warning and my observation(s) about buying a possibly "new" rig...and stating you can always come here.

73 Joe
WB7UQU

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 17, 2013 6:59 AM
Subject: [TS-520_820_530_830] Re: How firm/stiff should the drive and plate knobs turn?

Hi Joe:

I would say no one should panic. You may get lucky and be able to restore to design quite easily. I have seen them as simple as just one Het Osc crystal to a complete hack/QRO abortion. Sometimes the hack is not only ill conceived but very poorly executed. Some people have very poor workmanship skills. I didnt know you could use a beaver to chew a hole in the back panel!

I have of course gotten the real dogs and spent many hours in discovery mode and not always sure I found everything they did. I generally no longer accept them for repair as cant bill all the hours.

Good thing is you are not alone and have this group to help you, but if you have reservations about your ability or lack sufficient test gear then selling and trying to recover some of your loss is smart way to go. Might even consider parting it out to recover you purchase price. It hurts to see this happen, but reality is if we have no one parting out those rigs that have reached end of life then makes it hard for rest of us to do restorations.

73s
Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Chip,
>
> Â Sorry to hear that the rig was "not as described."....been there. To undo the CB HACK

mod on the 520 series..is not for the faint of heart!
> Terry..k9tw...gives good council(glad your back)....are you looking for another 520 series...or higher? The 820 series and the 530 & 830 can also
> have the CB HACK aka "FREE BANDING" mod done to them...it is easier to detect it on the 530/830 vs the 820. Any questions...you know where
> to find us
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: chipthome <chip@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sunday, June 16, 2013 12:27 PM
> Subject: [TS-520_820_530_830] Re: How firm/stiff should the drive and plate knobs turn?
>
>
>
> Â
> Thanks for your help everyone !!!
>
> A little background. For 28 years I was in the used car biz with my Dad. Being #2 in the chain of command, I got the job of figuring out why the "trade ins" that were "perfect" when the last owner traded it, now don't function like it should.
>
> Taking what the wife told me, what the husband told me, what I observed at their home, and what the radio is telling me now, I am deducing this has been mod'd and the last time it functioned correctly was when the modder took off the case cover to do his stuff to it.
>
> I re-assmebled last night and now realize the VFO main and sub dials are not in sync. All knobs and dials are exactly where I found them, so they haven't been in sync for a long time. The fact the husband told me he never used it, also tells me after it was modded it didn't work at that time. The wife told me she bought it from friends who were "big hams", so my assumption is a "big ham" wouldn't hack this to a CB mod'd rig because of legality and possible loss of license. All this points to someone who didn't know anything other than CB type radios, which the husband showed me his set up which he still was quite proud of.
>
> Results, it's screwed up but probably not fatally. I also see to get in and undo the mod is past my skills and any attempt by me will most likely accentuate the list of maladies this rig currently has. So I posted it online describing what was wrong etc, and Monday it gets shipped off to it's new home where hopefully it gets resurrected as it really is in nice shape.
>
> Thanks again for your time and help and 73s,
>
> Chip

>
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

42895. Re: TS-820 not showing trasmitter output during tune procedure

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-17 18:43:19 UTC
From: Barry
Topic: 42853 Message: 42895

We did see an orange glow - not sure about from the center of each tube, but we did see them glowing orange. We took the cover off to make sure something was glowing in there.

Barry

Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> * CAN you actually see the orange glow from the center of each tube, (VERY important) this should be visible looking thru the vent slots on the side of the cabinet.

42896. Re: [TS-520_820_530_830] Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-17 20:36:48 UTC
From: Mike
Topic: 42877 Message: 42896

Craig,

Many hybrid owners have replaced the HV filter capacitors without any evidence indicating they should be replaced. Most hybrid electrolytic capacitors do not need replacing. Unfortunately there are hams who will replace them using the same concept, "they're old and it's good insurance for the future".

Another myth that some hams believe in which is similar but different, is that new high power amplifier tubes such as the 4-400, 3-500Z, and the 4-1000 for example, must be run on filament power ONLY for hours and hours before putting the tube(s) into service. One ham I had a discussion about this with, said the tubes, either in a brand new amp right out of the box or brand new tubes out of the boxes that are put in an older amp, have to be "FIRST" run for 18 hours straight on filament voltage ONLY before putting the tube in service. The "belief" behind this myth is the filament heat, over the many hours of idling, will eliminate any gas that has accumulated in the tubes. That's simply NOT true!! The filaments in these tubes do NOT absorb gas, the Zirconium coating that appears as a dull dusty gray color of the Anode (Plate) does! The filaments in these tubes are NOT coated with a gas absorbing coating and the filaments cannot and will not heat the Zirconium coating on the tube's Anode (Plate) to the temperature required to absorb any gas in the tube! The only way to heat the Zirconium coating on the tube's Anode to the high temperature required to absorb gas in the tube(s) is to have current flowing in the tube that heats the Anode to the high temperature and that can ONLY occur when current is flowing from the Filament to the Anode, normal operation, resulting in a dull Red glow on the anode during normal transmit operation (dull Red glow disappears in standby or when no RF is applied to the amplifier tubes which is normal). Unfortunately, there are many hams that, when they see the dull Red glow on the Anode's of these tubes, do the WRONG thing, they reduce drive until the Red glow on the Anode disappears. They believe the dull Red glow during normal amplifier operation, indicates the tubes are being over driven which is simply NOT true. There are times when over driving the tubes warrants drive reduction but under normal operation with normal drive and the dull Red glow appearing on the Anodes, that's perfectly fine. Those tubes are designed to operate that way.

Having said that, low power tube such as 6146, 2E26, sweep tubes, and receiving tubes should NEVER show any color on their Anodes. Any color shown on these tubes is a sign of a circuit or tube problem and the equipment should be shut down until the problem is found and fixed, and that includes the Kenwood hybrids.

73
Mike W5RKL

On 6/17/2013 1:49 PM, Craig Roberts wrote:
>
> Mike, thank you. That is precisely the kind of sensible advice I was
> after.
>
> I had never heard anyone recommend this shotgun approach to recapping
> except, perhaps, electrolytics in older power supply sections and, of
> course, ancient wax paper caps in antique gear.
>
> It seemed like a clever but perhaps specious marketing ploy (possibly
> well intentioned in some cases and certainly self serving) but it got me
> to wondering if there was something universally amiss in the supply of
> electrolytics installed in the Kenwood hybrids. I was suspicious in part
> because the widely accepted Kenwood hybrid guru, K4EAA, does NOT sell "a
> complete recap kit."
>
> 73 and thanks again,
>
> Craig
> W3CRR
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

42897. Re: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-17 22:35:37 UTC
From: Mike
Topic: 42877 Message: 42897

Louis and others,

To prevent any stray capacitance from the circuit and/or adjacent components and wiring affecting the test results, at least one lead of the capacitor should be disconnected from the circuit and that includes any voltage equalizing resistors should be disconnected from the capacitor. I would not try to test a capacitor that's still connected in the circuit, too many variables that can affect the test results.

Not all capacitors have the same leakage rating. It depends on the capacitance value and voltage rating. For example, Sprague says capacitors that fall within the 1 to 100VDC rating have different leakage current ratings depending on the capacitance value of the capacitor. For example, a 2ufd capacitor and a 100ufd capacitor that are within this voltage range will have .31ma for the 2ufd capacitor but 1.3ma for the 100ufd capacitor.

Sprague also states that any capacitor value that is less than 75% of its capacitance value should be replaced.

There also is the "80/20" rule which means a capacitor may be replaced with a different capacitor with a value that does not exceed 80% of or less than 20% of the original value. I personally would not follow that rule that close, especially if the new capacitor value is more than 20% of the original capacitance value. Remember, "I" (current) leads "E" (voltage" in capacitors. That's part of the phrase, "ELI the ICE man" where "I" (current) lead "E" (voltage) in the "C" capacitor! When a capacitor initially starts to charge, the "I" current is at "maximum" and the "E" voltage is at "minimum". A "thump" is heard quite often in power supplies when they are first turned ON which is the high current surge in the capacitor when power is first applied to the capacitor.

73
Mike W5RKL

.
On 6/17/2013 1:55 PM, Louis Wilen wrote:
>
> What are your feelings about using an ESR meter to test caps in-circuit?
>
> Also – would it be of value (no pun intended) to create and publish a
> list of measured, in-circuit ESR values for the major electrolytic
> caps in the various hybrids? Those who have ESR meters could then
> compare values of suspected bad caps to the values in the list while
> not risking any damage by unsoldering.
>

> Louis
> W3LMW
>
> From: Terry Wagoner
> Sent: Monday, June 17, 2013 2:42 PM
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
>
> Intuitively it would seem like good thing to replace all the
> electrolytics in a 40 year old radio same as replacing all the carbon
> resistors and changing all the active devices especially front end
> Mosfet who some believe degrade with ESD exposure.
>
> In practice most of these changes are really feel good changes that do
> not produce any measurable performance improvements. Almost all will
> report quieter operation etc. Not everyone has a discriminating ear.
> Also how can you measure the effectiveness of preventing a failure
> that did not occur. In the PM world of passenger airplanes and nuclear
> power they do reliability based preventive maintenance and it is OK to
> let some components run to failure. That would be case of most
> electrolytics that do not cause any collateral damage if they fail.
>
> All of these changes you need to weigh the risk vs the reward. Easy to
> pull molex pins off the boards and to lift PC foils. These old
> phenolic boards have poor plating and cant handle many
> desolder/resolder cycles. I now use a Hakko 808 which is salty for
> average ham, but makes desoldering childs play.
>
> Be very careful replacing electrolytics in your hybrid. Make sure you
> re-install as you found the polarity was oriented. There are two or
> three places on the 530/830s where they are reverse polarity with
> positive on the ground foil. This is not a mistake. The silk screen
> and the schematic are wrong and the as built config is correct.
> Electrolytics are similar to diodes and cannot tolerate very much
> reverse polarity. If you are unsure look at the schematic to see if
> there is negative voltage being applied in the circuit. This may be
> done to back bias a detector diode or to bias a FET that requires
> negative bias voltage on the gate.
>
> Replacing the HV and medium voltage filter caps and perhaps the 14vdc,
> 12vdc and 9vdc power supply electrolytics is OK but I personally would
> not wholesale change all of them.
>
> Terry K9TW
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Craig"
> <crgrbrts@...> wrote:
> >
> > In an attempt to cure my stubborn TS-530S VOX problem (Anti-Vox has no

> > effect, no matter what VOX Gain and VOX Delay settings are used
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> into the AF Board to renew the 'lytics along the line.
> >
> > Any hints about board removal? Obviously, connectors must be gently
> > unplugged and screws removed, but what about the wires soldered on
> > topside? The reason I am asking is that -- more than once -- I have
> > gone to great pains to access wiring or remove components in
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> way to accomplish the same task known to the experienced, but not to me.
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> > Also, what are your views on completely recapping the 530 (or 830, for
> > that matter, since I have one of those on the way, too)? Good
> > practice? Unnecessary if symptoms of unpleasantness have not appeared?
> > I already did the HV caps, but that was dead simple and quick.
> >
> > Thanks, gurus.
> >
> > 73,
> >
> > Craig
> > W3CRR
> >
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

42898. Kenwood YG-455S-1

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-17 22:05:53 UTC
From: Skip Guenter
Topic: 42898 Message: 42898

/Kenwood YG-455S-1, 2.4k SSB filter for TS-950S and others. Appears new in Kenwood box. - $95 OBO shipped to upper 48 states./

email call sign at a rrl dot net

posted w/ permission

--
S. R. 'Skip' Guenter
K5SRG

[Non-text portions of this message have been removed]

42899. Re: [TS-520_820_530_830] Re: Looking for the schematic for the 3-diode (1N34a?) RF probe

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-17 20:13:40 UTC
From: Wes Will
Topic: 42874 Message: 42899

On 06/17/2013 01:51 PM, Terry Wagoner wrote:

> Your 1N34s will be just fine and simply place 3 in series observing
> polarity

Just wanted to make sure there weren't any caveats (the possibility of a resistor or a cap across each diode to do some current balancing or limiting, for instance) that I couldn't imagine being needed in my own head. I already have the thing about ready to shoe-horn into a Sharpie pen body, before I thought to ask.

There are often things in the universe that have not been dreamt of in my philosophy.

Plus, I've found it hurts a lot less to ask for clarification than it does to pick bits of semiconductor or dielectric out of my teeth because of something I didn't know (but could have asked about).

(BTW, I'm putting in a mini-slide-switch to 'jump out' two of the diodes and make it switch-selectable (one or three diodes), so as not to NEED two separate probes.)

--
Wes Will
N9KDY

42900. Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-17 23:56:05 UTC
From: Terry Wagoner
Topic: 42877 Message: 42900

How do you get on the leads of the electrolytic caps that are mounted flush to the boards as the majority our? I use the Blue Anatek ESR meter and it takes some experience to tell what is an acceptable ESR. We generally do not have access to factory data sheets that list ESR values for the original Kenwood caps.

I have developed some rules of thumb, but frankly havent found it a very useful tool for hybrid troubleshooting. I do measure and record ESR values for the ones I do replace.

Most service shops that have a ESR meter on the bench also have a nice supply of factory fresh electrolytics across broad capacitance and voltage ranges to use for comparisons and when in doubt they just replace.

Not trying to rain on your idea I just dont know how to get on the leads of most of the caps to run the test and good/bad is a bit subjective.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Louis Wilen" <louis.wilen@...> wrote:
>
> What are your feelings about using an ESR meter to test caps in-circuit?
>
> Also â□" would it be of value (no pun intended) to create and publish a list of measured, in-circuit ESR values for the major electrolytic caps in the various hybrids? Those who have ESR meters could then compare values of suspected bad caps to the values in the list while not risking any damage by unsoldering.
>
> Louis
> W3LMW
>
> From: Terry Wagoner
> Sent: Monday, June 17, 2013 2:42 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
>
>
> Intuitively it would seem like good thing to replace all the electrolytics in a 40 year old radio same as replacing all the carbon resistors and changing all the active devices especially front end Mosfet who some believe degrade with ESD exposure.
>
> In practice most of these changes are really feel good changes that do not produce any measurable performance improvements. Almost all will report quieter operation etc. Not everyone has a discriminating ear. Also how can you measure the effectiveness of preventing a failure that did not occur. In the PM world of passenger airplanes and nuclear power they do reliability based preventive maintenance and it is OK to let some components run to failure. That would be case of most electrolytics that do not cause any collateral damage if they fail.
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> All of these changes you need to weigh the risk vs the reward. Easy to pull molex pins off the boards and to lift PC

foils. These old phenolic boards have poor plating and cant handle many desolder/resolder cycles. I now use a Hakko 808 which is salty for average ham, but makes desoldering childs play.
>
> Be very careful replacing electrolytics in your hybrid. Make sure you re-install as you found the polarity was oriented. There are two or three places on the 530/830s where they are reverse polarity with positive on the ground foil. This is not a mistake. The silk screen and the schematic are wrong and the as built config is correct. Electrolytics are similar to diodes and cannot tolerate very much reverse polarity. If you are unsure look at the schematic to see if there is negative voltage being applied in the circuit. This may be done to back bias a detector diode or to bias a FET that requires negative bias voltage on the gate.
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> Replacing the HV and medium voltage filter caps and perhaps the 14vdc, 12vdc and 9vdc power supply electrolytics is OK but I personally would not wholesale change all of them.
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> Terry K9TW
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Craig" <crgrbrts@> wrote:
> >
> > In an attempt to cure my stubborn TS-530S VOX problem (Anti-Vox has no
> > effect, no matter what VOX Gain and VOX Delay settings are used unless the speaker is muted or headphones are used), I plan to dive into the AF Board to renew the 'lytics along the line.
> >
> > Any hints about board removal? Obviously, connectors must be gently
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> > topside? The reason I am asking is that -- more than once -- I have
> > gone to great pains to access wiring or remove components in unfamiliar radios only to learn later that there was an easy, painless way to accomplish the same task known to the experienced, but not to me.
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> > Also, what are your views on completely recapping the 530 (or 830, for
> > that matter, since I have one of those on the way, too)? Good
> > practice? Unnecessary if symptoms of unpleasantness have not appeared?
> > I already did the HV caps, but that was dead simple and quick.
> >
> > Thanks, gurus.
> >
> > 73,
> >
> > Craig
> > W3CRR
> >
>
>
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>
>
> [Non-text portions of this message have been removed]
>

42901. Re: Looking for the schematic for the 3-diode (1N34a?) RF probe

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 00:03:24 UTC
From: Terry Wagoner
Topic: 42874 Message: 42901

Wes: Wasnt scolding by saying I had posted more than once on this subject. Should have said take a look at Message 42072. Just get tired sometimes typing over and over and over! I understand the search feature sometimes is not the easiest to use.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Wes Will <wwill@...> wrote:
>
> On 06/17/2013 01:51 PM, Terry Wagoner wrote:
>
> > Your 1N34s will be just fine and simply place 3 in series observing
> > polarity
>
> Just wanted to make sure there weren't any caveats (the possibility of a
> resistor or a cap across each diode to do some current balancing or
> limiting, for instance) that I couldn't imagine being needed in my own
> head. I already have the thing about ready to shoe-horn into a Sharpie
> pen body, before I thought to ask.
>
> There are often things in the universe that have not been dreamt of in
> my philosophy.
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> Plus, I've found it hurts a lot less to ask for clarification than it
> does to pick bits of semiconductor or dielectric out of my teeth because
> of something I didn't know (but could have asked about).
>
> (BTW, I'm putting in a mini-slide-switch to 'jump out' two of the diodes
> and make it switch-selectable (one or three diodes), so as not to NEED
> two separate probes.)
>
> --
> Wes Will
> N9KDY
>

42902. Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 00:39:04 UTC
From: Terry Wagoner
Topic: 42877 Message: 42902

Hi Mike:

Louis was talking about using an ESR meter to test the electrolytics. With an ESR meter you are not measuring capacitance or leakage current. 99% of all caps can be measured directly in circuit with an ESR meter. No need to lift any leads. Just need to make sure the cap is discharged. About only exception is when a large cap is paralleled with a small cap and then need to lift one leg.

ESR meters work be applying low level AC signal (maybe 5mv to 20 mv) at around 100 to 200 khz in short pulses. Only about 4 circuit combinations you will encounter.
1. Parallel inductors such as chokes, coils and transformers and the XL is such that ESR meter doesnt see them.
2. Parallel resistors. The input Z of the ESR meter is very low maybe around 1 to 2 ohms so not bothered by the resistors
3. The junctions of transistors. The input signal level is too low to forward bias diodes or transistors
4. Parallel capacitor. Need to lift one lead

If you use a Capacitor bridge an/or Leakage tester the cap can check good, but still have higher than normal ESR. It acts like a cap with a high value of R in series with it.

Very easy to find Open or dried out caps as ESR will approach infinity.

Biggest problem is what is too high an ESR? What was original factory ESR?

Usually rule of thumb is anything over 10 ohms is too high and should be replaced. If the cap is in a switching circuit then anything over 0.5 ohms is probably too high.

Now what about those that read in circuit between 1 ohm and 10 ohms. This is where you need lots of experience and best if you can practice on known bad caps.

I always save any pulled cap for future use as reference.

ESR meter is nice addition to the bench but in my experience no sub for replacing whenever in doubt. Just not easy to get on the leads to test in circuit. For most must remove the board to access the foil side. ESR meter is also good low ohms meter to check contact resistance however it does not push any current thru a contact.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> Louis and others,
>
> To prevent any stray capacitance from the circuit and/or adjacent
> components and wiring affecting the test results, at least one lead of
> the capacitor should be disconnected from the circuit and that includes

> any voltage equalizing resistors should be disconnected from the
> capacitor. I would not try to test a capacitor that's still connected in
> the circuit, too many variables that can affect the test results.
>
> Not all capacitors have the same leakage rating. It depends on the
> capacitance value and voltage rating. For example, Sprague says
> capacitors that fall within the 1 to 100VDC rating have different
> leakage current ratings depending on the capacitance value of the
> capacitor. For example, a 2ufd capacitor and a 100ufd capacitor that are
> within this voltage range will have .31ma for the 2ufd capacitor but
> 1.3ma for the 100ufd capacitor.
>
> Sprague also states that any capacitor value that is less than 75% of
> its capacitance value should be replaced.
>
> There also is the "80/20" rule which means a capacitor may be replaced
> with a different capacitor with a value that does not exceed 80% of or
> less than 20% of the original value. I personally would not follow that
> rule that close, especially if the new capacitor value is more than 20%
> of the original capacitance value. Remember, "I" (current) leads "E"
> (voltage" in capacitors. That's part of the phrase, "ELI the ICE man"
> where "I" (current) lead "E" (voltage) in the "C" capacitor! When a
> capacitor initially starts to charge, the "I" current is at "maximum"
> and the "E" voltage is at "minimum". A "thump" is heard quite often in
> power supplies when they are first turned ON which is the high current
> surge in the capacitor when power is first applied to the capacitor.
>
> 73
> Mike W5RKL
>
>
>
>
> .
> On 6/17/2013 1:55 PM, Louis Wilen wrote:
> >
> > What are your feelings about using an ESR meter to test caps in-circuit?
> >
> > Also â□" would it be of value (no pun intended) to create and publish a
> > list of measured, in-circuit ESR values for the major electrolytic
> > caps in the various hybrids? Those who have ESR meters could then
> > compare values of suspected bad caps to the values in the list while
> > not risking any damage by unsoldering.
> >
> > Louis
> > W3LMW
> >
> > From: Terry Wagoner
> > Sent: Monday, June 17, 2013 2:42 PM

> > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
> >
> > Intuitively it would seem like good thing to replace all the
> > electrolytics in a 40 year old radio same as replacing all the carbon
> > resistors and changing all the active devices especially front end
> > Mosfet who some believe degrade with ESD exposure.
> >
> > In practice most of these changes are really feel good changes that do
> > not produce any measurable performance improvements. Almost all will
> > report quieter operation etc. Not everyone has a discriminating ear.
> > Also how can you measure the effectiveness of preventing a failure
> > that did not occur. In the PM world of passenger airplanes and nuclear
> > power they do reliability based preventive maintenance and it is OK to
> > let some components run to failure. That would be case of most
> > electrolytics that do not cause any collateral damage if they fail.
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> > All of these changes you need to weigh the risk vs the reward. Easy to
> > pull molex pins off the boards and to lift PC foils. These old
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> > desolder/resolder cycles. I now use a Hakko 808 which is salty for
> > average ham, but makes desoldering childs play.
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> > Be very careful replacing electrolytics in your hybrid. Make sure you
> > re-install as you found the polarity was oriented. There are two or
> > three places on the 530/830s where they are reverse polarity with
> > positive on the ground foil. This is not a mistake. The silk screen
> > and the schematic are wrong and the as built config is correct.
> > Electrolytics are similar to diodes and cannot tolerate very much
> > reverse polarity. If you are unsure look at the schematic to see if
> > there is negative voltage being applied in the circuit. This may be
> > done to back bias a detector diode or to bias a FET that requires
> > negative bias voltage on the gate.
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> > Replacing the HV and medium voltage filter caps and perhaps the 14vdc,
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> > not wholesale change all of them.
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> > Terry K9TW
> >
> > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Craig"
> > <crgrbrts@> wrote:
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> > > In an attempt to cure my stubborn TS-530S VOX problem (Anti-Vox has no
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> > into the AF Board to renew the 'lytics along the line.
> > >

> > > Any hints about board removal? Obviously, connectors must be gently
> > > unplugged and screws removed, but what about the wires soldered on
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> > unfamiliar radios only to learn later that there was an easy, painless
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> > > Also, what are your views on completely recapping the 530 (or 830, for
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> > > practice? Unnecessary if symptoms of unpleasantness have not appeared?
> > > I already did the HV caps, but that was dead simple and quick.
> > >
> > > Thanks, gurus.
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> > > 73,
> > >
> > > Craig
> > > W3CRR
> > >
> >
> > [Non-text portions of this message have been removed]
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> >
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>
>
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>

42903. Re: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 00:57:56 UTC
From: Louis Wilen
Topic: 42877 Message: 42903

Certainly the board-mounted caps would be a challenge. I'm thinking that mainly the large capacitors that are easy to access would be candidates for this approach.

Those who have ESR meters could make it a point (next time they have the cover off the rig) to measure the easily accessible capacitors and post the values here. After a few posts for each type of rig, we'd have some indication of what is "normal". While these values wouldn't necessarily be the same as those of new caps, the measurements would be useful as guidelines for what is known to be within working range. For example, if 5 people measure a particular cap as having an ESR of 3 to 6 ohms, then there's a pretty good chance that if someone runs into the same cap in their rig showing an ESR of 15 ohms, it's a bad cap.

I'd be willing to collect the posted values into a table and store it in the files section of the group for reference.

Louis
W3LMW

From: Terry Wagoner
Sent: Monday, June 17, 2013 7:56 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

How do you get on the leads of the electrolytic caps that are mounted flush to the boards as the majority our? I use the Blue Anatek ESR meter and it takes some experience to tell what is an acceptable ESR. We generally do not have access to factory data sheets that list ESR values for the original Kenwood caps.

I have developed some rules of thumb, but frankly havent found it a very useful tool for hybrid troubleshooting. I do measure and record ESR values for the ones I do replace.

Most service shops that have a ESR meter on the bench also have a nice supply of factory fresh electrolytics across broad capacitance and voltage ranges to use for comparisons and when in doubt they just replace.

Not trying to rain on your idea I just dont know how to get on the leads of most of the caps to run the test and good/bad is a bit subjective.

Terry K9TW

--- In mailto:TS-520_820_530_830%40yahoogroups.com, "Louis Wilen" <louis.wilen@...> wrote:
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> W3LMW
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> From: Terry Wagoner
> Sent: Monday, June 17, 2013 2:42 PM
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
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> Intuitively it would seem like good thing to replace all the electrolytics in a 40 year old radio same as replacing all the carbon resistors and changing all the active devices especially front end Mosfet who some believe degrade with ESD exposure.
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> In practice most of these changes are really feel good changes that do not produce any measurable performance improvements. Almost all will report quieter operation etc. Not everyone has a discriminating ear. Also how can you measure the effectiveness of preventing a failure that did not occur. In the PM world of passenger airplanes and nuclear power they do reliability based preventive maintenance and it is OK to let some components run to failure. That would be case of most electrolytics that do not cause any collateral damage if they fail.
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> Be very careful replacing electrolytics in your hybrid. Make sure you re-install as you found the polarity was oriented. There are two or three places on the 530/830s where they are reverse polarity with positive on the ground foil. This is not a mistake. The silk screen and the schematic are wrong and the as built config is correct. Electrolytics are similar to diodes and cannot tolerate very much reverse polarity. If you are unsure look at the schematic to see if there is negative voltage being applied in the circuit. This may be done to back bias a detector diode or to bias a FET that requires negative bias voltage on the gate.
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> > Craig
> > W3CRR
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>
> [Non-text portions of this message have been removed]
>

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.3345 / Virus Database: 3199/6419 - Release Date: 06/17/13

[Non-text portions of this message have been removed]

42904. Re: [TS-520_820_530_830] Re: Looking for the schematic for the 3-diode (1N34a?) RF probe

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 00:50:31 UTC
From: Wes Will
Topic: 42874 Message: 42904

On 06/17/2013 07:03 PM, Terry Wagoner wrote:
> Wes: Wasnt scolding by saying I had posted more than once on this
> subject. Should have said take a look at Message 42072. Just get tired
> sometimes typing over and over and over! I understand the search feature
> sometimes is not the easiest to use.

Well there is the problem, silly me. Yes, the search facility for Wahoo
is what the youngsters here call "teh SuX0rs." Idiotic way to say it,
but I can agree in general.

Part of it, however, is how things are labeled in their database, which
is -another- can of worms. Having had to work around it before I think
the way I tagged it should show up fairly quickly from here on out.

The big issue? I spent more time checking the files, links, photos, and
database, and other such addendae (found all sorts of manuals, and a
bunch of broken links....) for a gif, tiff, or even pdf of jpeg of the
schematic in there, when I should have dug deeper in the messages for
text regarding it instead.

So, now in the "Files" area there IS, under "files," quite easily found,
a GIF file of the Heathkit PK-3A 3-diode RF probe. Problem solved.

Send whomever the next sod turns out to be to that schematic file, and
Bob's your Uncle.

--
Wes Will
N9KDY

42905. Re: Looking for the schematic for the 3-diode (1N34a?) RF probe

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 01:02:04 UTC
From: roberteleazer@rocketmail.com
Topic: 42874 Message: 42905

You can download for free an entire 224 page book on probes from the following website:

http://www.tubebooks.org/technical_books_online.htm

Good Luck!

Robert

--- In TS-520_820_530_830@yahoogroups.com, Wes Will <wwill@...> wrote:
>
> On 06/17/2013 01:51 PM, Terry Wagoner wrote:
>
> > Your 1N34s will be just fine and simply place 3 in series observing
> > polarity
>
> Just wanted to make sure there weren't any caveats (the possibility of a
> resistor or a cap across each diode to do some current balancing or
> limiting, for instance) that I couldn't imagine being needed in my own
> head. I already have the thing about ready to shoe-horn into a Sharpie
> pen body, before I thought to ask.
>
> There are often things in the universe that have not been dreamt of in
> my philosophy.
>
> Plus, I've found it hurts a lot less to ask for clarification than it
> does to pick bits of semiconductor or dielectric out of my teeth because
> of something I didn't know (but could have asked about).
>
> (BTW, I'm putting in a mini-slide-switch to 'jump out' two of the diodes
> and make it switch-selectable (one or three diodes), so as not to NEED
> two separate probes.)
>
> --
> Wes Will
> N9KDY
>

42906. Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 01:52:36 UTC
From: Terry Wagoner
Topic: 42877 Message: 42906

Ok my response was based on the discussion on the merits of a complete electrolytic recap. I thought you were talking about using the ESR to decide which of this total population to replace. Not very many caps that have accessible leads, but it would be nice to have good/bad ESR readings for those. Many of those you can also see the vent caps and get a good clue there is bulging or leaky.

Here are my logged results for the 900vdc B+ supply filter caps in a TS-830:

1. In circuit with bleeder resistors and small rf bypass caps in parallel. ESR = 0.33 to 0.35 ohms (new K4EAA caps)

2. Bad cap out of circuit with bleeder and bypass caps lifted. ESR = 1.00 to 1.20 ohms

3. New replacement caps from Ken K4EAA prior to install with no bleeders or bypass caps installed. ESR = 0.53 to 0.57 ohms

This is with a Blue Anatek ESR Meter

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Louis Wilen" <louis.wilen@...> wrote:
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> Certainly the board-mounted caps would be a challenge. Iâ□□m thinking that mainly the large capacitors that are easy to access would be candidates for this approach.
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>
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> Louis
> W3LMW
>
> From: Terry Wagoner
> Sent: Monday, June 17, 2013 7:56 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
>
>
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> >
> > From: Terry Wagoner
> > Sent: Monday, June 17, 2013 2:42 PM
> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
> >
> >
> > Intuitively it would seem like good thing to replace all the electrolytics in a 40 year old radio same as replacing all the carbon resistors and changing all the active devices especially front end Mosfet who some believe degrade with ESD exposure.
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> >
> > [Non-text portions of this message have been removed]
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>
> No virus found in this message.
> Checked by AVG - www.avg.com
> Version: 2013.0.3345 / Virus Database: 3199/6419 - Release Date: 06/17/13
>
>
> [Non-text portions of this message have been removed]
>

42907. Re: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 01:58:30 UTC
From: Louis Wilen
Topic: 42877 Message: 42907

Thanks Terry. This is helpful information.

I have the same Blue Anatek ESR Meter. Next time I have my TS-530S open, I'll measure the accessible caps and report here.

Louis
W3LMW

From: Terry Wagoner
Sent: Monday, June 17, 2013 9:52 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

Ok my response was based on the discussion on the merits of a complete electrolytic recap. I thought you were talking about using the ESR to decide which of this total population to replace. Not very many caps that have accessible leads, but it would be nice to have good/bad ESR readings for those. Many of those you can also see the vent caps and get a good clue there is bulging or leaky.

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would be case of most electrolytics that do not cause any collateral damage if they fail.
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> > All of these changes you need to weigh the risk vs the reward. Easy to pull molex pins off the boards and to lift PC foils. These old phenolic boards have poor plating and cant handle many desolder/resolder cycles. I now use a Hakko 808 which is salty for average ham, but makes desoldering childs play.
> >
> > Be very careful replacing electrolytics in your hybrid. Make sure you re-install as you found the polarity was oriented. There are two or three places on the 530/830s where they are reverse polarity with positive on the ground foil. This is not a mistake. The silk screen and the schematic are wrong and the as built config is correct. Electrolytics are similar to diodes and cannot tolerate very much reverse polarity. If you are unsure look at the schematic to see if there is negative voltage being applied in the circuit. This may be done to back bias a detector diode or to bias a FET that requires negative bias voltage on the gate.
> >
> > Replacing the HV and medium voltage filter caps and perhaps the 14vdc, 12vdc and 9vdc power supply electrolytics is OK but I personally would not wholesale change all of them.
> >
> > Terry K9TW
> >
> > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Craig" <crgrbrts@> wrote:
> > >
> > > In an attempt to cure my stubborn TS-530S VOX problem (Anti-Vox has no
> > > effect, no matter what VOX Gain and VOX Delay settings are used unless the speaker is muted or headphones are used), I plan to dive into the AF Board to renew the 'lytics along the line.
> > >
> > > Any hints about board removal? Obviously, connectors must be gently
> > > unplugged and screws removed, but what about the wires soldered on
> > > topside? The reason I am asking is that -- more than once -- I have
> > > gone to great pains to access wiring or remove components in unfamiliar radios only to learn later that there was an easy, painless way to accomplish the same task known to the experienced, but not to me.
> > >
> > > Also, what are your views on completely recapping the 530 (or 830, for
> > > that matter, since I have one of those on the way, too)? Good
> > > practice? Unnecessary if symptoms of unpleasantness have not appeared?
> > > I already did the HV caps, but that was dead simple and quick.
> > >
> > > Thanks, gurus.
> > >
> > > 73,
> > >
> > > Craig
> > > W3CRR
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> > [Non-text portions of this message have been removed]
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>
> No virus found in this message.
> Checked by AVG - www.avg.com
> Version: 2013.0.3345 / Virus Database: 3199/6419 - Release Date: 06/17/13
>
>
> [Non-text portions of this message have been removed]
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[Non-text portions of this message have been removed]

42908. Re: [TS-520_820_530_830] Re: Looking for the schematic for the 3-diode (1N34a?) RF probe

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 02:06:27 UTC
From: Wes Will
Topic: 42874 Message: 42908

On 06/17/2013 08:02 PM, roberteleazer@... wrote:
> You can download for free an entire 224 page book on probes from the
> following website:
>
> http://www.tubebooks.org/technical_books_online.htm

That happens to be in my bookmark file, couple of years now I think. I particularly like the oscilloscope books, just about the probe book. Great site. Fantastic resource for tube-jockeys.

42909. Topic Change - ESR Meters and other test instruments

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 02:30:32 UTC
From: Wes Will
Topic: 42877 Message: 42909

TS530 measurements and all..... I can't seem to find any available used, not even on ePay, that aren't MORE than the un-assembled kit from the supplier. I'm not stuck on Anatek brand, nor any particular name or make, but I am interested in getting an ESR meter some one of these days.

RETIRED GEEK HERE - Price is most DEFINITELY an object!

Saving some shekels here or there makes a big difference to us. That's why I'm fixing a mangled hybrid radio in the first place. But I've been spoiled over the years for decent tools. I would rather wait and save for a -good- one that I'll never need to replace instead of getting a "good enough to get going on" item and having to buy it three or four times.

(Craftsman and Snap-On hand tools? Of course. Buy it right the first time, and you only have to buy it ONCE.)

Before the ESR meter, I'll be getting an antenna analyzer box (when I can afford it) to get this trapped-coax attic dipole tuned up and connected to the TS520. Before THAT, though, I need to get a decent O-scope. The one I have I got for free, and it has been worth every cent....

Oh, I can't complain, it was free for the taking. But it's getting to the point where I am not sure I can keep it going any longer, so it's time for a replacement that I actually sink cash into.

At which point the "Buy it once" philosophy, beaten into me with a leather belt by my father, kicks in and I want to get -one- that will keep going for as long as I do. Single-trace, dual-trace, DTT, PC-based, whatever.

Perhaps there ought to be a semi-permanent topic for test instruments, where to find them, or to let others know when one or another person runs across a cache of say, VTVM's; which ones to avoid, which ones can be refurbished and which cannot without flaming-hoop hopping, and so on. Nothing in serious detail, just information that can be mined out of the archives.

Opinions? (And anyone know of a decent O-scope in need of repair and a home?)

--
Wes Will
N9KDY

42910. Re: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 02:59:43 UTC
From: Mike
Topic: 42877 Message: 42910

HI Terry and Louis,

I don't ownan ESR meter so my response was based on the Sprague TO-4 capacitor checker I use, it does a nice job even though it's old technology.

If caps can be checked in the circuit with an ESR meter then that's fine with me. I guess I'll have to geta simple one and dosome experimenting/learning.

73
Mike W5RKL

On 6/17/2013 7:39 PM, Terry Wagoner wrote:
>
> Hi Mike:
>
> Louis was talking about using an ESR meter to test the electrolytics.
> With an ESR meter you are not measuring capacitance or leakage
> current. 99% of all caps can be measured directly in circuit with an
> ESR meter. No need to lift any leads. Just need to make sure the cap
> is discharged. About only exception is when a large cap is paralleled
> with a small cap and then need to lift one leg.
>
> ESR meters work be applying low level AC signal (maybe 5mv to 20 mv)
> at around 100 to 200 khz in short pulses. Only about 4 circuit
> combinations you will encounter.
> 1. Parallel inductors such as chokes, coils and transformers and the
> XL is such that ESR meter doesnt see them.
> 2. Parallel resistors. The input Z of the ESR meter is very low maybe
> around 1 to 2 ohms so not bothered by the resistors
> 3. The junctions of transistors. The input signal level is too low to
> forward bias diodes or transistors
> 4. Parallel capacitor. Need to lift one lead
>
> If you use a Capacitor bridge an/or Leakage tester the cap can check
> good, but still have higher than normal ESR. It acts like a cap with a
> high value of R in series with it.
>
> Very easy to find Open or dried out caps as ESR will approach infinity.
>
> Biggest problem is what is too high an ESR? What was original factory
> ESR?
>
> Usually rule of thumb is anything over 10 ohms is too high and should
> be replaced. If the cap is in a switching circuit then anything over

> 0.5 ohms is probably too high.
>
> Now what about those that read in circuit between 1 ohm and 10 ohms.
> This is where you need lots of experience and best if you can practice
> on known bad caps.
>
> I always save any pulled cap for future use as reference.
>
> ESR meter is nice addition to the bench but in my experience no sub
> for replacing whenever in doubt. Just not easy to get on the leads to
> test in circuit. For most must remove the board to access the foil
> side. ESR meter is also good low ohms meter to check contact
> resistance however it does not push any current thru a contact.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@...> wrote:
> >
> > Louis and others,
> >
> > To prevent any stray capacitance from the circuit and/or adjacent
> > components and wiring affecting the test results, at least one lead of
> > the capacitor should be disconnected from the circuit and that includes
> > any voltage equalizing resistors should be disconnected from the
> > capacitor. I would not try to test a capacitor that's still
> connected in
> > the circuit, too many variables that can affect the test results.
> >
> > Not all capacitors have the same leakage rating. It depends on the
> > capacitance value and voltage rating. For example, Sprague says
> > capacitors that fall within the 1 to 100VDC rating have different
> > leakage current ratings depending on the capacitance value of the
> > capacitor. For example, a 2ufd capacitor and a 100ufd capacitor that
> are
> > within this voltage range will have .31ma for the 2ufd capacitor but
> > 1.3ma for the 100ufd capacitor.
> >
> > Sprague also states that any capacitor value that is less than 75% of
> > its capacitance value should be replaced.
> >
> > There also is the "80/20" rule which means a capacitor may be replaced
> > with a different capacitor with a value that does not exceed 80% of or
> > less than 20% of the original value. I personally would not follow that
> > rule that close, especially if the new capacitor value is more than 20%
> > of the original capacitance value. Remember, "I" (current) leads "E"
> > (voltage" in capacitors. That's part of the phrase, "ELI the ICE man"
> > where "I" (current) lead "E" (voltage) in the "C" capacitor! When a
> > capacitor initially starts to charge, the "I" current is at "maximum"
> > and the "E" voltage is at "minimum". A "thump" is heard quite often in

> > power supplies when they are first turned ON which is the high current
> > surge in the capacitor when power is first applied to the capacitor.
> >
> > 73
> > Mike W5RKL
> >
> >
> >
> >
> > .
> > On 6/17/2013 1:55 PM, Louis Wilen wrote:
> > >
> > > What are your feelings about using an ESR meter to test caps
> in-circuit?
> > >
> > > Also âEUR" would it be of value (no pun intended) to create and
> publish a
> > > list of measured, in-circuit ESR values for the major electrolytic
> > > caps in the various hybrids? Those who have ESR meters could then
> > > compare values of suspected bad caps to the values in the list while
> > > not risking any damage by unsoldering.
> > >
> > > Louis
> > > W3LMW
> > >
> > > From: Terry Wagoner
> > > Sent: Monday, June 17, 2013 2:42 PM
> > > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
> > >
> > > Intuitively it would seem like good thing to replace all the
> > > electrolytics in a 40 year old radio same as replacing all the carbon
> > > resistors and changing all the active devices especially front end
> > > Mosfet who some believe degrade with ESD exposure.
> > >
> > > In practice most of these changes are really feel good changes
> that do
> > > not produce any measurable performance improvements. Almost all will
> > > report quieter operation etc. Not everyone has a discriminating ear.
> > > Also how can you measure the effectiveness of preventing a failure
> > > that did not occur. In the PM world of passenger airplanes and
> nuclear
> > > power they do reliability based preventive maintenance and it is
> OK to
> > > let some components run to failure. That would be case of most
> > > electrolytics that do not cause any collateral damage if they fail.
> > >
> > > All of these changes you need to weigh the risk vs the reward.

> Easy to
> > > pull molex pins off the boards and to lift PC foils. These old
> > > phenolic boards have poor plating and cant handle many
> > > desolder/resolder cycles. I now use a Hakko 808 which is salty for
> > > average ham, but makes desoldering childs play.
> > >
> > > Be very careful replacing electrolytics in your hybrid. Make sure you
> > > re-install as you found the polarity was oriented. There are two or
> > > three places on the 530/830s where they are reverse polarity with
> > > positive on the ground foil. This is not a mistake. The silk screen
> > > and the schematic are wrong and the as built config is correct.
> > > Electrolytics are similar to diodes and cannot tolerate very much
> > > reverse polarity. If you are unsure look at the schematic to see if
> > > there is negative voltage being applied in the circuit. This may be
> > > done to back bias a detector diode or to bias a FET that requires
> > > negative bias voltage on the gate.
> > >
> > > Replacing the HV and medium voltage filter caps and perhaps the
> 14vdc,
> > > 12vdc and 9vdc power supply electrolytics is OK but I personally
> would
> > > not wholesale change all of them.
> > >
> > > Terry K9TW
> > >
> > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Craig"
> > > <crgrbrts@> wrote:
> > > >
> > > > In an attempt to cure my stubborn TS-530S VOX problem (Anti-Vox
> has no
> > > > effect, no matter what VOX Gain and VOX Delay settings are used
> > > unless the speaker is muted or headphones are used), I plan to dive
> > > into the AF Board to renew the 'lytics along the line.
> > > >
> > > > Any hints about board removal? Obviously, connectors must be gently
> > > > unplugged and screws removed, but what about the wires soldered on
> > > > topside? The reason I am asking is that -- more than once -- I have
> > > > gone to great pains to access wiring or remove components in
> > > unfamiliar radios only to learn later that there was an easy,
> painless
> > > way to accomplish the same task known to the experienced, but not
> to me.
> > > >
> > > > Also, what are your views on completely recapping the 530 (or
> 830, for
> > > > that matter, since I have one of those on the way, too)? Good
> > > > practice? Unnecessary if symptoms of unpleasantness have not
> appeared?
> > > > I already did the HV caps, but that was dead simple and quick.
> > > >

> > > > Thanks, gurus.
> > > >
> > > > 73,
> > > >
> > > > Craig
> > > > W3CRR
> > > >
> > >
> > > [Non-text portions of this message have been removed]
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> > [Non-text portions of this message have been removed]
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42911. Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 03:01:03 UTC
From: Terry Wagoner
Topic: 42877 Message: 42911

Craig:

1. What happens if you remove the Mic?

2. What happens if you remove the Mic, set mic gain to 1200, rig in SSB mode and flip to send? Any RF output?

3. Do you have normal side tone? Normal semi break in CW operations? Side tone is not enabled in SSB mode?

4. Perhaps a TS-530 owner that has normal VOX operation could measure the dc voltage levels at TP-2 on audio board for you.

If I get time I will measure TP-2 dc voltages on a TS-830 for you as the VOX amp and VOX delay circuits are similar. They both sample the audio amp output and rectify it and develop a dc control voltage that is used to counter the DC voltage developed by the VOX amp which ends up being input for an emitter coupled schmitt trigger circuit to key the relay.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Craig" <crgrbrts@...> wrote:
>
> In an attempt to cure my stubborn TS-530S VOX problem (Anti-Vox has no
> effect, no matter what VOX Gain and VOX Delay settings are used unless the speaker is muted or headphones are used), I plan to dive into the AF Board to renew the 'lytics along the line.
>
> Any hints about board removal? Obviously, connectors must be gently
> unplugged and screws removed, but what about the wires soldered on
> topside? The reason I am asking is that -- more than once -- I have
> gone to great pains to access wiring or remove components in unfamiliar radios only to learn later that there was an easy, painless way to accomplish the same task known to the experienced, but not to me.
>
> Also, what are your views on completely recapping the 530 (or 830, for
> that matter, since I have one of those on the way, too)? Good
> practice? Unnecessary if symptoms of unpleasantness have not appeared?
> I already did the HV caps, but that was dead simple and quick.
>
> Thanks, gurus.
>
> 73,
>
> Craig
> W3CRR
>

42912. Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 03:05:35 UTC
From: Terry Wagoner
Topic: 42877 Message: 42912

Craig: If you have another functional TS-530 troubleshooting this should be a piece of cake! Go to TP-2 on Audio board and measure dc voltages there in VOX mode using same mic, same mic gain setting, same vox gain and anti-vox pot settings, same AF gain setting.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Craig Roberts <crgrbrts@...> wrote:
>
> On 6/17/2013 12:39 PM, John Davidson wrote:
> >
> > If you have an external speaker connected, try reversing the two wires
> > going to it.
> >
> Thanks, John. Yeah, I tried that with the internal speaker and an
> external one as well. No joy.
>
> I have another TS-530S (in absolutely mint cosmetic condition with
> original, unblemished boxes) that works perfectly in VOX mode with the
> same microphone, so I know that's not an issue, either.
>
> My cunning plan is to get the one with the VOX problem up to snuff (it's
> about an 8+ cosmetically with a couple of minor scratches on the covers
> - front panel is flawless) and sell it in order to cover the cost of the
> TS-830S I just bought. I got overly excited as a new hybrid junkie and
> bought three radios when I actually just need one. I'm keeping two,
> however.
>
> I did the same thing with Drake TR-7s a few years ago.
>
> 73,
>
> Craig
> W3CRR
>
>
> [Non-text portions of this message have been removed]
>

42913. Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 03:11:25 UTC
From: Terry Wagoner
Topic: 42877 Message: 42913

OK I would like to see your results. Terry

--- In TS-520_820_530_830@yahoogroups.com, "Louis Wilen" <louis.wilen@...> wrote:
>
> Thanks Terry. This is helpful information.
>
> I have the same Blue Anatek ESR Meter. Next time I have my TS-530S open, Iâ☐☐ll measure the accessible caps and report here.
>
> Louis
> W3LMW
>
>
> From: Terry Wagoner
> Sent: Monday, June 17, 2013 9:52 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
>
>
> Ok my response was based on the discussion on the merits of a complete electrolytic recap. I thought you were talking about using the ESR to decide which of this total population to replace. Not very many caps that have accessible leads, but it would be nice to have good/bad ESR readings for those. Many of those you can also see the vent caps and get a good clue there is bulging or leaky.
>
> Here are my logged results for the 900vdc B+ supply filter caps in a TS-830:
>
> 1. In circuit with bleeder resistors and small rf bypass caps in parallel. ESR = 0.33 to 0.35 ohms (new K4EAA caps)
>
> 2. Bad cap out of circuit with bleeder and bypass caps lifted. ESR = 1.00 to 1.20 ohms
>
> 3. New replacement caps from Ken K4EAA prior to install with no bleeders or bypass caps installed. ESR = 0.53 to 0.57 ohms
>
> This is with a Blue Anatek ESR Meter
>
> Terry K9TW
>
> --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Louis Wilen" <louis.wilen@> wrote:
> >
> > Certainly the board-mounted caps would be a challenge. IÃ¢Â☐Â☐m thinking that mainly the large capacitors that are easy to access would be candidates for this approach.
> >
> > Those who have ESR meters could make it a point (next time they have the cover off the rig) to measure the easily accessible capacitors and post the values here. After a few posts for each type of rig, weÃ¢Â☐Â☐d have some

indication of what is Ã¢Â□Â□normalÃ¢Â□Â□. While these values wouldnÃ¢Â□Â□t necessarily be the same as those of new caps, the measurements would be useful as guidelines for what is known to be within working range. For example, if 5 people measure a particular cap as having an ESR of 3 to 6 ohms, then thereÃ¢Â□Â□s a pretty good chance that if someone runs into the same cap in their rig showing an ESR of 15 ohms, itÃ¢Â□Â□s a bad cap.
> >
> > IÃ¢Â□Â□d be willing to collect the posted values into a table and store it in the files section of the group for reference.
> >
> > Louis
> > W3LMW
> >
> > From: Terry Wagoner
> > Sent: Monday, June 17, 2013 7:56 PM
> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
> >
> >
> > How do you get on the leads of the electrolytic caps that are mounted flush to the boards as the majority our? I use the Blue Anatek ESR meter and it takes some experience to tell what is an acceptable ESR. We generally do not have access to factory data sheets that list ESR values for the original Kenwood caps.
> >
> > I have developed some rules of thumb, but frankly havent found it a very useful tool for hybrid troubleshooting. I do measure and record ESR values for the ones I do replace.
> >
> > Most service shops that have a ESR meter on the bench also have a nice supply of factory fresh electrolytics across broad capacitance and voltage ranges to use for comparisons and when in doubt they just replace.
> >
> > Not trying to rain on your idea I just dont know how to get on the leads of most of the caps to run the test and good/bad is a bit subjective.
> >
> > Terry K9TW
> >
> > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Louis Wilen" <louis.wilen@> wrote:
> > >
> > > What are your feelings about using an ESR meter to test caps in-circuit?
> > >
> > > Also Ã□Â¢Ã□Â□" would it be of value (no pun intended) to create and publish a list of measured, in-circuit ESR values for the major electrolytic caps in the various hybrids? Those who have ESR meters could then compare values of suspected bad caps to the values in the list while not risking any damage by unsoldering.
> > >
> > > Louis
> > > W3LMW
> > >
> > > From: Terry Wagoner
> > > Sent: Monday, June 17, 2013 2:42 PM
> > > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > > Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
> > >
> > >
> > > Intuitively it would seem like good thing to replace all the electrolytics in a 40 year old radio same as replacing all

the carbon resistors and changing all the active devices especially front end Mosfet who some believe degrade with ESD exposure.
> > >
> > > In practice most of these changes are really feel good changes that do not produce any measurable performance improvements. Almost all will report quieter operation etc. Not everyone has a discriminating ear. Also how can you measure the effectiveness of preventing a failure that did not occur. In the PM world of passenger airplanes and nuclear power they do reliability based preventive maintenance and it is OK to let some components run to failure. That would be case of most electrolytics that do not cause any collateral damage if they fail.
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> > > All of these changes you need to weigh the risk vs the reward. Easy to pull molex pins off the boards and to lift PC foils. These old phenolic boards have poor plating and cant handle many desolder/resolder cycles. I now use a Hakko 808 which is salty for average ham, but makes desoldering childs play.
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> > > Be very careful replacing electrolytics in your hybrid. Make sure you re-install as you found the polarity was oriented. There are two or three places on the 530/830s where they are reverse polarity with positive on the ground foil. This is not a mistake. The silk screen and the schematic are wrong and the as built config is correct. Electrolytics are similar to diodes and cannot tolerate very much reverse polarity. If you are unsure look at the schematic to see if there is negative voltage being applied in the circuit. This may be done to back bias a detector diode or to bias a FET that requires negative bias voltage on the gate.
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> > > Terry K9TW
> > >
> > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Craig" <crgrbrts@> wrote:
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> > > > In an attempt to cure my stubborn TS-530S VOX problem (Anti-Vox has no
> > > > effect, no matter what VOX Gain and VOX Delay settings are used unless the speaker is muted or headphones are used), I plan to dive into the AF Board to renew the 'lytics along the line.
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> > > > Any hints about board removal? Obviously, connectors must be gently
> > > > unplugged and screws removed, but what about the wires soldered on
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> > > >
> > > > Also, what are your views on completely recapping the 530 (or 830, for
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> > > > practice? Unnecessary if symptoms of unpleasantness have not appeared?
> > > > I already did the HV caps, but that was dead simple and quick.
> > > >
> > > > Thanks, gurus.
> > > >
> > > > 73,
> > > >
> > > > Craig
> > > > W3CRR
> > > >
> > >

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> > > [Non-text portions of this message have been removed]
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> >
> > No virus found in this message.
> > Checked by AVG - www.avg.com
> > Version: 2013.0.3345 / Virus Database: 3199/6419 - Release Date: 06/17/13
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>

42914. Re: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 03:15:14 UTC
From: Craig Roberts
Topic: 42877 Message: 42914

Hi Terry:

1. The VOX does not trip - in other words, all is normal.

2. No RF output in SSB / Send mode with mic detached.

3. Side tone is normal. Semi break-in CW is normal.

Actually, I have purchased a TS-830S which will arrive tomorrow. I will take voltages measurements on it to compare.

I'll keep you posted.

Many thanks and 73,

Craig
W3CRR

42915. Re: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 03:17:39 UTC
From: Craig Roberts
Topic: 42877 Message: 42915

Right-oh, Terry. Unfortunately, the fully functioning TS-530S is
located at another QTH temporarily. When we are reunited, I will do as
you suggested.

Thanks again,

Craig
>

[Non-text portions of this message have been removed]

42916. Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 03:24:56 UTC
From: Terry Wagoner
Topic: 42877 Message: 42916

Mike:

I always wanted a Tel-O-Mike especially for leakage measurements and of course you are correct for any capacitance bridge that I am aware of you need to lift one lead in circuit. I have a real nice Heath IT-28 that I keep for sentimental reasons but not much use anymore.

As I mentioned not uncommon to use the bridge to measure the capacitance value and it will be well within 80/20 tolerance and leakage will be low yet ESR will be high. Prior to ESR we would never have replaced a cap like that measured by a Tel-O-Mike or IT-28.

Not having to lift one end of most caps in circuit to test with ESR meter is a big plus. I think I paid $79.95 for the Blue ESR meter (digital). There is also a good analog unit available.

As I noted an ESR meter is not the magic pill. Still have to learn to recognize when ESR is too high and for about 90% of caps in the hybrids cant get on the leads from component side of board to test them.

Just my experience using one. I hear fellows on the Hybrid net talk about how handy has been testing caps in their hybrids and I sure would like to know how they are doing it.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
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> HI Terry and Louis,
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> I don't ownan ESR meter so my response was based on the Sprague TO-4
> capacitor checker I use, it does a nice job even though it's old
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> > With an ESR meter you are not measuring capacitance or leakage

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> > is discharged. About only exception is when a large cap is paralleled
> > with a small cap and then need to lift one leg.
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> > ESR meters work be applying low level AC signal (maybe 5mv to 20 mv)
> > at around 100 to 200 khz in short pulses. Only about 4 circuit
> > combinations you will encounter.
> > 1. Parallel inductors such as chokes, coils and transformers and the
> > XL is such that ESR meter doesnt see them.
> > 2. Parallel resistors. The input Z of the ESR meter is very low maybe
> > around 1 to 2 ohms so not bothered by the resistors
> > 3. The junctions of transistors. The input signal level is too low to
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> > high value of R in series with it.
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> > Very easy to find Open or dried out caps as ESR will approach infinity.
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> > > capacitors that fall within the 1 to 100VDC rating have different
> > > leakage current ratings depending on the capacitance value of the
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> > > There also is the "80/20" rule which means a capacitor may be replaced
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> > > (voltage" in capacitors. That's part of the phrase, "ELI the ICE man"
> > > where "I" (current) lead "E" (voltage) in the "C" capacitor! When a
> > > capacitor initially starts to charge, the "I" current is at "maximum"
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> > > > Also âEUR" would it be of value (no pun intended) to create and
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> > > > caps in the various hybrids? Those who have ESR meters could then
> > > > compare values of suspected bad caps to the values in the list while
> > > > not risking any damage by unsoldering.
> > > >
> > > > Louis

> > > > W3LMW
> > > >
> > > > From: Terry Wagoner
> > > > Sent: Monday, June 17, 2013 2:42 PM
> > > > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
> > > >
> > > > Intuitively it would seem like good thing to replace all the
> > > > electrolytics in a 40 year old radio same as replacing all the carbon
> > > > resistors and changing all the active devices especially front end
> > > > Mosfet who some believe degrade with ESD exposure.
> > > >
> > > > In practice most of these changes are really feel good changes
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> > > > not produce any measurable performance improvements. Almost all will
> > > > report quieter operation etc. Not everyone has a discriminating ear.
> > > > Also how can you measure the effectiveness of preventing a failure
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> > > > let some components run to failure. That would be case of most
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> > > > All of these changes you need to weigh the risk vs the reward.
> > Easy to
> > > > pull molex pins off the boards and to lift PC foils. These old
> > > > phenolic boards have poor plating and cant handle many
> > > > desolder/resolder cycles. I now use a Hakko 808 which is salty for
> > > > average ham, but makes desoldering childs play.
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> > > > Be very careful replacing electrolytics in your hybrid. Make sure you
> > > > re-install as you found the polarity was oriented. There are two or
> > > > three places on the 530/830s where they are reverse polarity with
> > > > positive on the ground foil. This is not a mistake. The silk screen
> > > > and the schematic are wrong and the as built config is correct.
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> > > > reverse polarity. If you are unsure look at the schematic to see if
> > > > there is negative voltage being applied in the circuit. This may be
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> > > > negative bias voltage on the gate.
> > > >
> > > > Replacing the HV and medium voltage filter caps and perhaps the
> > 14vdc,
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> > would
> > > > not wholesale change all of them.
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> > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Craig"
> > > > <crgrbrts@> wrote:
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> > > > > Any hints about board removal? Obviously, connectors must be gently
> > > > > unplugged and screws removed, but what about the wires soldered on
> > > > > topside? The reason I am asking is that -- more than once -- I have
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> > > > > Also, what are your views on completely recapping the 530 (or
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42917. Re: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 03:31:59 UTC
From: Bob Macklin
Topic: 42877 Message: 42917

Terry,

I use my nice IT-28 to find out the capacitance of small capacitors I cannot read the writing on!

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Terry Wagoner
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 17, 2013 8:24 PM
Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

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> > > > Sent: Monday, June 17, 2013 2:42 PM
> > > > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
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42918. Re: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 04:34:18 UTC
From: Wes Will
Topic: 42877 Message: 42918

On 06/17/2013 10:31 PM, Bob Macklin wrote:
> Terry,
>
> I use my nice IT-28 to find out the capacitance of small capacitors I
> cannot read the writing on!

Reminds me of the old times, when the only way was to use a known value of coil with the unknown capacitor, connect them, use the dip meter to find resonance and figure backwards to solve for C. (Or likewise solve for L with a known value of C, when the coil was the unknown....)

Whatever works, I guess.

Looks like I would do best at this point to get a better grid-dipper. One of the FET ones, likely can be found cheap. What I've got left is dying more rapidly every time I drag the poor antique critter out, and I don't want to muck about trying to resurrect yet ANOTHER dinosaur. Particularly true when newer types of instruments can give much better results anyway. Doing things the old, hard way isn't particularly a huge fascination with me, unless it's the only way I can afford to do it at all.

Tubes for the GDO I have are getting to be made out of unobtanium, and the price for a 6CW4 tube (it's a Lafayette TE-57) are getting to the stupid point. (I only have three coils for this old beast, too. Can't seem to get the give-a-crap to hand-wind more until I need them for something specific.)

42919. Re: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 05:01:59 UTC
From: Bob Macklin
Topic: 42877 Message: 42919

I have 2 Heathkit GDO. A GD-1b, and a HM-1250. The HM-1250 is solid state and does not work as well as the GD-1B. The GD-1b does work on all bands but is marginal on the highest.

I have Millen GDO also. It's good on all but the highest band. The highest band does not work at all.

I also have an EICO 710. It's OK.

I would stay away from solid state GDOs. Besides they don't have a GRID!

IGNORE THE HEATHKIT TUNNEL DIPPER!

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Wes Will
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 17, 2013 9:34 PM
Subject: Re: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

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> cannot read the writing on!

Reminds me of the old times, when the only way was to use a known value of coil with the unknown capacitor, connect them, use the dip meter to find resonance and figure backwards to solve for C. (Or likewise solve for L with a known value of C, when the coil was the unknown....)

Whatever works, I guess.

Looks like I would do best at this point to get a better grid-dipper. One of the FET ones, likely can be found cheap. What I've got left is dying more rapidly every time I drag the poor antique critter out, and I don't want to muck about trying to resurrect yet ANOTHER dinosaur. Particularly true when newer types of instruments can give much better results anyway. Doing things the old, hard way isn't particularly a huge fascination with me, unless it's the only way I can afford to do it at all.

Tubes for the GDO I have are getting to be made out of unobtanium, and the price for a 6CW4 tube (it's a Lafayette TE-57) are getting to the stupid point. (I only have three coils for this old beast, too. Can't

seem to get the give-a-crap to hand-wind more until I need them for something specific.)

[Non-text portions of this message have been removed]

42920. Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 09:50:45 UTC
From: Terry Wagoner
Topic: 42877 Message: 42920

Bob: Yes that would be a good use for it. I use to do that as well, but now have B&K 875B digital LCR meter and the AADE IIB digital LC bridge. So can read values of chokes and caps pretty close.

In old days used my Millen GDO with a standard capacitor or inductor and would dip and calculate. Have also done this with Rf sig gen and O-scope and sweep and read frequency and then calculate. Lots of ways to skin a cat, but the digital bridges work so nice and more accurate.

I dont home brew much anymore so not making any gimmick caps anymore and will rewind hybrid plate chokes from time to time so get limited use out of LCR bridges these days.

I have seen some very cheap LCR bridges from China listed on Ebay and read some reviews and they get high marks. You might want to look in to one of those.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@...> wrote:
>
> Terry,
>
> I use my nice IT-28 to find out the capacitance of small capacitors I cannot read the writing on!
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Terry Wagoner
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, June 17, 2013 8:24 PM
> Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
>
>
>
> Mike:
>
> I always wanted a Tel-O-Mike especially for leakage measurements and of course you are correct for any capacitance bridge that I am aware of you need to lift one lead in circuit. I have a real nice Heath IT-28 that I keep for sentimental reasons but not much use anymore.
>
> As I mentioned not uncommon to use the bridge to measure the capacitance value and it will be well within 80/20 tolerance and leakage will be low yet ESR will be high. Prior to ESR we would never have replaced a cap like that measured by a Tel-O-Mike or IT-28.

>
> Not having to lift one end of most caps in circuit to test with ESR meter is a big plus. I think I paid $79.95 for the Blue ESR meter (digital). There is also a good analog unit available.
>
> As I noted an ESR meter is not the magic pill. Still have to learn to recognize when ESR is too high and for about 90% of caps in the hybrids cant get on the leads from component side of board to test them.
>
> Just my experience using one. I hear fellows on the Hybrid net talk about how handy has been testing caps in their hybrids and I sure would like to know how they are doing it.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@> wrote:
> >
> > HI Terry and Louis,
> >
> > I don't ownan ESR meter so my response was based on the Sprague TO-4
> > capacitor checker I use, it does a nice job even though it's old
> > technology.
> >
> > If caps can be checked in the circuit with an ESR meter then that's fine
> > with me. I guess I'll have to geta simple one and dosome
> > experimenting/learning.
> >
> >
> >
> > 73
> > Mike W5RKL
> >
> > On 6/17/2013 7:39 PM, Terry Wagoner wrote:
> > >
> > > Hi Mike:
> > >
> > > Louis was talking about using an ESR meter to test the electrolytics.
> > > With an ESR meter you are not measuring capacitance or leakage
> > > current. 99% of all caps can be measured directly in circuit with an
> > > ESR meter. No need to lift any leads. Just need to make sure the cap
> > > is discharged. About only exception is when a large cap is paralleled
> > > with a small cap and then need to lift one leg.
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> > > ESR meters work be applying low level AC signal (maybe 5mv to 20 mv)
> > > at around 100 to 200 khz in short pulses. Only about 4 circuit
> > > combinations you will encounter.
> > > 1. Parallel inductors such as chokes, coils and transformers and the
> > > XL is such that ESR meter doesnt see them.
> > > 2. Parallel resistors. The input Z of the ESR meter is very low maybe
> > > around 1 to 2 ohms so not bothered by the resistors
> > > 3. The junctions of transistors. The input signal level is too low to

> > > forward bias diodes or transistors
> > > 4. Parallel capacitor. Need to lift one lead
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> > > If you use a Capacitor bridge an/or Leakage tester the cap can check
> > > good, but still have higher than normal ESR. It acts like a cap with a
> > > high value of R in series with it.
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> > > Very easy to find Open or dried out caps as ESR will approach infinity.
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> > > Biggest problem is what is too high an ESR? What was original factory
> > > ESR?
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> > > Usually rule of thumb is anything over 10 ohms is too high and should
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> > > 0.5 ohms is probably too high.
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> > > Now what about those that read in circuit between 1 ohm and 10 ohms.
> > > This is where you need lots of experience and best if you can practice
> > > on known bad caps.
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> > > I always save any pulled cap for future use as reference.
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> > > ESR meter is nice addition to the bench but in my experience no sub
> > > for replacing whenever in doubt. Just not easy to get on the leads to
> > > test in circuit. For most must remove the board to access the foil
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> > > Terry K9TW
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> > > --- In TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@> wrote:
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> > > > Louis and others,
> > > >
> > > > To prevent any stray capacitance from the circuit and/or adjacent
> > > > components and wiring affecting the test results, at least one lead of
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> > > > any voltage equalizing resistors should be disconnected from the
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> > > > the circuit, too many variables that can affect the test results.
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> > > > Not all capacitors have the same leakage rating. It depends on the
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> > > > capacitors that fall within the 1 to 100VDC rating have different
> > > > leakage current ratings depending on the capacitance value of the
> > > > capacitor. For example, a 2ufd capacitor and a 100ufd capacitor that
> > > are
> > > > within this voltage range will have .31ma for the 2ufd capacitor but

> > > > 1.3ma for the 100ufd capacitor.
> > > >
> > > > Sprague also states that any capacitor value that is less than 75% of
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> > > > There also is the "80/20" rule which means a capacitor may be replaced
> > > > with a different capacitor with a value that does not exceed 80% of or
> > > > less than 20% of the original value. I personally would not follow that
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> > > > (voltage" in capacitors. That's part of the phrase, "ELI the ICE man"
> > > > where "I" (current) lead "E" (voltage) in the "C" capacitor! When a
> > > > capacitor initially starts to charge, the "I" current is at "maximum"
> > > > and the "E" voltage is at "minimum". A "thump" is heard quite often in
> > > > power supplies when they are first turned ON which is the high current
> > > > surge in the capacitor when power is first applied to the capacitor.
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> > > > Mike W5RKL
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> > > >
> > > >
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> > > > On 6/17/2013 1:55 PM, Louis Wilen wrote:
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> > > > > not risking any damage by unsoldering.
> > > > >
> > > > > Louis
> > > > > W3LMW
> > > > >
> > > > > From: Terry Wagoner
> > > > > Sent: Monday, June 17, 2013 2:42 PM
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
> > > > >
> > > > > Intuitively it would seem like good thing to replace all the
> > > > > electrolytics in a 40 year old radio same as replacing all the carbon
> > > > > resistors and changing all the active devices especially front end
> > > > > Mosfet who some believe degrade with ESD exposure.

> > > > >
> > > > > In practice most of these changes are really feel good changes
> > > that do
> > > > > not produce any measurable performance improvements. Almost all will
> > > > > report quieter operation etc. Not everyone has a discriminating ear.
> > > > > Also how can you measure the effectiveness of preventing a failure
> > > > > that did not occur. In the PM world of passenger airplanes and
> > > nuclear
> > > > > power they do reliability based preventive maintenance and it is
> > > OK to
> > > > > let some components run to failure. That would be case of most
> > > > > electrolytics that do not cause any collateral damage if they fail.
> > > > >
> > > > > All of these changes you need to weigh the risk vs the reward.
> > > Easy to
> > > > > pull molex pins off the boards and to lift PC foils. These old
> > > > > phenolic boards have poor plating and cant handle many
> > > > > desolder/resolder cycles. I now use a Hakko 808 which is salty for
> > > > > average ham, but makes desoldering childs play.
> > > > >
> > > > > Be very careful replacing electrolytics in your hybrid. Make sure you
> > > > > re-install as you found the polarity was oriented. There are two or
> > > > > three places on the 530/830s where they are reverse polarity with
> > > > > positive on the ground foil. This is not a mistake. The silk screen
> > > > > and the schematic are wrong and the as built config is correct.
> > > > > Electrolytics are similar to diodes and cannot tolerate very much
> > > > > reverse polarity. If you are unsure look at the schematic to see if
> > > > > there is negative voltage being applied in the circuit. This may be
> > > > > done to back bias a detector diode or to bias a FET that requires
> > > > > negative bias voltage on the gate.
> > > > >
> > > > > Replacing the HV and medium voltage filter caps and perhaps the
> > > 14vdc,
> > > > > 12vdc and 9vdc power supply electrolytics is OK but I personally
> > > would
> > > > > not wholesale change all of them.
> > > > >
> > > > > Terry K9TW
> > > > >
> > > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Craig"
> > > > > <crgrbrts@> wrote:
> > > > > >
> > > > > > In an attempt to cure my stubborn TS-530S VOX problem (Anti-Vox
> > > has no
> > > > > > effect, no matter what VOX Gain and VOX Delay settings are used
> > > > > > unless the speaker is muted or headphones are used), I plan to dive
> > > > > > into the AF Board to renew the 'lytics along the line.
> > > > > >
> > > > > > Any hints about board removal? Obviously, connectors must be gently
> > > > > > unplugged and screws removed, but what about the wires soldered on

> > > > > > topside? The reason I am asking is that -- more than once -- I have
> > > > > > gone to great pains to access wiring or remove components in
> > > > > > unfamiliar radios only to learn later that there was an easy,
> > > painless
> > > > > > way to accomplish the same task known to the experienced, but not
> > > to me.
> > > > > >
> > > > > > Also, what are your views on completely recapping the 530 (or
> > > 830, for
> > > > > > that matter, since I have one of those on the way, too)? Good
> > > > > > practice? Unnecessary if symptoms of unpleasantness have not
> > > appeared?
> > > > > > I already did the HV caps, but that was dead simple and quick.
> > > > > >
> > > > > > Thanks, gurus.
> > > > > >
> > > > > > 73,
> > > > > >
> > > > > > Craig
> > > > > > W3CRR
> > > > > >
> > > > > >
> > > > > > [Non-text portions of this message have been removed]
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> > > > > [Non-text portions of this message have been removed]
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> > > [Non-text portions of this message have been removed]
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> >
> [Non-text portions of this message have been removed]
>

42921. Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 10:05:01 UTC
From: Terry Wagoner
Topic: 42877 Message: 42921

Bob:

You are correct the Tunnel Dipper just doesnt have enough "horse power". I am a Heath fan but sold mine very shortly after buying it.

I have the old standard Millen 90651 and the Measurements 59B. The Measurements is a big but a real joy to use. I got it for $60.00 at Dayton last year. I have never used the Millen 90652 solid state (FET based) and always wanted one, but they go pretty high when they come up on Ebay.

Kenwood makes a nice looking GDO that includes socket to test crystals but I havent used it either. Had the EICO 710 many years ago.

GDO is nice for testing antenna traps or making homebrew traps. Again RF sig gen and O-scope also works well.

If you have TS-430 or rig like that you can unlock it and use low level RF (2 to 3 watts) and run the VFO thru its range to sweep a trap or choke and use a light bulb to detect resonance.

About the only time I use my GDO these days is to test hybrid plate chokes and to check the series resonant holes after a rewind.

It was a must have instrument in old days when homebrewing.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@...> wrote:
>
> I have 2 Heathkit GDO. A GD-1b, and a HM-1250. The HM-1250 is solid state and does not work as well as the GD-1B. The GD-1b does work on all bands but is marginal on the highest.
>
> I have Millen GDO also. It's good on all but the highest band. The highest band does not work at all.
>
> I also have an EICO 710. It's OK.
>
> I would stay away from solid state GDOs. Besides they don't have a GRID!
>
> IGNORE THE HEATHKIT TUNNEL DIPPER!
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Wes Will

> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, June 17, 2013 9:34 PM
> Subject: Re: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
>
>
>
> On 06/17/2013 10:31 PM, Bob Macklin wrote:
> > Terry,
> >
> > I use my nice IT-28 to find out the capacitance of small capacitors I
> > cannot read the writing on!
>
> Reminds me of the old times, when the only way was to use a known value
> of coil with the unknown capacitor, connect them, use the dip meter to
> find resonance and figure backwards to solve for C. (Or likewise solve
> for L with a known value of C, when the coil was the unknown....)
>
> Whatever works, I guess.
>
> Looks like I would do best at this point to get a better grid-dipper.
> One of the FET ones, likely can be found cheap. What I've got left is
> dying more rapidly every time I drag the poor antique critter out, and I
> don't want to muck about trying to resurrect yet ANOTHER dinosaur.
> Particularly true when newer types of instruments can give much better
> results anyway. Doing things the old, hard way isn't particularly a
> huge fascination with me, unless it's the only way I can afford to do it
> at all.
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> Tubes for the GDO I have are getting to be made out of unobtanium, and
> the price for a 6CW4 tube (it's a Lafayette TE-57) are getting to the
> stupid point. (I only have three coils for this old beast, too. Can't
> seem to get the give-a-crap to hand-wind more until I need them for
> something specific.)
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

42922. Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 10:23:22 UTC
From: Terry Wagoner
Topic: 42877 Message: 42922

Mike:

Not sure I would highly recommend you get a ESR meter. I know you run Drake and Heath gear and do some boat anchor work. If I did a lot of boat anchor transmitter and receiver work where there is point to point wiring and axial lead electrolytic caps mounted on terminal strips then a ESR meter would put your Tel-O-Mike pretty much in to retirement.

For work on radial lead PC board mounted caps not sure how you can routinely and easily access the leads to use the Tel-O-mike or a ESR meter. Back in the AM/FM tube radio days and the tube TV chassis days the Tel-O-Mike or IT-28 was nice to have.

I dont smoke, hunt, fish, gamble so I choose to spend my discretionary income on ham radio and test gear. More so on upgrading test bench in last several years. Test gear is the electronic techs equivalent of the Mechanics tools. I use to wrench some when three boys were home so have lots of specialized tools that seldom use these days but sure nice to have when you have the need.

Terry K9TW
--- In TS-520_820_530_830@...m, Mike <w5rkl@...> wrote:
>
> HI Terry and Louis,
>
> I don't ownan ESR meter so my response was based on the Sprague TO-4
> capacitor checker I use, it does a nice job even though it's old
> technology.
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> If caps can be checked in the circuit with an ESR meter then that's fine
> with me. I guess I'll have to geta simple one and dosome
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> 73
> Mike W5RKL
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> On 6/17/2013 7:39 PM, Terry Wagoner wrote:
> >
> > Hi Mike:
> >
> > Louis was talking about using an ESR meter to test the electrolytics.
> > With an ESR meter you are not measuring capacitance or leakage
> > current. 99% of all caps can be measured directly in circuit with an
> > ESR meter. No need to lift any leads. Just need to make sure the cap
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> > Biggest problem is what is too high an ESR? What was original factory
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> > Now what about those that read in circuit between 1 ohm and 10 ohms.
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> > > > >
> > > > > Louis
> > > > > W3LMW
> > > > >
> > > > > From: Terry Wagoner
> > > > > Sent: Monday, June 17, 2013 2:42 PM
> > > > > To: TS-520_820_530_830@yahoogroups.com

> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
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> > > > Replacing the HV and medium voltage filter caps and perhaps the
> > 14vdc,
> > > > 12vdc and 9vdc power supply electrolytics is OK but I personally
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> > > > not wholesale change all of them.
> > > >
> > > > Terry K9TW
> > > >
> > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Craig"
> > > > <crgrbrts@> wrote:
> > > > >

> > > > > In an attempt to cure my stubborn TS-530S VOX problem (Anti-Vox
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42923. PK-3 probe

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 10:32:58 UTC
From: Terry Wagoner
Topic: 42923 Message: 42923

There is a Heath PK-3 RF probe on QTH.com this am for $17.00

Terry
K9TW

42924. Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 11:25:22 UTC
From: Terry Wagoner
Topic: 42877 Message: 42924

Hi Mike:

On reflection I think we need to clarify to all members following this thread that we are talking about testing electrolytic capacitors here and not bypass or interstage coupling capacitors. For electrolytics the ESR meter is superior to the Tel-o-mike or IT-28 as normally do not need to lift lead to test in circuit.

Now for non-electrolytics capacitors as Mike pointed out the best way to test them is to lift one lead and test for Ua leakage current at the DC operating voltage. This is especially true for tube radios where very little capacitor leakage current can greatly affect operating bias.

If you do not have a capacitor tester like a Tel-o-Mike of IT-28 you can use a DC power supply, a Variac, and VTVM. You look for the quick meter deflection and then count the RC time constants back to zero. Usually 8 time constants is sufficient. The voltage at that point can be used to calculate the leakage current.

Sprague has a set of formulas for acceptable leakage current and the one I use to determine the maximum leakage current is: The square root of the applied dc voltage X the capacitance value divided by 2.

So just wanted to make sure it was clear that we are talking two different types and applications of capacitors. Use the ESR for in circuit testing of electrolytic capacitors and Tel-o-Mike, IT-28, or Variable Dc power supply and VTVM for bypass and coupling caps.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Mike:
>
> Not sure I would highly recommend you get a ESR meter. I know you run Drake and Heath gear and do some boat anchor work. If I did a lot of boat anchor transmitter and receiver work where there is point to point wiring and axial lead electrolytic caps mounted on terminal strips then a ESR meter would put your Tel-O-Mike pretty much in to retirement.
>
> For work on radial lead PC board mounted caps not sure how you can routinely and easily access the leads to use the Tel-O-mike or a ESR meter. Back in the AM/FM tube radio days and the tube TV chassis days the Tel-O-Mike or IT-28 was nice to have.
>
> I dont smoke, hunt, fish, gamble so I choose to spend my discretionary income on ham radio and test gear. More so on upgrading test bench in last several years. Test gear is the electronic techs equivalent of the Mechanics tools. I use to wrench some when three boys were home so have lots of specialized tools that seldom use these days but sure nice to have when you have the need.
>
> Terry K9TW

> --- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@> wrote:
> >
> > HI Terry and Louis,
> >
> > I don't ownan ESR meter so my response was based on the Sprague TO-4
> > capacitor checker I use, it does a nice job even though it's old
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> > If caps can be checked in the circuit with an ESR meter then that's fine
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> > > > > Louis
> > > > > W3LMW
> > > > >
> > > > > From: Terry Wagoner
> > > > > Sent: Monday, June 17, 2013 2:42 PM
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
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> > > > > Be very careful replacing electrolytics in your hybrid. Make sure you
> > > > > re-install as you found the polarity was oriented. There are two or
> > > > > three places on the 530/830s where they are reverse polarity with
> > > > > positive on the ground foil. This is not a mistake. The silk screen
> > > > > and the schematic are wrong and the as built config is correct.
> > > > > Electrolytics are similar to diodes and cannot tolerate very much
> > > > > reverse polarity. If you are unsure look at the schematic to see if
> > > > > there is negative voltage being applied in the circuit. This may be
> > > > > done to back bias a detector diode or to bias a FET that requires
> > > > > negative bias voltage on the gate.
> > > > >
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> > > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Craig"
> > > > > <crgrbrts@> wrote:
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42925. Re: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 14:01:35 UTC
From: Bob Macklin
Topic: 42877 Message: 42925

Terry,

In addition to the IT-28 I also have a IB-2A LRC bridge and a QM-1 Q-Meter. I use the Q-Meter when making coils and building tanks circuit. But there are time the GDO is more convenient.

I use the Millen GDO with a Millen antenna bridge to prune antennas.

But I too am slowing down on home brewing.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Terry Wagoner
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 18, 2013 2:50 AM
Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

Bob: Yes that would be a good use for it. I use to do that as well, but now have B&K 875B digital LCR meter and the AADE IIB digital LC bridge. So can read values of chokes and caps pretty close.

In old days used my Millen GDO with a standard capacitor or inductor and would dip and calculate. Have also done this with Rf sig gen and O-scope and sweep and read frequency and then calculate. Lots of ways to skin a cat, but the digital bridges work so nice and more accurate.

I dont home brew much anymore so not making any gimmick caps anymore and will rewind hybrid plate chokes from time to time so get limited use out of LCR bridges these days.

I have seen some very cheap LCR bridges from China listed on Ebay and read some reviews and they get high marks. You might want to look in to one of those.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@...> wrote:
>
> Terry,
>
> I use my nice IT-28 to find out the capacitance of small capacitors I cannot read the writing on!
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.

> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Terry Wagoner
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, June 17, 2013 8:24 PM
> Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
>
>
>
> Mike:
>
> I always wanted a Tel-O-Mike especially for leakage measurements and of course you are correct for any capacitance bridge that I am aware of you need to lift one lead in circuit. I have a real nice Heath IT-28 that I keep for sentimental reasons but not much use anymore.
>
> As I mentioned not uncommon to use the bridge to measure the capacitance value and it will be well within 80/20 tolerance and leakage will be low yet ESR will be high. Prior to ESR we would never have replaced a cap like that measured by a Tel-O-Mike or IT-28.
>
> Not having to lift one end of most caps in circuit to test with ESR meter is a big plus. I think I paid $79.95 for the Blue ESR meter (digital). There is also a good analog unit available.
>
> As I noted an ESR meter is not the magic pill. Still have to learn to recognize when ESR is too high and for about 90% of caps in the hybrids cant get on the leads from component side of board to test them.
>
> Just my experience using one. I hear fellows on the Hybrid net talk about how handy has been testing caps in their hybrids and I sure would like to know how they are doing it.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@> wrote:
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> > HI Terry and Louis,
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> > > > > Sent: Monday, June 17, 2013 2:42 PM
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
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> > > > > and the schematic are wrong and the as built config is correct.
> > > > > Electrolytics are similar to diodes and cannot tolerate very much
> > > > > reverse polarity. If you are unsure look at the schematic to see if
> > > > > there is negative voltage being applied in the circuit. This may be
> > > > > done to back bias a detector diode or to bias a FET that requires
> > > > > negative bias voltage on the gate.
> > > > >

> > > > > Replacing the HV and medium voltage filter caps and perhaps the
> > > 14vdc,
> > > > > 12vdc and 9vdc power supply electrolytics is OK but I personally
> > > would
> > > > > not wholesale change all of them.
> > > > >
> > > > > Terry K9TW
> > > > >
> > > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Craig"
> > > > > <crgrbrts@> wrote:
> > > > > >
> > > > > > In an attempt to cure my stubborn TS-530S VOX problem (Anti-Vox
> > > has no
> > > > > > effect, no matter what VOX Gain and VOX Delay settings are used
> > > > > > unless the speaker is muted or headphones are used), I plan to dive
> > > > > > into the AF Board to renew the 'lytics along the line.
> > > > > >
> > > > > > Any hints about board removal? Obviously, connectors must be gently
> > > > > > unplugged and screws removed, but what about the wires soldered on
> > > > > > topside? The reason I am asking is that -- more than once -- I have
> > > > > > gone to great pains to access wiring or remove components in
> > > > > > unfamiliar radios only to learn later that there was an easy,
> > > painless
> > > > > > way to accomplish the same task known to the experienced, but not
> > > to me.
> > > > > >
> > > > > > Also, what are your views on completely recapping the 530 (or
> > > 830, for
> > > > > > that matter, since I have one of those on the way, too)? Good
> > > > > > practice? Unnecessary if symptoms of unpleasantness have not
> > > appeared?
> > > > > > I already did the HV caps, but that was dead simple and quick.
> > > > > >
> > > > > > Thanks, gurus.
> > > > > >
> > > > > > 73,
> > > > > >
> > > > > > Craig
> > > > > > W3CRR
> > > > > >
> > > > > >
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42926. PK-3 Schematic

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 14:14:59 UTC
From: Terry Wagoner
Topic: 42926 Message: 42926

The PK-3 schematic GIF in the files is missing the series scaling resistor. It shows two values. A 4.7meg for 11meg VTVM and a 3.9meg for 10meg DMMs. Need to insert either resistor depending on what meter you will be using. Insert it where they have listed the resistance values. Insert it in series with the "hot" lead going to the phone plug. It will then form a voltage divider with the input resistance of your meter so you dont have to divide readings by 1.414.

Without the series scaling resistor the probe wont read RMS values.

There are correct versions of the schematic on the web.

Terry K9TW

42927. Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 15:24:21 UTC
From: Terry Wagoner
Topic: 42877 Message: 42927

Bob:

I have seen the Heath Q meter in catalogs but never seen one up close or got to operate one. I remember reading about the special low inductance mica capacitor in it?

I think kind of the poor mans Boonton 160/260 Q meters. My guess is compares favorably.

Heath engineers had a knack for clever approaches to make serviceable test gear at price average hobbyist could afford. I can see where Q-meter really would come in handy for winding coils.

Amazing when you look at the size of these monsters in contrast to the modern digital LCR-Q meters of today.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@...> wrote:
>
> Terry,
>
> In addition to the IT-28 I also have a IB-2A LRC bridge and a QM-1 Q-Meter. I use the Q-Meter when making coils and building tanks circuit. But there are time the GDO is more convenient.
>
> I use the Millen GDO with a Millen antenna bridge to prune antennas.
>
> But I too am slowing down on home brewing.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Terry Wagoner
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tuesday, June 18, 2013 2:50 AM
> Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
>
>
>
> Bob: Yes that would be a good use for it. I use to do that as well, but now have B&K 875B digital LCR meter and the AADE IIB digital LC bridge. So can read values of chokes and caps pretty close.
>
> In old days used my Millen GDO with a standard capacitor or inductor and would dip and calculate. Have also done this with Rf sig gen and O-scope and sweep and read frequency and

then calculate. Lots of ways to skin a cat, but the digital bridges work so nice and more accurate.
>
> I dont home brew much anymore so not making any gimmick caps anymore and will rewind hybrid plate chokes from time to time so get limited use out of LCR bridges these days.
>
> I have seen some very cheap LCR bridges from China listed on Ebay and read some reviews and they get high marks. You might want to look in to one of those.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@> wrote:
> >
> > Terry,
> >
> > I use my nice IT-28 to find out the capacitance of small capacitors I cannot read the writing on!
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> > Bob Macklin
> > K5MYJ
> > Seattle, Wa.
> > "Real Radios Glow In The Dark"
> > ----- Original Message -----
> > From: Terry Wagoner
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Monday, June 17, 2013 8:24 PM
> > Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
> >
> >
> >
> > Mike:
> >
> > I always wanted a Tel-O-Mike especially for leakage measurements and of course you are correct for any capacitance bridge that I am aware of you need to lift one lead in circuit. I have a real nice Heath IT-28 that I keep for sentimental reasons but not much use anymore.
> >
> > As I mentioned not uncommon to use the bridge to measure the capacitance value and it will be well within 80/20 tolerance and leakage will be low yet ESR will be high. Prior to ESR we would never have replaced a cap like that measured by a Tel-O-Mike or IT-28.
> >
> > Not having to lift one end of most caps in circuit to test with ESR meter is a big plus. I think I paid $79.95 for the Blue ESR meter (digital). There is also a good analog unit available.
> >
> > As I noted an ESR meter is not the magic pill. Still have to learn to recognize when ESR is too high and for about 90% of caps in the hybrids cant get on the leads from component side of board to test them.
> >
> > Just my experience using one. I hear fellows on the Hybrid net talk about how handy has been testing caps in their hybrids and I sure would like to know how they are doing it.

> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@> wrote:
> > >
> > > HI Terry and Louis,
> > >
> > > I don't ownan ESR meter so my response was based on the Sprague TO-4
> > > capacitor checker I use, it does a nice job even though it's old
> > > technology.
> > >
> > > If caps can be checked in the circuit with an ESR meter then that's fine
> > > with me. I guess I'll have to geta simple one and dosome
> > > experimenting/learning.
> > >
> > >
> > >
> > > 73
> > > Mike W5RKL
> > >
> > > On 6/17/2013 7:39 PM, Terry Wagoner wrote:
> > > >
> > > > Hi Mike:
> > > >
> > > > Louis was talking about using an ESR meter to test the electrolytics.
> > > > With an ESR meter you are not measuring capacitance or leakage
> > > > current. 99% of all caps can be measured directly in circuit with an
> > > > ESR meter. No need to lift any leads. Just need to make sure the cap
> > > > is discharged. About only exception is when a large cap is paralleled
> > > > with a small cap and then need to lift one leg.
> > > >
> > > > ESR meters work be applying low level AC signal (maybe 5mv to 20 mv)
> > > > at around 100 to 200 khz in short pulses. Only about 4 circuit
> > > > combinations you will encounter.
> > > > 1. Parallel inductors such as chokes, coils and transformers and the
> > > > XL is such that ESR meter doesnt see them.
> > > > 2. Parallel resistors. The input Z of the ESR meter is very low maybe
> > > > around 1 to 2 ohms so not bothered by the resistors
> > > > 3. The junctions of transistors. The input signal level is too low to
> > > > forward bias diodes or transistors
> > > > 4. Parallel capacitor. Need to lift one lead
> > > >
> > > > If you use a Capacitor bridge an/or Leakage tester the cap can check
> > > > good, but still have higher than normal ESR. It acts like a cap with a
> > > > high value of R in series with it.
> > > >
> > > > Very easy to find Open or dried out caps as ESR will approach infinity.
> > > >
> > > > Biggest problem is what is too high an ESR? What was original factory
> > > > ESR?

> > > >
> > > > Usually rule of thumb is anything over 10 ohms is too high and should
> > > > be replaced. If the cap is in a switching circuit then anything over
> > > > 0.5 ohms is probably too high.
> > > >
> > > > Now what about those that read in circuit between 1 ohm and 10 ohms.
> > > > This is where you need lots of experience and best if you can practice
> > > > on known bad caps.
> > > >
> > > > I always save any pulled cap for future use as reference.
> > > >
> > > > ESR meter is nice addition to the bench but in my experience no sub
> > > > for replacing whenever in doubt. Just not easy to get on the leads to
> > > > test in circuit. For most must remove the board to access the foil
> > > > side. ESR meter is also good low ohms meter to check contact
> > > > resistance however it does not push any current thru a contact.
> > > >
> > > > Terry K9TW
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@> wrote:
> > > > >
> > > > > Louis and others,
> > > > >
> > > > > To prevent any stray capacitance from the circuit and/or adjacent
> > > > > components and wiring affecting the test results, at least one lead of
> > > > > the capacitor should be disconnected from the circuit and that includes
> > > > > any voltage equalizing resistors should be disconnected from the
> > > > > capacitor. I would not try to test a capacitor that's still
> > > > connected in
> > > > > the circuit, too many variables that can affect the test results.
> > > > >
> > > > > Not all capacitors have the same leakage rating. It depends on the
> > > > > capacitance value and voltage rating. For example, Sprague says
> > > > > capacitors that fall within the 1 to 100VDC rating have different
> > > > > leakage current ratings depending on the capacitance value of the
> > > > > capacitor. For example, a 2ufd capacitor and a 100ufd capacitor that
> > > > are
> > > > > within this voltage range will have .31ma for the 2ufd capacitor but
> > > > > 1.3ma for the 100ufd capacitor.
> > > > >
> > > > > Sprague also states that any capacitor value that is less than 75% of
> > > > > its capacitance value should be replaced.
> > > > >
> > > > > There also is the "80/20" rule which means a capacitor may be replaced
> > > > > with a different capacitor with a value that does not exceed 80% of or
> > > > > less than 20% of the original value. I personally would not follow that
> > > > > rule that close, especially if the new capacitor value is more than 20%
> > > > > of the original capacitance value. Remember, "I" (current) leads "E"
> > > > > (voltage" in capacitors. That's part of the phrase, "ELI the ICE man"

> > > > > where "I" (current) lead "E" (voltage) in the "C" capacitor! When a
> > > > > capacitor initially starts to charge, the "I" current is at "maximum"
> > > > > and the "E" voltage is at "minimum". A "thump" is heard quite often in
> > > > > power supplies when they are first turned ON which is the high current
> > > > > surge in the capacitor when power is first applied to the capacitor.
> > > > > >
> > > > > > 73
> > > > > > Mike W5RKL
> > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > > .
> > > > > > On 6/17/2013 1:55 PM, Louis Wilen wrote:
> > > > > > >
> > > > > > > What are your feelings about using an ESR meter to test caps
> > > > in-circuit?
> > > > > > >
> > > > > > > Also â€" would it be of value (no pun intended) to create and
> > > > publish a
> > > > > > > list of measured, in-circuit ESR values for the major electrolytic
> > > > > > > caps in the various hybrids? Those who have ESR meters could then
> > > > > > > compare values of suspected bad caps to the values in the list while
> > > > > > > not risking any damage by unsoldering.
> > > > > > >
> > > > > > > Louis
> > > > > > > W3LMW
> > > > > > >
> > > > > > > From: Terry Wagoner
> > > > > > > Sent: Monday, June 17, 2013 2:42 PM
> > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > > Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
> > > > > > >
> > > > > > > Intuitively it would seem like good thing to replace all the
> > > > > > > electrolytics in a 40 year old radio same as replacing all the carbon
> > > > > > > resistors and changing all the active devices especially front end
> > > > > > > Mosfet who some believe degrade with ESD exposure.
> > > > > > >
> > > > > > > In practice most of these changes are really feel good changes
> > > > that do
> > > > > > > not produce any measurable performance improvements. Almost all will
> > > > > > > report quieter operation etc. Not everyone has a discriminating ear.
> > > > > > > Also how can you measure the effectiveness of preventing a failure
> > > > > > > that did not occur. In the PM world of passenger airplanes and
> > > > nuclear
> > > > > > > power they do reliability based preventive maintenance and it is
> > > > OK to
> > > > > > > let some components run to failure. That would be case of most

> > > > > > electrolytics that do not cause any collateral damage if they fail.
> > > > > >
> > > > > > > All of these changes you need to weigh the risk vs the reward.
> > > > Easy to
> > > > > > pull molex pins off the boards and to lift PC foils. These old
> > > > > > phenolic boards have poor plating and cant handle many
> > > > > > desolder/resolder cycles. I now use a Hakko 808 which is salty for
> > > > > > average ham, but makes desoldering childs play.
> > > > > >
> > > > > > Be very careful replacing electrolytics in your hybrid. Make sure you
> > > > > > re-install as you found the polarity was oriented. There are two or
> > > > > > three places on the 530/830s where they are reverse polarity with
> > > > > > positive on the ground foil. This is not a mistake. The silk screen
> > > > > > and the schematic are wrong and the as built config is correct.
> > > > > > Electrolytics are similar to diodes and cannot tolerate very much
> > > > > > reverse polarity. If you are unsure look at the schematic to see if
> > > > > > there is negative voltage being applied in the circuit. This may be
> > > > > > done to back bias a detector diode or to bias a FET that requires
> > > > > > negative bias voltage on the gate.
> > > > > >
> > > > > > Replacing the HV and medium voltage filter caps and perhaps the
> > > > 14vdc,
> > > > > > 12vdc and 9vdc power supply electrolytics is OK but I personally
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> > > > > > Terry K9TW
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> > > > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Craig"
> > > > > > <crgrbrts@> wrote:
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> > > > > > > In an attempt to cure my stubborn TS-530S VOX problem (Anti-Vox
> > > > has no
> > > > > > > effect, no matter what VOX Gain and VOX Delay settings are used
> > > > > > > unless the speaker is muted or headphones are used), I plan to dive
> > > > > > > into the AF Board to renew the 'lytics along the line.
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> > > > > > > Any hints about board removal? Obviously, connectors must be gently
> > > > > > > unplugged and screws removed, but what about the wires soldered on
> > > > > > > topside? The reason I am asking is that -- more than once -- I have
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> > > > > > > way to accomplish the same task known to the experienced, but not
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> > > > > > > Also, what are your views on completely recapping the 530 (or
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> > > > > > > practice? Unnecessary if symptoms of unpleasantness have not

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> > > > > > > I already did the HV caps, but that was dead simple and quick.
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> > > > > > > Thanks, gurus.
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42928. Re: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 16:05:54 UTC
From: Bob Macklin
Topic: 42877 Message: 42928

Terry,

I grew up with this kind of equipment. When I was working for companies doing NASA/DOD work we used Heathkit equipment for general lab use and had HP, GR, or Boonton(the old one) instruments for final test.

The one thing Heathkit did not make in the 60's was good scope. In the 70's they made the IO-14 which is a knockoff of the Tek 561. If you could work with a single channel scope it was not bad. A lot od analog work was done with Tek 561s.

I now have a Heathkit IO-4235. Two channels, 35MHz. better than my Korean 35MHz scope. I can do a lot of work with it. I use a custom RF probe for looking at things over 35MHz.

I have a problem with limited space in my 20x20 Retirment Closet. So I keep the seldom used instruments in my storage unit(about 50 ft from my Retirment Closet).

I just bought a HP FET scope probe from eBay. $89. I could afford that (I THINK). Better than making one.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Terry Wagoner
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 18, 2013 8:24 AM
Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

Bob:

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Amazing when you look at the size of these monsters in contrast to the modern digital LCR-Q meters of today.

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> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@> wrote:
> > > > >

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> > > > > > Sent: Monday, June 17, 2013 2:42 PM
> > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
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> > > > > > Terry K9TW
> > > > > >
> > > > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Craig"
> > > > > > <crgrbrts@> wrote:
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42929. Inexpensive ESR meter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 16:11:57 UTC
From: w5rkl
Topic: 42877 Message: 42929

I agree with Terry.

For those who do not have an ESR meter, would like to experiment/learn how to use one, don't have a lot of cash to purchase a good quality ESR meter, there is a U.S. seller on eBay selling an inexpensive ESR meter for $19 (free shipping) under eBay ad #140988149020. This inexpensive ESR meter would serve as a good learning platform. I bought one of these last summer and it's easy to use. The meter operates on 9VDC making it ideal for field work. The meter could be easily installed in a plastic enclosure so it can be carried in your pocket for easy use at hamfest and swap meets. Just an idea for those who have considered purchasing an ESR meter but don't have a lot of disposable cash to spend. The ESR meter is fully assembled, tested, and ready for use as is but as I said, it would fit nicely inside a small plastic protective enclosure.

73
Mike W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Hi Mike:
>
> On reflection I think we need to clarify to all members following this thread that we are talking about testing electrolytic capacitors here and not bypass or interstage coupling capacitors. For electrolytics the ESR meter is superior to the Tel-o-mike or IT-28 as normally do not need to lift lead to test in circuit.
>
> Now for non-electrolytics capacitors as Mike pointed out the best way to test them is to lift one lead and test for Ua leakage current at the DC operating voltage. This is especially true for tube radios where very little capacitor leakage current can greatly affect operating bias.
>
> If you do not have a capacitor tester like a Tel-o-Mike of IT-28 you can use a DC power supply, a Variac, and VTVM. You look for the quick meter deflection and then count the RC time constants back to zero. Usually 8 time constants is sufficient. The voltage at that point can be used to calculate the leakage current.
>
> Sprague has a set of formulas for acceptable leakage current and the one I use to determine the maximum leakage current is: The square root of the applied dc voltage X the capacitance value divided by 2.
>
> So just wanted to make sure it was clear that we are talking two different types and applications of capacitors. Use the ESR for in circuit testing of electrolytic capacitors and Tel-o-Mike, IT-28, or Variable Dc power supply and VTVM for bypass and coupling caps.
>
> Terry K9TW
>
>

> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Mike:
> >
> > Not sure I would highly recommend you get a ESR meter. I know you run Drake and Heath gear and do some boat anchor work. If I did a lot of boat anchor transmitter and receiver work where there is point to point wiring and axial lead electrolytic caps mounted on terminal strips then a ESR meter would put your Tel-O-Mike pretty much in to retirement.
> >
> > For work on radial lead PC board mounted caps not sure how you can routinely and easily access the leads to use the Tel-O-mike or a ESR meter. Back in the AM/FM tube radio days and the tube TV chassis days the Tel-O-Mike or IT-28 was nice to have.
> >
> > I dont smoke, hunt, fish, gamble so I choose to spend my discretionary income on ham radio and test gear. More so on upgrading test bench in last several years. Test gear is the electronic techs equivalent of the Mechanics tools. I use to wrench some when three boys were home so have lots of specialized tools that seldom use these days but sure nice to have when you have the need.
> >
> > Terry K9TW
> > --- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@> wrote:
> > >
> > > HI Terry and Louis,
> > >
> > > I don't ownan ESR meter so my response was based on the Sprague TO-4
> > > capacitor checker I use, it does a nice job even though it's old
> > > technology.
> > >
> > > If caps can be checked in the circuit with an ESR meter then that's fine
> > > with me. I guess I'll have to geta simple one and dosome
> > > experimenting/learning.
> > >
> > >
> > >
> > > 73
> > > Mike W5RKL
> > >
> > > On 6/17/2013 7:39 PM, Terry Wagoner wrote:
> > > >
> > > > Hi Mike:
> > > >
> > > > Louis was talking about using an ESR meter to test the electrolytics.
> > > > With an ESR meter you are not measuring capacitance or leakage
> > > > current. 99% of all caps can be measured directly in circuit with an
> > > > ESR meter. No need to lift any leads. Just need to make sure the cap
> > > > is discharged. About only exception is when a large cap is paralleled
> > > > with a small cap and then need to lift one leg.
> > > >
> > > > ESR meters work be applying low level AC signal (maybe 5mv to 20 mv)
> > > > at around 100 to 200 khz in short pulses. Only about 4 circuit

> > > > combinations you will encounter.
> > > > 1. Parallel inductors such as chokes, coils and transformers and the
> > > > XL is such that ESR meter doesnt see them.
> > > > 2. Parallel resistors. The input Z of the ESR meter is very low maybe
> > > > around 1 to 2 ohms so not bothered by the resistors
> > > > 3. The junctions of transistors. The input signal level is too low to
> > > > forward bias diodes or transistors
> > > > 4. Parallel capacitor. Need to lift one lead
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> > > > > > Sent: Monday, June 17, 2013 2:42 PM
> > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
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> > > > > > Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
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> > > > > > <crgrbrts@> wrote:
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> > > > > > > > 73,
> > > > > > > > >
> > > > > > > > Craig
> > > > > > > > W3CRR
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42930. Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 17:08:54 UTC
From: Terry Wagoner
Topic: 42877 Message: 42930

Bob:

I think O-scope and various scope probes probably least understood and most under utilized test gear on ham bench. Can be intimidating for some especially learning the triggering modes. You wont need this but if you are learning to use a scope look at all of Alan Wolke W2AEW scope tutorials on You Tube. They are first class. He is good instructor.

I dont have an "active" probe for my scopes. I think they result in about 100k input impedance up to about 10 mhz?

I dont use my scope that much as it is easier and faster to reach for the Boonton Millivolt meter, but glad I have it. I just got my first digital. Got the Rigol 1152E 100mhz and learning how to use it. I plan to take key waveforms in a TS-830 and store for future reference. A good winter project.

73s
Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@...> wrote:
>
> Terry,
>
> I grew up with this kind of equipment. When I was working for companies doing NASA/DOD work we used Heathkit equipment for general lab use and had HP, GR, or Boonton(the old one) instruments for final test.
>
> The one thing Heathkit did not make in the 60's was good scope. In the 70's they made the IO-14 which is a knockoff of the Tek 561. If you could work with a single channel scope it was not bad. A lot od analog work was done with Tek 561s.
>
> I now have a Heathkit IO-4235. Two channels, 35MHz. better than my Korean 35MHz scope. I can do a lot of work with it. I use a custom RF probe for looking at things over 35MHz.
>
> I have a problem with limited space in my 20x20 Retirment Closet. So I keep the seldom used instruments in my storage unit(about 50 ft from my Retirment Closet).
>
> I just bought a HP FET scope probe from eBay. $89. I could afford that (I THINK). Better than making one.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Terry Wagoner
> To: TS-520_820_530_830@yahoogroups.com

> Sent: Tuesday, June 18, 2013 8:24 AM
> Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
>
>
>
> Bob:
>
> I have seen the Heath Q meter in catalogs but never seen one up close or got to operate one. I remember reading about the special low inductance mica capacitor in it?
>
> I think kind of the poor mans Boonton 160/260 Q meters. My guess is compares favorably.
>
> Heath engineers had a knack for clever approaches to make serviceable test gear at price average hobbyist could afford. I can see where Q-meter really would come in handy for winding coils.
>
> Amazing when you look at the size of these monsters in contrast to the modern digital LCR-Q meters of today.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@> wrote:
> >
> > Terry,
> >
> > In addition to the IT-28 I also have a IB-2A LRC bridge and a QM-1 Q-Meter. I use the Q-Meter when making coils and building tanks circuit. But there are time the GDO is more convenient.
> >
> > I use the Millen GDO with a Millen antenna bridge to prune antennas.
> >
> > But I too am slowing down on home brewing.
> >
> > Bob Macklin
> > K5MYJ
> > Seattle, Wa.
> > "Real Radios Glow In The Dark"
> > ----- Original Message -----
> > From: Terry Wagoner
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Tuesday, June 18, 2013 2:50 AM
> > Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
> >
> >
> >
> > Bob: Yes that would be a good use for it. I use to do that as well, but now have B&K 875B digital LCR meter and the AADE IIB digital LC bridge. So can read values of chokes and caps pretty close.
> >
> > In old days used my Millen GDO with a standard capacitor or inductor and would dip and

calculate. Have also done this with Rf sig gen and O-scope and sweep and read frequency and then calculate. Lots of ways to skin a cat, but the digital bridges work so nice and more accurate.
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> > I dont home brew much anymore so not making any gimmick caps anymore and will rewind hybrid plate chokes from time to time so get limited use out of LCR bridges these days.
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> > I have seen some very cheap LCR bridges from China listed on Ebay and read some reviews and they get high marks. You might want to look in to one of those.
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> > --- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@> wrote:
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> > > Terry,
> > >
> > > I use my nice IT-28 to find out the capacitance of small capacitors I cannot read the writing on!
> > >
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> > > Sent: Monday, June 17, 2013 8:24 PM
> > > Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
> > >
> > >
> > >
> > > Mike:
> > >
> > > I always wanted a Tel-O-Mike especially for leakage measurements and of course you are correct for any capacitance bridge that I am aware of you need to lift one lead in circuit. I have a real nice Heath IT-28 that I keep for sentimental reasons but not much use anymore.
> > >
> > > As I mentioned not uncommon to use the bridge to measure the capacitance value and it will be well within 80/20 tolerance and leakage will be low yet ESR will be high. Prior to ESR we would never have replaced a cap like that measured by a Tel-O-Mike or IT-28.
> > >
> > > Not having to lift one end of most caps in circuit to test with ESR meter is a big plus. I think I paid $79.95 for the Blue ESR meter (digital). There is also a good analog unit available.
> > >
> > > As I noted an ESR meter is not the magic pill. Still have to learn to recognize when ESR is too high and for about 90% of caps in the hybrids cant get on the leads from component side of board to test them.
> > >
> > > Just my experience using one. I hear fellows on the Hybrid net talk about how handy

has been testing caps in their hybrids and I sure would like to know how they are doing it.
> > >
> > > Terry K9TW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@> wrote:
> > > >
> > > > HI Terry and Louis,
> > > >
> > > > I don't ownan ESR meter so my response was based on the Sprague TO-4
> > > > capacitor checker I use, it does a nice job even though it's old
> > > > technology.
> > > >
> > > > If caps can be checked in the circuit with an ESR meter then that's fine
> > > > with me. I guess I'll have to geta simple one and dosome
> > > > experimenting/learning.
> > > >
> > > >
> > > >
> > > > 73
> > > > Mike W5RKL
> > > >
> > > > On 6/17/2013 7:39 PM, Terry Wagoner wrote:
> > > > >
> > > > > Hi Mike:
> > > > >
> > > > > Louis was talking about using an ESR meter to test the electrolytics.
> > > > > With an ESR meter you are not measuring capacitance or leakage
> > > > > current. 99% of all caps can be measured directly in circuit with an
> > > > > ESR meter. No need to lift any leads. Just need to make sure the cap
> > > > > is discharged. About only exception is when a large cap is paralleled
> > > > > with a small cap and then need to lift one leg.
> > > > >
> > > > > ESR meters work be applying low level AC signal (maybe 5mv to 20 mv)
> > > > > at around 100 to 200 khz in short pulses. Only about 4 circuit
> > > > > combinations you will encounter.
> > > > > 1. Parallel inductors such as chokes, coils and transformers and the
> > > > > XL is such that ESR meter doesnt see them.
> > > > > 2. Parallel resistors. The input Z of the ESR meter is very low maybe
> > > > > around 1 to 2 ohms so not bothered by the resistors
> > > > > 3. The junctions of transistors. The input signal level is too low to
> > > > > forward bias diodes or transistors
> > > > > 4. Parallel capacitor. Need to lift one lead
> > > > >
> > > > > If you use a Capacitor bridge an/or Leakage tester the cap can check
> > > > > good, but still have higher than normal ESR. It acts like a cap with a
> > > > > high value of R in series with it.
> > > > >
> > > > > Very easy to find Open or dried out caps as ESR will approach infinity.
> > > > >
> > > > > Biggest problem is what is too high an ESR? What was original factory
> > > > > ESR?

> > > > >
> > > > > Usually rule of thumb is anything over 10 ohms is too high and should
> > > > > be replaced. If the cap is in a switching circuit then anything over
> > > > > 0.5 ohms is probably too high.
> > > > > >
> > > > > Now what about those that read in circuit between 1 ohm and 10 ohms.
> > > > > This is where you need lots of experience and best if you can practice
> > > > > on known bad caps.
> > > > > >
> > > > > I always save any pulled cap for future use as reference.
> > > > > >
> > > > > ESR meter is nice addition to the bench but in my experience no sub
> > > > > for replacing whenever in doubt. Just not easy to get on the leads to
> > > > > test in circuit. For most must remove the board to access the foil
> > > > > side. ESR meter is also good low ohms meter to check contact
> > > > > resistance however it does not push any current thru a contact.
> > > > > >
> > > > > Terry K9TW
> > > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@> wrote:
> > > > > > >
> > > > > > Louis and others,
> > > > > > >
> > > > > > To prevent any stray capacitance from the circuit and/or adjacent
> > > > > > components and wiring affecting the test results, at least one lead of
> > > > > > the capacitor should be disconnected from the circuit and that includes
> > > > > > any voltage equalizing resistors should be disconnected from the
> > > > > > capacitor. I would not try to test a capacitor that's still
> > > > > connected in
> > > > > > the circuit, too many variables that can affect the test results.
> > > > > > >
> > > > > > Not all capacitors have the same leakage rating. It depends on the
> > > > > > capacitance value and voltage rating. For example, Sprague says
> > > > > > capacitors that fall within the 1 to 100VDC rating have different
> > > > > > leakage current ratings depending on the capacitance value of the
> > > > > > capacitor. For example, a 2ufd capacitor and a 100ufd capacitor that
> > > > > are
> > > > > > within this voltage range will have .31ma for the 2ufd capacitor but
> > > > > > 1.3ma for the 100ufd capacitor.
> > > > > > >
> > > > > > Sprague also states that any capacitor value that is less than 75% of
> > > > > > its capacitance value should be replaced.
> > > > > > >
> > > > > > There also is the "80/20" rule which means a capacitor may be replaced
> > > > > > with a different capacitor with a value that does not exceed 80% of or
> > > > > > less than 20% of the original value. I personally would not follow that
> > > > > > rule that close, especially if the new capacitor value is more than 20%
> > > > > > of the original capacitance value. Remember, "I" (current) leads "E"
> > > > > > (voltage" in capacitors. That's part of the phrase, "ELI the ICE man"

> > > > > > where "I" (current) lead "E" (voltage) in the "C" capacitor! When a
> > > > > > capacitor initially starts to charge, the "I" current is at "maximum"
> > > > > > and the "E" voltage is at "minimum". A "thump" is heard quite often in
> > > > > > power supplies when they are first turned ON which is the high current
> > > > > > surge in the capacitor when power is first applied to the capacitor.
> > > > > > >
> > > > > > > 73
> > > > > > > Mike W5RKL
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > > .
> > > > > > > On 6/17/2013 1:55 PM, Louis Wilen wrote:
> > > > > > >
> > > > > > > > What are your feelings about using an ESR meter to test caps
> > > > > > in-circuit?
> > > > > > > >
> > > > > > > > Also âEUR" would it be of value (no pun intended) to create and
> > > > > > publish a
> > > > > > > > list of measured, in-circuit ESR values for the major electrolytic
> > > > > > > > caps in the various hybrids? Those who have ESR meters could then
> > > > > > > > compare values of suspected bad caps to the values in the list while
> > > > > > > > not risking any damage by unsoldering.
> > > > > > > >
> > > > > > > > Louis
> > > > > > > > W3LMW
> > > > > > > >
> > > > > > > > From: Terry Wagoner
> > > > > > > > Sent: Monday, June 17, 2013 2:42 PM
> > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > > > Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
> > > > > > > >
> > > > > > > > Intuitively it would seem like good thing to replace all the
> > > > > > > > electrolytics in a 40 year old radio same as replacing all the carbon
> > > > > > > > resistors and changing all the active devices especially front end
> > > > > > > > Mosfet who some believe degrade with ESD exposure.
> > > > > > > >
> > > > > > > > In practice most of these changes are really feel good changes
> > > > > > that do
> > > > > > > > not produce any measurable performance improvements. Almost all will
> > > > > > > > report quieter operation etc. Not everyone has a discriminating ear.
> > > > > > > > Also how can you measure the effectiveness of preventing a failure
> > > > > > > > that did not occur. In the PM world of passenger airplanes and
> > > > > > nuclear
> > > > > > > > power they do reliability based preventive maintenance and it is
> > > > > > OK to
> > > > > > > > let some components run to failure. That would be case of most

> > > > > > > electrolytics that do not cause any collateral damage if they fail.
> > > > > > > >
> > > > > > > > All of these changes you need to weigh the risk vs the reward.
> > > > > Easy to
> > > > > > > pull molex pins off the boards and to lift PC foils. These old
> > > > > > > phenolic boards have poor plating and cant handle many
> > > > > > > desolder/resolder cycles. I now use a Hakko 808 which is salty for
> > > > > > > average ham, but makes desoldering childs play.
> > > > > > > >
> > > > > > > > Be very careful replacing electrolytics in your hybrid. Make sure you
> > > > > > > re-install as you found the polarity was oriented. There are two or
> > > > > > > three places on the 530/830s where they are reverse polarity with
> > > > > > > positive on the ground foil. This is not a mistake. The silk screen
> > > > > > > and the schematic are wrong and the as built config is correct.
> > > > > > > Electrolytics are similar to diodes and cannot tolerate very much
> > > > > > > reverse polarity. If you are unsure look at the schematic to see if
> > > > > > > there is negative voltage being applied in the circuit. This may be
> > > > > > > done to back bias a detector diode or to bias a FET that requires
> > > > > > > negative bias voltage on the gate.
> > > > > > > >
> > > > > > > > Replacing the HV and medium voltage filter caps and perhaps the
> > > > > 14vdc,
> > > > > > > 12vdc and 9vdc power supply electrolytics is OK but I personally
> > > > > would
> > > > > > > not wholesale change all of them.
> > > > > > > >
> > > > > > > > Terry K9TW
> > > > > > > >
> > > > > > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Craig"
> > > > > > > <crgrbrts@> wrote:
> > > > > > > >
> > > > > > > > In an attempt to cure my stubborn TS-530S VOX problem (Anti-Vox
> > > > > has no
> > > > > > > effect, no matter what VOX Gain and VOX Delay settings are used
> > > > > > > unless the speaker is muted or headphones are used), I plan to dive
> > > > > > > into the AF Board to renew the 'lytics along the line.
> > > > > > > >
> > > > > > > > Any hints about board removal? Obviously, connectors must be gently
> > > > > > > unplugged and screws removed, but what about the wires soldered on
> > > > > > > topside? The reason I am asking is that -- more than once -- I have
> > > > > > > gone to great pains to access wiring or remove components in
> > > > > > > unfamiliar radios only to learn later that there was an easy,
> > > > > painless
> > > > > > > way to accomplish the same task known to the experienced, but not
> > > > > to me.
> > > > > > > >
> > > > > > > > Also, what are your views on completely recapping the 530 (or
> > > > > 830, for
> > > > > > > that matter, since I have one of those on the way, too)? Good
> > > > > > > practice? Unnecessary if symptoms of unpleasantness have not

> > > > > appeared?
> > > > > > > > > I already did the HV caps, but that was dead simple and quick.
> > > > > > > > > >
> > > > > > > > > > Thanks, gurus.
> > > > > > > > > > >
> > > > > > > > > > > 73,
> > > > > > > > > > > >
> > > > > > > > > > > > Craig
> > > > > > > > > > > > W3CRR
> > > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > [Non-text portions of this message have been removed]
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42931. Re: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 17:57:55 UTC
From: Bob Macklin
Topic: 42877 Message: 42931

Terry,

I was an analog design engineer until the mid 70's I have a lot of experience with analog instruments especially scopes.

I came close to buying a Tek scope(HP does not make scopes) several years ago but after looking at the service manuals I decided not to. There chips in some of those scopes that are not available except from a donor.

What instruments you use depends on what you want to do.

I still design both digital and analog electronics. I only do the repairs on my ham radios that are necessary to keep them operational.

My next project is a CW keyer to connect between my computer and any of my HF transmitters. Why? For one thing the DX-60/HR-10 does not have sidetone. Several other boatanchors are the same way. This keyer will allow me to easily switch between the computer and one of the hand keys.

Recently I have been studying DDS VFOs. I don't think they are all they are cracked up to be. A PTO/heterodyne VFO is really a better solution than a DDS. But other than band switching it is not computer controllable. I have several Heathkit LMOs/VFOs to work with, Kenwood and Drake PTOs would also be a good choice.

With the problem of crystal ageing using a DDS for the heterodyne oscillator is a viable solution. That would allow me to have the xceiver remote except for the VFO. I do have an operational Kenwood VFO-520 and other Kenwood VFOs are common on eBay.

Why is a 79 year old retired EE doing stuff like this? It's something I can do to keep busy in this Retirement Closet. It keeps the brain busy.

Several years ago the ARRL published a couple of articles on making a spectrum analyzer. That's an unfinished project because of some parts I still need to buy. But I plan to finish it.

Do I really need a spectrum analyzer? Probably not. But it is an interesting project.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Terry Wagoner
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 18, 2013 10:08 AM
Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

Bob:

I think O-scope and various scope probes probably least understood and most under utilized test gear on ham bench. Can be intimidating for some especially learning the triggering modes. You wont need this but if you are learning to use a scope look at all of Alan Wolke W2AEW scope tutorials on You Tube. They are first class. He is good instructor.

I dont have an "active" probe for my scopes. I think they result in about 100k input impedance up to about 10 mhz?

I dont use my scope that much as it is easier and faster to reach for the Boonton Millivolt meter, but glad I have it. I just got my first digital. Got the Rigol 1152E 100mhz and learning how to use it. I plan to take key waveforms in a TS-830 and store for future reference. A good winter project.

73s
Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@...> wrote:
>
> Terry,
>
> I grew up with this kind of equipment. When I was working for companies doing NASA/DOD work we used Heathkit equipment for general lab use and had HP, GR, or Boonton(the old one) instruments for final test.
>
> The one thing Heathkit did not make in the 60's was good scope. In the 70's they made the IO-14 which is a knockoff of the Tek 561. If you could work with a single channel scope it was not bad. A lot od analog work was done with Tek 561s.
>
> I now have a Heathkit IO-4235. Two channels, 35MHz. better than my Korean 35MHz scope. I can do a lot of work with it. I use a custom RF probe for looking at things over 35MHz.
>
> I have a problem with limited space in my 20x20 Retirment Closet. So I keep the seldom used instruments in my storage unit(about 50 ft from my Retirment Closet).
>
> I just bought a HP FET scope probe from eBay. $89. I could afford that (I THINK). Better than making one.
>
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> > > Not having to lift one end of most caps in circuit to test with ESR meter is a big plus. I think I paid $79.95 for the Blue ESR meter (digital). There is also a good analog unit available.
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> > > As I noted an ESR meter is not the magic pill. Still have to learn to recognize when ESR is too high and for about 90% of caps in the hybrids cant get on the leads from component side of board to test them.
> > >
> > > Just my experience using one. I hear fellows on the Hybrid net talk about how handy has been testing caps in their hybrids and I sure would like to know how they are doing it.
> > >
> > > Terry K9TW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@> wrote:
> > > >
> > > > HI Terry and Louis,
> > > >

> > > > I don't ownan ESR meter so my response was based on the Sprague TO-4
> > > > capacitor checker I use, it does a nice job even though it's old
> > > > technology.
> > > >
> > > > If caps can be checked in the circuit with an ESR meter then that's fine
> > > > with me. I guess I'll have to geta simple one and dosome
> > > > experimenting/learning.
> > > >
> > > >
> > > >
> > > > 73
> > > > Mike W5RKL
> > > >
> > > > On 6/17/2013 7:39 PM, Terry Wagoner wrote:
> > > > >
> > > > > Hi Mike:
> > > > >
> > > > > Louis was talking about using an ESR meter to test the electrolytics.
> > > > > With an ESR meter you are not measuring capacitance or leakage
> > > > > current. 99% of all caps can be measured directly in circuit with an
> > > > > ESR meter. No need to lift any leads. Just need to make sure the cap
> > > > > is discharged. About only exception is when a large cap is paralleled
> > > > > with a small cap and then need to lift one leg.
> > > > >
> > > > > ESR meters work be applying low level AC signal (maybe 5mv to 20 mv)
> > > > > at around 100 to 200 khz in short pulses. Only about 4 circuit
> > > > > combinations you will encounter.
> > > > > 1. Parallel inductors such as chokes, coils and transformers and the
> > > > > XL is such that ESR meter doesnt see them.
> > > > > 2. Parallel resistors. The input Z of the ESR meter is very low maybe
> > > > > around 1 to 2 ohms so not bothered by the resistors
> > > > > 3. The junctions of transistors. The input signal level is too low to
> > > > > forward bias diodes or transistors
> > > > > 4. Parallel capacitor. Need to lift one lead
> > > > >
> > > > > If you use a Capacitor bridge an/or Leakage tester the cap can check
> > > > > good, but still have higher than normal ESR. It acts like a cap with a
> > > > > high value of R in series with it.
> > > > >
> > > > > Very easy to find Open or dried out caps as ESR will approach infinity.
> > > > >
> > > > > Biggest problem is what is too high an ESR? What was original factory
> > > > > ESR?
> > > > >
> > > > > Usually rule of thumb is anything over 10 ohms is too high and should
> > > > > be replaced. If the cap is in a switching circuit then anything over
> > > > > 0.5 ohms is probably too high.
> > > > >
> > > > > Now what about those that read in circuit between 1 ohm and 10 ohms.
> > > > > This is where you need lots of experience and best if you can practice

> > > > > on known bad caps.
> > > > >
> > > > > I always save any pulled cap for future use as reference.
> > > > >
> > > > > ESR meter is nice addition to the bench but in my experience no sub
> > > > > for replacing whenever in doubt. Just not easy to get on the leads to
> > > > > test in circuit. For most must remove the board to access the foil
> > > > > side. ESR meter is also good low ohms meter to check contact
> > > > > resistance however it does not push any current thru a contact.
> > > > >
> > > > > Terry K9TW
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@> wrote:
> > > > > >
> > > > > > Louis and others,
> > > > > >
> > > > > > To prevent any stray capacitance from the circuit and/or adjacent
> > > > > > components and wiring affecting the test results, at least one lead of
> > > > > > the capacitor should be disconnected from the circuit and that includes
> > > > > > any voltage equalizing resistors should be disconnected from the
> > > > > > capacitor. I would not try to test a capacitor that's still
> > > > > connected in
> > > > > > the circuit, too many variables that can affect the test results.
> > > > > >
> > > > > > Not all capacitors have the same leakage rating. It depends on the
> > > > > > capacitance value and voltage rating. For example, Sprague says
> > > > > > capacitors that fall within the 1 to 100VDC rating have different
> > > > > > leakage current ratings depending on the capacitance value of the
> > > > > > capacitor. For example, a 2ufd capacitor and a 100ufd capacitor that
> > > > > are
> > > > > > within this voltage range will have .31ma for the 2ufd capacitor but
> > > > > > 1.3ma for the 100ufd capacitor.
> > > > > >
> > > > > > Sprague also states that any capacitor value that is less than 75% of
> > > > > > its capacitance value should be replaced.
> > > > > >
> > > > > > There also is the "80/20" rule which means a capacitor may be replaced
> > > > > > with a different capacitor with a value that does not exceed 80% of or
> > > > > > less than 20% of the original value. I personally would not follow that
> > > > > > rule that close, especially if the new capacitor value is more than 20%
> > > > > > of the original capacitance value. Remember, "I" (current) leads "E"
> > > > > > (voltage" in capacitors. That's part of the phrase, "ELI the ICE man"
> > > > > > where "I" (current) lead "E" (voltage) in the "C" capacitor! When a
> > > > > > capacitor initially starts to charge, the "I" current is at "maximum"
> > > > > > and the "E" voltage is at "minimum". A "thump" is heard quite often in
> > > > > > power supplies when they are first turned ON which is the high current
> > > > > > surge in the capacitor when power is first applied to the capacitor.
> > > > > >
> > > > > > 73

> > > > > > Mike W5RKL
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > > .
> > > > > > > On 6/17/2013 1:55 PM, Louis Wilen wrote:
> > > > > > > >
> > > > > > > > What are your feelings about using an ESR meter to test caps
> > > > > > in-circuit?
> > > > > > > >
> > > > > > > > Also âEUR" would it be of value (no pun intended) to create and
> > > > > > publish a
> > > > > > > > list of measured, in-circuit ESR values for the major electrolytic
> > > > > > > > caps in the various hybrids? Those who have ESR meters could then
> > > > > > > > compare values of suspected bad caps to the values in the list while
> > > > > > > > not risking any damage by unsoldering.
> > > > > > > >
> > > > > > > > Louis
> > > > > > > > W3LMW
> > > > > > > >
> > > > > > > > From: Terry Wagoner
> > > > > > > > Sent: Monday, June 17, 2013 2:42 PM
> > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > > > Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
> > > > > > > >
> > > > > > > > Intuitively it would seem like good thing to replace all the
> > > > > > > > electrolytics in a 40 year old radio same as replacing all the carbon
> > > > > > > > resistors and changing all the active devices especially front end
> > > > > > > > Mosfet who some believe degrade with ESD exposure.
> > > > > > > >
> > > > > > > > In practice most of these changes are really feel good changes
> > > > > > that do
> > > > > > > > not produce any measurable performance improvements. Almost all will
> > > > > > > > report quieter operation etc. Not everyone has a discriminating ear.
> > > > > > > > Also how can you measure the effectiveness of preventing a failure
> > > > > > > > that did not occur. In the PM world of passenger airplanes and
> > > > > > nuclear
> > > > > > > > power they do reliability based preventive maintenance and it is
> > > > > > OK to
> > > > > > > > let some components run to failure. That would be case of most
> > > > > > > > electrolytics that do not cause any collateral damage if they fail.
> > > > > > > >
> > > > > > > > All of these changes you need to weigh the risk vs the reward.
> > > > > > Easy to
> > > > > > > > pull molex pins off the boards and to lift PC foils. These old
> > > > > > > > phenolic boards have poor plating and cant handle many
> > > > > > > > desolder/resolder cycles. I now use a Hakko 808 which is salty for

> > > > > > > average ham, but makes desoldering childs play.
> > > > > > > >
> > > > > > > > Be very careful replacing electrolytics in your hybrid. Make sure you
> > > > > > > > re-install as you found the polarity was oriented. There are two or
> > > > > > > > three places on the 530/830s where they are reverse polarity with
> > > > > > > > positive on the ground foil. This is not a mistake. The silk screen
> > > > > > > > and the schematic are wrong and the as built config is correct.
> > > > > > > > Electrolytics are similar to diodes and cannot tolerate very much
> > > > > > > > reverse polarity. If you are unsure look at the schematic to see if
> > > > > > > > there is negative voltage being applied in the circuit. This may be
> > > > > > > > done to back bias a detector diode or to bias a FET that requires
> > > > > > > > negative bias voltage on the gate.
> > > > > > > > >
> > > > > > > > > Replacing the HV and medium voltage filter caps and perhaps the
> > > > > > > 14vdc,
> > > > > > > > > 12vdc and 9vdc power supply electrolytics is OK but I personally
> > > > > > > would
> > > > > > > > > not wholesale change all of them.
> > > > > > > > >
> > > > > > > > > Terry K9TW
> > > > > > > > >
> > > > > > > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Craig"
> > > > > > > > > <crgrbrts@> wrote:
> > > > > > > > > >
> > > > > > > > > > In an attempt to cure my stubborn TS-530S VOX problem (Anti-Vox
> > > > > > > has no
> > > > > > > > > effect, no matter what VOX Gain and VOX Delay settings are used
> > > > > > > > > unless the speaker is muted or headphones are used), I plan to dive
> > > > > > > > > into the AF Board to renew the 'lytics along the line.
> > > > > > > > > >
> > > > > > > > > > Any hints about board removal? Obviously, connectors must be gently
> > > > > > > > > > unplugged and screws removed, but what about the wires soldered on
> > > > > > > > > > topside? The reason I am asking is that -- more than once -- I have
> > > > > > > > > > gone to great pains to access wiring or remove components in
> > > > > > > > > > unfamiliar radios only to learn later that there was an easy,
> > > > > > > painless
> > > > > > > > > way to accomplish the same task known to the experienced, but not
> > > > > > > to me.
> > > > > > > > > >
> > > > > > > > > > Also, what are your views on completely recapping the 530 (or
> > > > > > > 830, for
> > > > > > > > > > that matter, since I have one of those on the way, too)? Good
> > > > > > > > > > practice? Unnecessary if symptoms of unpleasantness have not
> > > > > > > appeared?
> > > > > > > > > > I already did the HV caps, but that was dead simple and quick.
> > > > > > > > > >
> > > > > > > > > > Thanks, gurus.
> > > > > > > > > >
> > > > > > > > > > 73,
> > > > > > > > > >

> > > > > > > > Craig
> > > > > > > > > W3CRR
> > > > > > > > >
> > > > > > > >
> > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > [Non-text portions of this message have been removed]
> > > > > > > >
> > > > > > >
> > > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > [Non-text portions of this message have been removed]
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> > > >
> > > [Non-text portions of this message have been removed]
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> > >
> > [Non-text portions of this message have been removed]
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>
[Non-text portions of this message have been removed]

42932. Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-18 20:54:04 UTC
From: Terry Wagoner
Topic: 42877 Message: 42932

Bob:

I think it is great you are making best of limited space. Hams are pretty ingenious when it comes to this. I have literally seen small closet operating positions and card table service benches.

You should talk to Mike W5RKL about his DDS VFO experience. I think he resolved spurs and has a buffer amp to get the drive voltage he needs for tube rigs.

We have a similar approach to the hobby. I work hard to study and understand how all the circuits in these hybrids work. Havent mastered all of them yet and may never understand all the design basis, but it is fun for me. Light bulbs still come on all the time and I am 67 and been learning since around age 12. Learning is never ending and hopefully it can help stave off early dementia if you keep the mind exercised. No guarantee as genetics surely plays a factor.

Have fun.

73s
Terry K9TW

--- In TS-520_820_530_830@...m, "Bob Macklin" <macklinbob@...> wrote:
>
> Terry,
>
> I was an analog design engineer until the mid 70's I have a lot of experience with analog instruments especially scopes.
>
> I came close to buying a Tek scope(HP does not make scopes) several years ago but after looking at the service manuals I decided not to. There chips in some of those scopes that are not available except from a donor.
>
> What instruments you use depends on what you want to do.
>
> I still design both digital and analog electronics. I only do the repairs on my ham radios that are necessary to keep them operational.
>
> My next project is a CW keyer to connect between my computer and any of my HF transmitters. Why? For one thing the DX-60/HR-10 does not have sidetone. Several other boatanchors are the same way. This keyer will allow me to easily switch between the computer and one of the hand keys.
>
> Recently I have been studying DDS VFOs. I don't think they are all they are cracked up to be. A PTO/heterodyne VFO is really a better solution than a DDS. But other than band switching it is not computer controllable. I have several Heathkit LMOs/VFOs to work with, Kenwood and Drake PTOs would also be a good choice.

>
> With the problem of crystal ageing using a DDS for the heterodyne oscillator is a viable solution. That would allow me to have the xceiver remote except for the VFO. I do have an operational Kenwood VFO-520 and other Kenwood VFOs are common on eBay.
>
> Why is a 79 year old retired EE doing stuff like this? It's something I can do to keep busy in this Retirement Closet. It keeps the brain busy.
>
> Several years ago the ARRL published a couple of articles on making a spectrum analyzer. That's an unfinished project because of some parts I still need to buy. But I plan to finish it.
>
> Do I really need a spectrum analyzer? Probably not. But it is an interesting project.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Terry Wagoner
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tuesday, June 18, 2013 10:08 AM
> Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
>
>
>
> Bob:
>
> I think O-scope and various scope probes probably least understood and most under utilized test gear on ham bench. Can be intimidating for some especially learning the triggering modes. You wont need this but if you are learning to use a scope look at all of Alan Wolke W2AEW scope tutorials on You Tube. They are first class. He is good instructor.
>
> I dont have an "active" probe for my scopes. I think they result in about 100k input impedance up to about 10 mhz?
>
> I dont use my scope that much as it is easier and faster to reach for the Boonton Millivolt meter, but glad I have it. I just got my first digital. Got the Rigol 1152E 100mhz and learning how to use it. I plan to take key waveforms in a TS-830 and store for future reference. A good winter project.
>
> 73s
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@> wrote:
> >
> > Terry,
> >
> > I grew up with this kind of equipment. When I was working for companies doing NASA/DOD work we used Heathkit equipment for general lab use and had HP, GR, or Boonton(the old one)

instruments for final test.
> >
> > The one thing Heathkit did not make in the 60's was good scope. In the 70's they made the IO-14 which is a knockoff of the Tek 561. If you could work with a single channel scope it was not bad. A lot od analog work was done with Tek 561s.
> >
> > I now have a Heathkit IO-4235. Two channels, 35MHz. better than my Korean 35MHz scope. I can do a lot of work with it. I use a custom RF probe for looking at things over 35MHz.
> >
> > I have a problem with limited space in my 20x20 Retirment Closet. So I keep the seldom used instruments in my storage unit(about 50 ft from my Retirment Closet).
> >
> > I just bought a HP FET scope probe from eBay. $89. I could afford that (I THINK). Better than making one.
> >
> > Bob Macklin
> > K5MYJ
> > Seattle, Wa.
> > "Real Radios Glow In The Dark"
> > ----- Original Message -----
> > From: Terry Wagoner
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Tuesday, June 18, 2013 8:24 AM
> > Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
> >
> >
> >
> > Bob:
> >
> > I have seen the Heath Q meter in catalogs but never seen one up close or got to operate one. I remember reading about the special low inductance mica capacitor in it?
> >
> > I think kind of the poor mans Boonton 160/260 Q meters. My guess is compares favorably.
> >
> > Heath engineers had a knack for clever approaches to make serviceable test gear at price average hobbyist could afford. I can see where Q-meter really would come in handy for winding coils.
> >
> > Amazing when you look at the size of these monsters in contrast to the modern digital LCR-Q meters of today.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@> wrote:
> > >
> > > Terry,
> > >
> > > In addition to the IT-28 I also have a IB-2A LRC bridge and a QM-1 Q-Meter. I use the Q-Meter when making coils and building tanks circuit. But there are time the GDO is more convenient.
> > >

> > > I use the Millen GDO with a Millen antenna bridge to prune antennas.
> > >
> > > But I too am slowing down on home brewing.
> > >
> > > Bob Macklin
> > > K5MYJ
> > > Seattle, Wa.
> > > "Real Radios Glow In The Dark"
> > > ----- Original Message -----
> > > From: Terry Wagoner
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Tuesday, June 18, 2013 2:50 AM
> > > Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
> > >
> > >
> > >
> > > Bob: Yes that would be a good use for it. I use to do that as well, but now have B&K 875B digital LCR meter and the AADE IIB digital LC bridge. So can read values of chokes and caps pretty close.
> > >
> > > In old days used my Millen GDO with a standard capacitor or inductor and would dip and calculate. Have also done this with Rf sig gen and O-scope and sweep and read frequency and then calculate. Lots of ways to skin a cat, but the digital bridges work so nice and more accurate.
> > >
> > > I dont home brew much anymore so not making any gimmick caps anymore and will rewind hybrid plate chokes from time to time so get limited use out of LCR bridges these days.
> > >
> > > I have seen some very cheap LCR bridges from China listed on Ebay and read some reviews and they get high marks. You might want to look in to one of those.
> > >
> > > Terry K9TW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@> wrote:
> > > >
> > > > Terry,
> > > >
> > > > I use my nice IT-28 to find out the capacitance of small capacitors I cannot read the writing on!
> > > >
> > > > Bob Macklin
> > > > K5MYJ
> > > > Seattle, Wa.
> > > > "Real Radios Glow In The Dark"
> > > > ----- Original Message -----
> > > > From: Terry Wagoner
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Monday, June 17, 2013 8:24 PM
> > > > Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
> > > >

> > > >
> > > >
> > > > Mike:
> > > >
> > > > I always wanted a Tel-O-Mike especially for leakage measurements and of course you are correct for any capacitance bridge that I am aware of you need to lift one lead in circuit. I have a real nice Heath IT-28 that I keep for sentimental reasons but not much use anymore.
> > > >
> > > > As I mentioned not uncommon to use the bridge to measure the capacitance value and it will be well within 80/20 tolerance and leakage will be low yet ESR will be high. Prior to ESR we would never have replaced a cap like that measured by a Tel-O-Mike or IT-28.
> > > >
> > > > Not having to lift one end of most caps in circuit to test with ESR meter is a big plus. I think I paid $79.95 for the Blue ESR meter (digital). There is also a good analog unit available.
> > > >
> > > > As I noted an ESR meter is not the magic pill. Still have to learn to recognize when ESR is too high and for about 90% of caps in the hybrids cant get on the leads from component side of board to test them.
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> > > > Just my experience using one. I hear fellows on the Hybrid net talk about how handy has been testing caps in their hybrids and I sure would like to know how they are doing it.
> > > >
> > > > Terry K9TW
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@> wrote:
> > > > >
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> > > > >
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> > > > > capacitor checker I use, it does a nice job even though it's old
> > > > > technology.
> > > > >
> > > > > If caps can be checked in the circuit with an ESR meter then that's fine
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> > > > >
> > > > >
> > > > >
> > > > > 73
> > > > > Mike W5RKL
> > > > >
> > > > > On 6/17/2013 7:39 PM, Terry Wagoner wrote:
> > > > > >
> > > > > > Hi Mike:
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> > > > > > Louis was talking about using an ESR meter to test the electrolytics.
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> > > > > > is discharged. About only exception is when a large cap is paralleled
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> > > > > > ESR meters work be applying low level AC signal (maybe 5mv to 20 mv)
> > > > > > at around 100 to 200 khz in short pulses. Only about 4 circuit
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> > > > > > 1. Parallel inductors such as chokes, coils and transformers and the
> > > > > > XL is such that ESR meter doesnt see them.
> > > > > > 2. Parallel resistors. The input Z of the ESR meter is very low maybe
> > > > > > around 1 to 2 ohms so not bothered by the resistors
> > > > > > 3. The junctions of transistors. The input signal level is too low to
> > > > > > forward bias diodes or transistors
> > > > > > 4. Parallel capacitor. Need to lift one lead
> > > > > >
> > > > > > If you use a Capacitor bridge an/or Leakage tester the cap can check
> > > > > > good, but still have higher than normal ESR. It acts like a cap with a
> > > > > > high value of R in series with it.
> > > > > >
> > > > > > Very easy to find Open or dried out caps as ESR will approach infinity.
> > > > > >
> > > > > > Biggest problem is what is too high an ESR? What was original factory
> > > > > > ESR?
> > > > > >
> > > > > > Usually rule of thumb is anything over 10 ohms is too high and should
> > > > > > be replaced. If the cap is in a switching circuit then anything over
> > > > > > 0.5 ohms is probably too high.
> > > > > >
> > > > > > Now what about those that read in circuit between 1 ohm and 10 ohms.
> > > > > > This is where you need lots of experience and best if you can practice
> > > > > > on known bad caps.
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> > > > > > I always save any pulled cap for future use as reference.
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> > > > > > resistance however it does not push any current thru a contact.
> > > > > >
> > > > > > Terry K9TW
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com
> > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@> wrote:
> > > > > > >
> > > > > > > Louis and others,
> > > > > > >
> > > > > > > To prevent any stray capacitance from the circuit and/or adjacent
> > > > > > > components and wiring affecting the test results, at least one lead of
> > > > > > > the capacitor should be disconnected from the circuit and that includes

> > > > > > > any voltage equalizing resistors should be disconnected from the
> > > > > > > capacitor. I would not try to test a capacitor that's still
> > > > > > connected in
> > > > > > > the circuit, too many variables that can affect the test results.
> > > > > > >
> > > > > > > Not all capacitors have the same leakage rating. It depends on the
> > > > > > > capacitance value and voltage rating. For example, Sprague says
> > > > > > > capacitors that fall within the 1 to 100VDC rating have different
> > > > > > > leakage current ratings depending on the capacitance value of the
> > > > > > > capacitor. For example, a 2ufd capacitor and a 100ufd capacitor that
> > > > > > are
> > > > > > > within this voltage range will have .31ma for the 2ufd capacitor but
> > > > > > > 1.3ma for the 100ufd capacitor.
> > > > > > >
> > > > > > > Sprague also states that any capacitor value that is less than 75% of
> > > > > > > its capacitance value should be replaced.
> > > > > > >
> > > > > > > There also is the "80/20" rule which means a capacitor may be replaced
> > > > > > > with a different capacitor with a value that does not exceed 80% of or
> > > > > > > less than 20% of the original value. I personally would not follow that
> > > > > > > rule that close, especially if the new capacitor value is more than 20%
> > > > > > > of the original capacitance value. Remember, "I" (current) leads "E"
> > > > > > > (voltage" in capacitors. That's part of the phrase, "ELI the ICE man"
> > > > > > > where "I" (current) lead "E" (voltage) in the "C" capacitor! When a
> > > > > > > capacitor initially starts to charge, the "I" current is at "maximum"
> > > > > > > and the "E" voltage is at "minimum". A "thump" is heard quite often in
> > > > > > > power supplies when they are first turned ON which is the high current
> > > > > > > surge in the capacitor when power is first applied to the capacitor.
> > > > > > >
> > > > > > > 73
> > > > > > > Mike W5RKL
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > > .
> > > > > > > On 6/17/2013 1:55 PM, Louis Wilen wrote:
> > > > > > >
> > > > > > > What are your feelings about using an ESR meter to test caps
> > > > > > in-circuit?
> > > > > > >
> > > > > > > Also âEUR" would it be of value (no pun intended) to create and
> > > > > > publish a
> > > > > > > list of measured, in-circuit ESR values for the major electrolytic
> > > > > > > caps in the various hybrids? Those who have ESR meters could then
> > > > > > > compare values of suspected bad caps to the values in the list while
> > > > > > > not risking any damage by unsoldering.
> > > > > > >
> > > > > > > Louis
> > > > > > > W3LMW

> > > > > > > >
> > > > > > > > > From: Terry Wagoner
> > > > > > > > > Sent: Monday, June 17, 2013 2:42 PM
> > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > > > > Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
> > > > > > > > >
> > > > > > > > > Intuitively it would seem like good thing to replace all the
> > > > > > > > > electrolytics in a 40 year old radio same as replacing all the carbon
> > > > > > > > > resistors and changing all the active devices especially front end
> > > > > > > > > Mosfet who some believe degrade with ESD exposure.
> > > > > > > > >
> > > > > > > > > In practice most of these changes are really feel good changes
> > > > > > that do
> > > > > > > > > not produce any measurable performance improvements. Almost all will
> > > > > > > > > report quieter operation etc. Not everyone has a discriminating ear.
> > > > > > > > > Also how can you measure the effectiveness of preventing a failure
> > > > > > > > > that did not occur. In the PM world of passenger airplanes and
> > > > > > nuclear
> > > > > > > > > power they do reliability based preventive maintenance and it is
> > > > > > OK to
> > > > > > > > > let some components run to failure. That would be case of most
> > > > > > > > > electrolytics that do not cause any collateral damage if they fail.
> > > > > > > > >
> > > > > > > > > All of these changes you need to weigh the risk vs the reward.
> > > > > > Easy to
> > > > > > > > > pull molex pins off the boards and to lift PC foils. These old
> > > > > > > > > phenolic boards have poor plating and cant handle many
> > > > > > > > > desolder/resolder cycles. I now use a Hakko 808 which is salty for
> > > > > > > > > average ham, but makes desoldering childs play.
> > > > > > > > >
> > > > > > > > > Be very careful replacing electrolytics in your hybrid. Make sure you
> > > > > > > > > re-install as you found the polarity was oriented. There are two or
> > > > > > > > > three places on the 530/830s where they are reverse polarity with
> > > > > > > > > positive on the ground foil. This is not a mistake. The silk screen
> > > > > > > > > and the schematic are wrong and the as built config is correct.
> > > > > > > > > Electrolytics are similar to diodes and cannot tolerate very much
> > > > > > > > > reverse polarity. If you are unsure look at the schematic to see if
> > > > > > > > > there is negative voltage being applied in the circuit. This may be
> > > > > > > > > done to back bias a detector diode or to bias a FET that requires
> > > > > > > > > negative bias voltage on the gate.
> > > > > > > > >
> > > > > > > > > Replacing the HV and medium voltage filter caps and perhaps the
> > > > > > 14vdc,
> > > > > > > > > 12vdc and 9vdc power supply electrolytics is OK but I personally
> > > > > > would
> > > > > > > > > not wholesale change all of them.
> > > > > > > > >
> > > > > > > > > Terry K9TW

> > > > > > > >
> > > > > > > > > --- In mailto:TS-520_820_530_830%40yahoogroups.com, "Craig"
> > > > > > > > > <crgrbrts@> wrote:
> > > > > > > > >
> > > > > > > > > > In an attempt to cure my stubborn TS-530S VOX problem (Anti-Vox
> > > > > > > has no
> > > > > > > > > > effect, no matter what VOX Gain and VOX Delay settings are used
> > > > > > > > > > unless the speaker is muted or headphones are used), I plan to dive
> > > > > > > > > > into the AF Board to renew the 'lytics along the line.
> > > > > > > > > >
> > > > > > > > > > Any hints about board removal? Obviously, connectors must be gently
> > > > > > > > > > unplugged and screws removed, but what about the wires soldered on
> > > > > > > > > > topside? The reason I am asking is that -- more than once -- I have
> > > > > > > > > > gone to great pains to access wiring or remove components in
> > > > > > > > > > unfamiliar radios only to learn later that there was an easy,
> > > > > > > painless
> > > > > > > > > > way to accomplish the same task known to the experienced, but not
> > > > > > > to me.
> > > > > > > > > >
> > > > > > > > > > Also, what are your views on completely recapping the 530 (or
> > > > > > > 830, for
> > > > > > > > > > that matter, since I have one of those on the way, too)? Good
> > > > > > > > > > practice? Unnecessary if symptoms of unpleasantness have not
> > > > > > > appeared?
> > > > > > > > > > I already did the HV caps, but that was dead simple and quick.
> > > > > > > > > >
> > > > > > > > > > Thanks, gurus.
> > > > > > > > > >
> > > > > > > > > > 73,
> > > > > > > > > >
> > > > > > > > > > Craig
> > > > > > > > > > W3CRR
> > > > > > > > > >
> > > > > > > > >
> > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > >
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> > > > > > > >
> > > > > > > > [Non-text portions of this message have been removed]
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42933. Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-19 10:17:19 UTC
From: wa4axt
Topic: 42877 Message: 42933

--- In TS-520_820_530_830@yahoogroups.com, "Craig" <crgrbrts@...> wrote:
>
> In an attempt to cure my stubborn TS-530S VOX problem (Anti-Vox has no
> effect, no matter what VOX Gain and VOX Delay settings are used unless the speaker is muted or headphones are used), I plan to dive into the AF Board to renew the 'lytics along the line.
>
> Any hints about board removal? Obviously, connectors must be gently
> unplugged and screws removed, but what about the wires soldered on
> topside? The reason I am asking is that -- more than once -- I have
> gone to great pains to access wiring or remove components in unfamiliar radios only to learn later that there was an easy, painless way to accomplish the same task known to the experienced, but not to me.
>
> Also, what are your views on completely recapping the 530 (or 830, for
> that matter, since I have one of those on the way, too)? Good
> practice? Unnecessary if symptoms of unpleasantness have not appeared?
> I already did the HV caps, but that was dead simple and quick.
>
> Thanks, gurus.
>
> 73,
>
> Craig
> W3CRR
>

42934. Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-19 10:40:49 UTC
From: wa4axt
Topic: 42877 Message: 42934

--- In TS-520_820_530_830@yahoogroups.com, "Craig" <crgrbrts@...> wrote:
>
> In an attempt to cure my stubborn TS-530S VOX problem (Anti-Vox has no
> effect, no matter what VOX Gain and VOX Delay settings are used unless the speaker is muted or headphones are used), I plan to dive into the AF Board to renew the 'lytics along the line.
>
> Any hints about board removal? Obviously, connectors must be gently
> unplugged and screws removed, but what about the wires soldered on
> topside? The reason I am asking is that -- more than once -- I have
> gone to great pains to access wiring or remove components in unfamiliar radios only to learn later that there was an easy, painless way to accomplish the same task known to the experienced, but not to me.
>
> Also, what are your views on completely recapping the 530 (or 830, for
> that matter, since I have one of those on the way, too)? Good
> practice? Unnecessary if symptoms of unpleasantness have not appeared?
> I already did the HV caps, but that was dead simple and quick.
>
> Thanks, gurus.
>
> 73,
>
> Craig
> W3CRR
>
The most important part to replace on a TS-530S is the coupler that connects the wafer switch in the finial cage to the band switch shaft .It should be replaced ASAP . These plastic couplers in the radio are no good , can slip , and result in rf damage to the wafer switches in your radio .If you find that the coupler in the finial cage is cracked ,don't use the transmitter again until this situation is fixed . While your at it , I would replace the coupler on the load control shaft also . Go to the K4EAA web site for more info and for the purchase of brass couplers that will last for ever.

http://www.k4eaa.com/examples.html

I am still using the original filter caps and they are doing fine but replacement is a good thing to do on a old radio .

If you look at the K4EAA site , you will find that their are some resistors in the finial cage that are rated so that if a person does something reckless in the tunning of the radio , these resistors will burn up and prevent a more costly repair . A look at those resistors in your radio to see their condition would be advised .

When putting the metal cabinet back together after work on the radio ,
be sure to put each screw in loosely so that the cabinet will have some wiggle room to line

up the holes . After all the screws are installed , you can then torque them down .

42935. Oh-oh! TS-830S glitches

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-19 12:57:36 UTC
From: Craig Roberts
Topic: 42877 Message: 42935

In my new Kenwood hybrid frenzy, I have purchased a TS-830S as a companion to my two 530Ss (one that looks a little crappy but works perfectly and the other that is in absolute mint condition cosmetically but is dead on most bands).

The 830 arrived yesterday looking in pretty good shape overall, though showing signs of long term neglect. I dusted the radio out a bit and inspected for obvious damage. Then, fairly assured that a house fire and neighborhood blackout would not ensue, plugged 'er in and powered up. At first, the meter light failed to glow, but a light "rap" on the cabinet top brought it to life.

Well, I shut the radio off after ascertaining that operation was normal (120 watts out and good reception) on all but two bands -- 7 and 21 MHz. Here are the symptoms:

* on 7 MHz: normal reception but little transmitter output (maybe a couple of watts) unless I fiddle relentlessly with the the obvioously dirty and/or misaligned and/or damaged band switch. ALSO (interestingly) the digital display intermittently shows a "0" preceding the "7.xxx".

* on 21 MHz: normal reception but --- okay, same as 40 meters on transmit.

* A very low level "buzzing" is heard when tuning up. This is not apparent on my TS-530S.

After taking the necessary HV safety precautions (I'm an old timer for a reason) , I cleaned the PA cage (somewhat dusty including, of course, the 6146Bs), lubed the fan and treated the PA portion of the band switch with DeoxIT. I also inspected the band switch coupler. It looks fine -- no cracks (though I do plan to replace it with one of Ken's brass do-dads).

The symptoms remain.

I will, of course, go through the entire radio cleaning plug-in board contacts, the rest of the band switch, the pots, etc. but I'm wondering if the commonality of symptoms on 40 and 15 meters points to a particular area. I'm also wondering why I get a couple of watts of output when the band switch fails to make proper contaxct on those bands AND, what's with the intermittent "0" digit display on 40 meters?

Thanks and 73,

Craig
W3CRR

[Non-text portions of this message have been removed]

42936. A bfo no no on the TS-530S !

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-19 11:05:58 UTC
From: wa4axt
Topic: 42936 Message: 42936

I noticed that during receive I was always adjusting my IF shift down about 200hz to get the the best receive effectiveness so one day I did as others have suggested and readjusted my bfo down so that the SSB low frequency cut off was about 200hz from around 400 hz . This turned out to be a bad idea because it also shifted the transmit spectrum down 200hz . Because there is a lot of energy in the low audio frequencies , shifting the transmit audio spectrum down makes the radios alc and audio compressor work harder and that's not a good thing if your goal is being herd and understood .I returned the bfo to its original position and now just use the IF shift to adjust my receive audio spectrum .

42937. Re: Oh-oh! TS-830S glitches

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-19 19:36:07 UTC
From: Terry Wagoner
Topic: 42877 Message: 42937

Craig:

I am a little busy now so will let other help you. Willing to help if I can. Couple of quick observations:

1. You mention 120 watts output. If that is into dummy load then suggest one of two things A. Loaded to approx 250 ma or more Ip OR B. Wattmeter is not caled. If into an antenna or a load that is greater than 1:0 to 1 VSWR then not taking reflected power in to account. OK to load to 250 to 260 ma when putting a new rig thru its paces, but not as a matter of routine as no reason to make finals dissipate that much heat. Most 830s will not typically load to 250 ma IP or more without power no longer increasing. Not a criticism just suggest you load to around 100 watts output without exceeding approx 225ma Ip as your normal practice. Receiving end wont notice difference between 100 watts and 120 watts. Tube longevity might.

2. What does Marker signal do on all bands including the low rf output bands? A well aligned TS-830 will get close to S9 on all bands at center of VFO range with Drive controlled peaked close to 1200.

3. Go to Operating manual Sect 6 and do a quick Coil Pack and IFT alignment using the Marker and S-meter and report back if any
improvement in weak TX. Remember you need Heaters on to peak the Drive coils.

4. I would also do the Driver Stage test that I have listed here several times. You do this in CW mode with SG switch off. Should be able to get FSD ALC indication with Car Level Pot no greater than 1200 and typically around 1000 to 1100 is sufficient. All bands should produce FSD and no gradual fall off. Let rig rest in between each band as Driver tube is running Class A at max IP and gets hot.

I have been ill and have couple of rigs here that I must attend to. Be glad to help if I can if you get stuck. There are some good 830 owners who can help you.

Hopefully you are not looking at bad bandswitch contacts on RF board.

Good Luck
Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Craig Roberts <crgrbrts@...> wrote:
>
> In my new Kenwood hybrid frenzy, I have purchased a TS-830S as a
> companion to my two 530Ss (one that looks a little crappy but works
> perfectly and the other that is in absolute mint condition cosmetically
> but is dead on most bands).
>
> The 830 arrived yesterday looking in pretty good shape overall, though
> showing signs of long term neglect. I dusted the radio out a bit and
> inspected for obvious damage. Then, fairly assured that a house fire and

> neighborhood blackout would not ensue, plugged 'er in and powered up.
> At first, the meter light failed to glow, but a light "rap" on the
> cabinet top brought it to life.
>
> Well, I shut the radio off after ascertaining that operation was normal
> (120 watts out and good reception) on all but two bands -- 7 and 21
> MHz. Here are the symptoms:
>
> * on 7 MHz: normal reception but little transmitter output (maybe a
> couple of watts) unless I fiddle relentlessly with the the
> obvioously dirty and/or misaligned and/or damaged band switch. ALSO
> (interestingly) the digital display intermittently shows a "0"
> preceding the "7.xxx".
>
> * on 21 MHz: normal reception but --- okay, same as 40 meters on
> transmit.
>
> * A very low level "buzzing" is heard when tuning up. This is not
> apparent on my TS-530S.
>
> After taking the necessary HV safety precautions (I'm an old timer for a
> reason) , I cleaned the PA cage (somewhat dusty including, of course,
> the 6146Bs), lubed the fan and treated the PA portion of the band switch
> with DeoxIT. I also inspected the band switch coupler. It looks fine --
> no cracks (though I do plan to replace it with one of Ken's brass do-dads).
>
> The symptoms remain.
>
> I will, of course, go through the entire radio cleaning plug-in board
> contacts, the rest of the band switch, the pots, etc. but I'm wondering
> if the commonality of symptoms on 40 and 15 meters points to a
> particular area. I'm also wondering why I get a couple of watts of
> output when the band switch fails to make proper contaxct on those bands
> AND, what's with the intermittent "0" digit display on 40 meters?
>
> Thanks and 73,
>
> Craig
> W3CRR
>
>
> [Non-text portions of this message have been removed]
>

42938. Re: Oh-oh! TS-830S glitches

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-19 19:39:33 UTC
From: Terry Wagoner
Topic: 42877 Message: 42938

One correction you may have to increase CAR Level pot to around 1300 to 1400 to get FSD ALC indication on 10 meters but typically can get full scale ALC on 10 meters with well aligned TS-830 with good Driver tube and spec tube dc voltages.

Terry

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Craig:
>
> I am a little busy now so will let other help you. Willing to help if I can. Couple of quick observations:
>
> 1. You mention 120 watts output. If that is into dummy load then suggest one of two things A. Loaded to approx 250 ma or more Ip OR B. Wattmeter is not caled. If into an antenna or a load that is greater than 1:0 to 1 VSWR then not taking reflected power in to account. OK to load to 250 to 260 ma when putting a new rig thru its paces, but not as a matter of routine as no reason to make finals dissipate that much heat. Most 830s will not typically load to 250 ma IP or more without power no longer increasing. Not a criticism just suggest you load to around 100 watts output without exceeding approx 225ma Ip as your normal practice. Receiving end wont notice difference between 100 watts and 120 watts. Tube longevity might.
>
> 2. What does Marker signal do on all bands including the low rf output bands? A well aligned TS-830 will get close to S9 on all bands at center of VFO range with Drive controlled peaked close to 1200.
>
> 3. Go to Operating manual Sect 6 and do a quick Coil Pack and IFT alignment using the Marker and S-meter and report back if any
> improvement in weak TX. Remember you need Heaters on to peak the Drive coils.
>
> 4. I would also do the Driver Stage test that I have listed here several times. You do this in CW mode with SG switch off. Should be able to get FSD ALC indication with Car Level Pot no greater than 1200 and typically around 1000 to 1100 is sufficient. All bands should produce FSD and no gradual fall off. Let rig rest in between each band as Driver tube is running Class A at max IP and gets hot.
>
> I have been ill and have couple of rigs here that I must attend to. Be glad to help if I can if you get stuck. There are some good 830 owners who can help you.
>
> Hopefully you are not looking at bad bandswitch contacts on RF board.
>
> Good Luck
> Terry K9TW
>

> --- In TS-520_820_530_830@yahoogroups.com, Craig Roberts <crgrbrts@> wrote:
> >
> > In my new Kenwood hybrid frenzy, I have purchased a TS-830S as a
> > companion to my two 530Ss (one that looks a little crappy but works
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> > neighborhood blackout would not ensue, plugged 'er in and powered up.
> > At first, the meter light failed to glow, but a light "rap" on the
> > cabinet top brought it to life.
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> > Well, I shut the radio off after ascertaining that operation was normal
> > (120 watts out and good reception) on all but two bands -- 7 and 21
> > MHz. Here are the symptoms:
> >
> > * on 7 MHz: normal reception but little transmitter output (maybe a
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> > obvioously dirty and/or misaligned and/or damaged band switch. ALSO
> > (interestingly) the digital display intermittently shows a "0"
> > preceding the "7.xxx".
> >
> > * on 21 MHz: normal reception but --- okay, same as 40 meters on
> > transmit.
> >
> > * A very low level "buzzing" is heard when tuning up. This is not
> > apparent on my TS-530S.
> >
> > After taking the necessary HV safety precautions (I'm an old timer for a
> > reason) , I cleaned the PA cage (somewhat dusty including, of course,
> > the 6146Bs), lubed the fan and treated the PA portion of the band switch
> > with DeoxIT. I also inspected the band switch coupler. It looks fine --
> > no cracks (though I do plan to replace it with one of Ken's brass do-dads).
> >
> > The symptoms remain.
> >
> > I will, of course, go through the entire radio cleaning plug-in board
> > contacts, the rest of the band switch, the pots, etc. but I'm wondering
> > if the commonality of symptoms on 40 and 15 meters points to a
> > particular area. I'm also wondering why I get a couple of watts of
> > output when the band switch fails to make proper contaxct on those bands
> > AND, what's with the intermittent "0" digit display on 40 meters?
> >
> > Thanks and 73,
> >
> > Craig
> > W3CRR
> >

> >
> > [Non-text portions of this message have been removed]
> >
>

42939. Re: Oh-oh! TS-830S glitches

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-19 20:02:41 UTC
From: Terry Wagoner
Topic: 42877 Message: 42939

OK this is the last "one more"!

I forgot to mention if you can easily get 120 watts plus out of your new TS-830 suggest you take a look at the SG voltage on the finals and do a good visual on the Plate choke for signs of overheating (darkened windings maybe brown or even blackened). It is possible that someone did a QRO mod which most commonly increases the 6146 screen grid voltage. Always measure directly at the 6146 tube socket on the final board.

I obviously havent seen all TS-830s but 120 to 125 watts output in my experience is pushing the limit.

Terry K9TW

> > > Well, I shut the radio off after ascertaining that operation was normal
> > > (120 watts out and good reception) on all but two bands -- 7 and 21
> >
>

42940. Re: [TS-520_820_530_830] Re: Oh-oh! TS-830S glitches

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-19 20:45:31 UTC
From: Craig Roberts
Topic: 42877 Message: 42940

Thanks again, Terry,

The 120 watts out into a dummy load is loading to about 260 ma. I had planned to back off a bit in actual operation. By contrast, my 530S peaks neatly and correctly at about 225 ma with 100 to 105 watts out.

The 40 and 15 meter bands do come alive in transmission with judicious (and extensive) "wiggling" of the band switch -- which is why I suspect something more mechanical and electrical going on here.

This radio was owned most recently by one of our good guy forum buddies, so I doubt that it's had any hinky mods. It just seems to have been in storage for awhile.

73,

Craig
W3CRR

42941. Re: Oh-oh! TS-830S glitches

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-19 21:22:43 UTC
From: Terry Wagoner
Topic: 42877 Message: 42941

OK Craig that is what I suspected you were doing for testing purposes only and not normal operating practice.

Before removing the vertical bandswitch boards suggest you contact Dick W0NTA about his bandswitch repair for loose rivets and contact fingers that have lost temper. He does not use the silver pen method that Ken K4EAA describes. Dick installs small gauge jumpers.

A good test is not to measure conductivity with an ohm meter or ESR meter as it does not push enough current. I use low voltage DC supply and do the standard 6vdc/1amp relay contact test on these contacts. A good contact will be in the 100mv to 50 mv range or better measured by a DMM across the contacts.

Biggest challenge is the desoldering of the vertical board pins that mate with the RF board. Dick and I use a Hakko 808 gun as we do enough hybrid work to justify the cost. Otherwise you are looking at a lot of solder wick and solder sucker work which can be a challenge.

Maybe deoxit and exercising will get you buy for awhile, but sounds like eventually you will have to undertake this repair.

73s
Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Craig Roberts <crgrbrts@...> wrote:
>
> Thanks again, Terry,
>
> The 120 watts out into a dummy load is loading to about 260 ma. I had
> planned to back off a bit in actual operation. By contrast, my 530S
> peaks neatly and correctly at about 225 ma with 100 to 105 watts out.
>
> The 40 and 15 meter bands do come alive in transmission with judicious
> (and extensive) "wiggling" of the band switch -- which is why I suspect
> something more mechanical and electrical going on here.
>
> This radio was owned most recently by one of our good guy forum buddies,
> so I doubt that it's had any hinky mods. It just seems to have been in
> storage for awhile.
>
> 73,
>
> Craig
> W3CRR
>

42942. RE: [TS-520_820_530_830] Re: Oh-oh! TS-830S glitches

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-19 22:57:26 UTC
From: fpath fpath
Topic: 42877 Message: 42942

Craig,

A common issue with most of the Hybird radios is the wafer switches on the RF board. Still do the service alignment as Terry suggested. Once you have done that and if there is no noticable difference then I'd give the wafer switches a good clean with DeOxit and a good blow out with canned air. Then have a look at each wafer switch in each band position ensuring the little brass fingers are actually making contact with the wiper, of course this is done with the rig turned off and HV discharged. If the fingers aren't contacting then it's a matter of just pushing back with a long enough tool, but be gentle as they are thin.

73s

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
CC: wagstw46@...
From: crgrbrts@verizon.net
Date: Wed, 19 Jun 2013 16:45:31 -0400
Subject: Re: [TS-520_820_530_830] Re: Oh-oh! TS-830S glitches

Thanks again, Terry,

The 120 watts out into a dummy load is loading to about 260 ma. I had planned to back off a bit in actual operation. By contrast, my 530S peaks neatly and correctly at about 225 ma with 100 to 105 watts out.

The 40 and 15 meter bands do come alive in transmission with judicious (and extensive) "wiggling" of the band switch -- which is why I suspect something more mechanical and electrical going on here.

This radio was owned most recently by one of our good guy forum buddies, so I doubt that it's had any hinky mods. It just seems to have been in storage for awhile.

73,

Craig
W3CRR

[Non-text portions of this message have been removed]

42943. TS-830S glitch progress

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-20 02:08:26 UTC
From: Craig Roberts
Topic: 42877 Message: 42943

Thanks, Dave,

Yes, as we all expected, the RF Board wafers were the culprits. All bands are now operative. One DeoxIT treatment brought back a semblence of life with intermittent dropouts. A second application seems to have had more positive and consistent results. I am tempted to remove the RF Board and a give the wafers a more thorough treatment by removing them, cleaning mechanically and electrically securing the rivets to the copper. As I said, I am tempted -- but not moved (for the moment, anyway).

One anomaly remains, and that is the mysterious and intermittent appearance of a leading "0" on the 1.5, 3.0 and 8 MHz bands. cleaning the plug-in headers on the display board had no effect.

I realize that a couple of hours of further contact cleaning and freshening are ahead of me. But, I'm a happy guy right now.

73 and thanks again,

Craig
W3CRR

42944. Re: TS-830S glitch progress

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-20 10:52:30 UTC
From: Terry Wagoner
Topic: 42877 Message: 42944

Craig:

Are you saying the display is normal with the exception that it is displaying an additional leading Zero?

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Craig Roberts <crgrbrts@...> wrote:
>
> Thanks, Dave,
>
> Yes, as we all expected, the RF Board wafers were the culprits. All
> bands are now operative. One DeoxIT treatment brought back a semblence
> of life with intermittent dropouts. A second application seems to have
> had more positive and consistent results. I am tempted to remove the RF
> Board and a give the wafers a more thorough treatment by removing them,
> cleaning mechanically and electrically securing the rivets to the
> copper. As I said, I am tempted -- but not moved (for the moment, anyway).
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> One anomaly remains, and that is the mysterious and intermittent
> appearance of a leading "0" on the 1.5, 3.0 and 8 MHz bands. cleaning
> the plug-in headers on the display board had no effect.
>
> I realize that a couple of hours of further contact cleaning and
> freshening are ahead of me. But, I'm a happy guy right now.
>
> 73 and thanks again,
>
> Craig
> W3CRR
>

42945. Re: [TS-520_820_530_830] Re: TS-830S glitch progress

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-20 11:04:38 UTC
From: crgrbrts@...
Topic: 42877 Message: 42945

Yes - sometimes. The leading zero is intermittent and often disappears as the unit warms (indicating another connector problem, I would guess). I cleaned all the connectors on the counter board, but have not touched the PLL board, yet.
Sent via BlackBerry by AT&T

-----Original Message-----
From: "Terry Wagoner" <wagstw46@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Thu, 20 Jun 2013 10:52:30
To: <TS-520_820_530_830@yahoogroups.com>
Reply-to: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS-830S glitch progress

Craig:

Are you saying the display is normal with the exception that it is displaying an additional leading Zero?

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Craig Roberts <crgrbrts@...> wrote:
>
> Thanks, Dave,
>
> Yes, as we all expected, the RF Board wafers were the culprits. All
> bands are now operative. One DeoxIT treatment brought back a semblence
> of life with intermittent dropouts. A second application seems to have
> had more positive and consistent results. I am tempted to remove the RF
> Board and a give the wafers a more thorough treatment by removing them,
> cleaning mechanically and electrically securing the rivets to the
> copper. As I said, I am tempted -- but not moved (for the moment, anyway).
>
> One anomaly remains, and that is the mysterious and intermittent
> appearance of a leading "0" on the 1.5, 3.0 and 8 MHz bands. cleaning
> the plug-in headers on the display board had no effect.
>
> I realize that a couple of hours of further contact cleaning and
> freshening are ahead of me. But, I'm a happy guy right now.
>
> 73 and thanks again,
>
> Craig
> W3CRR
>

[Non-text portions of this message have been removed]

42946. Re: TS-830S glitch progress

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-20 11:59:06 UTC
From: Terry Wagoner
Topic: 42877 Message: 42946

Ok I have not seen this. Counter needs Bandswitch position input and DCBA PLL divider input for proper display. If you are getting proper display plus the leading zero it would seem you are getting 9vdc from RF board to Conn 4. I will look at circuit and see if I can figure out what would cause display of the additional leading zero.

I also mispoke yesterday about contact resistance acceptance criteria. I got my relay contacts confused with my rotary switch contacts. Centralab catalog shows factory design contacts in the range of 2 milliohm to 15 milliohm as opposed to the 50 to 100 that I told you.

The reason I suggested using 6v/1A mv voltage drop testing over ohm meter testing was two fold. First not many hams have a milliohm meter and secondly it is important to get enough power thru the contact to penetrate any oxide film. Contacts will develop film from exposure to atmosphere especially if they sit idle and are not wiped frequently.

Centralab shows their phenolic and ceramic wafer switch contacts are brass alloy and silver alloy.

If your Deoxit fix is not long lived and you decide to install small jumpers make sure you dont overheat the contacts as can destroy the heat treated spring temper of the contact shoes. I install the jumper out at the window on the loop that is formed when the contact is bent and riveted. Clean this area good first to brite metal and I use a little liquid flux so solder wets quickly. I usually cut leads off 1/4 watt resistors to make the jumpers.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, crgrbrts@... wrote:
>
> Yes - sometimes. The leading zero is intermittent and often disappears as the unit warms (indicating another connector problem, I would guess). I cleaned all the connectors on the counter board, but have not touched the PLL board, yet.
> Sent via BlackBerry by AT&T
>
> -----Original Message-----
> From: "Terry Wagoner" <wagstw46@...>
> Sender: TS-520_820_530_830@yahoogroups.com
> Date: Thu, 20 Jun 2013 10:52:30
> To: <TS-520_820_530_830@yahoogroups.com>
> Reply-to: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: TS-830S glitch progress
>
> Craig:
>
> Are you saying the display is normal with the exception that it is displaying an additional leading Zero?

>
>
> Terry K9TW
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Craig Roberts <crgrbrts@> wrote:
> >
> > Thanks, Dave,
> >
> > Yes, as we all expected, the RF Board wafers were the culprits. All
> > bands are now operative. One DeoxIT treatment brought back a semblence
> > of life with intermittent dropouts. A second application seems to have
> > had more positive and consistent results. I am tempted to remove the RF
> > Board and a give the wafers a more thorough treatment by removing them,
> > cleaning mechanically and electrically securing the rivets to the
> > copper. As I said, I am tempted -- but not moved (for the moment, anyway).
> >
> > One anomaly remains, and that is the mysterious and intermittent
> > appearance of a leading "0" on the 1.5, 3.0 and 8 MHz bands. cleaning
> > the plug-in headers on the display board had no effect.
> >
> > I realize that a couple of hours of further contact cleaning and
> > freshening are ahead of me. But, I'm a happy guy right now.
> >
> > 73 and thanks again,
> >
> > Craig
> > W3CRR
> >
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>
> [Non-text portions of this message have been removed]
>

42947. Re: [TS-520_820_530_830] Re: TS-830S glitch progress

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-20 12:40:48 UTC
From: crgrbrts@...
Topic: 42877 Message: 42947

I plan a partial teardown and complete cleaning and inspection this weekend. That may reveal all. I still need to fix the VOX problem on the 530, too. Still, I'm havin' fun.
Sent via BlackBerry by AT&T

-----Original Message-----
From: "Terry Wagoner" <wagstw46@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Thu, 20 Jun 2013 11:59:06
To: <TS-520_820_530_830@yahoogroups.com>
Reply-to: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS-830S glitch progress

Ok I have not seen this. Counter needs Bandswitch position input and DCBA PLL divider input for proper display. If you are getting proper display plus the leading zero it would seem you are getting 9vdc from RF board to Conn 4. I will look at circuit and see if I can figure out what would cause display of the additional leading zero.

I also mispoke yesterday about contact resistance acceptance criteria. I got my relay contacts confused with my rotary switch contacts. Centralab catalog shows factory design contacts in the range of 2 milliohm to 15 milliohm as opposed to the 50 to 100 that I told you.

The reason I suggested using 6v/1A mv voltage drop testing over ohm meter testing was two fold. First not many hams have a milliohm meter and secondly it is important to get enough power thru the contact to penetrate any oxide film. Contacts will develop film from exposure to atmosphere especially if they sit idle and are not wiped frequently.

Centralab shows their phenolic and ceramic wafer switch contacts are brass alloy and silver alloy.

If your Deoxit fix is not long lived and you decide to install small jumpers make sure you dont overheat the contacts as can destroy the heat treated spring temper of the contact shoes. I install the jumper out at the window on the loop that is formed when the contact is bent and riveted. Clean this area good first to brite metal and I use a little liquid flux so solder wets quickly. I usually cut leads off 1/4 watt resistors to make the jumpers.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, crgrbrts@... wrote:
>
> Yes - sometimes. The leading zero is intermittent and often disappears as the unit warms (indicating another connector problem, I would guess). I cleaned all the connectors on the counter board, but have not touched the PLL board, yet.
> Sent via BlackBerry by AT&T
>
> -----Original Message-----

> From: "Terry Wagoner" <wagstw46@...>
> Sender: TS-520_820_530_830@yahoogroups.com
> Date: Thu, 20 Jun 2013 10:52:30
> To: <TS-520_820_530_830@yahoogroups.com>
> Reply-to: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: TS-830S glitch progress
>
> Craig:
>
> Are you saying the display is normal with the exception that it is displaying an
additional leading Zero?
>
>
> Terry K9TW
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Craig Roberts <crgrbrts@> wrote:
> >
> > Thanks, Dave,
> >
> > Yes, as we all expected, the RF Board wafers were the culprits. All
> > bands are now operative. One DeoxIT treatment brought back a semblence
> > of life with intermittent dropouts. A second application seems to have
> > had more positive and consistent results. I am tempted to remove the RF
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> > W3CRR
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42948. Re: TS-830S glitch progress

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-20 13:23:22 UTC
From: Terry Wagoner
Topic: 42877 Message: 42948

Yes this is the part of hobby I enjoy the most. I think you would also be lost if didnt have something to work on. Have fun. Terry

--- In TS-520_820_530_830@yahoogroups.com, crgrbrts@... wrote:
>
> I plan a partial teardown and complete cleaning and inspection this weekend. That may reveal all. I still need to fix the VOX problem on the 530, too. Still, I'm havin' fun.
> Sent via BlackBerry by AT&T
>
> -----Original Message-----
> From: "Terry Wagoner" <wagstw46@...>
> Sender: TS-520_820_530_830@yahoogroups.com
> Date: Thu, 20 Jun 2013 11:59:06
> To: <TS-520_820_530_830@yahoogroups.com>
> Reply-to: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: TS-830S glitch progress
>
> Ok I have not seen this. Counter needs Bandswitch position input and DCBA PLL divider input for proper display. If you are getting proper display plus the leading zero it would seem you are getting 9vdc from RF board to Conn 4. I will look at circuit and see if I can figure out what would cause display of the additional leading zero.
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> I also mispoke yesterday about contact resistance acceptance criteria. I got my relay contacts confused with my rotary switch contacts. Centralab catalog shows factory design contacts in the range of 2 milliohm to 15 milliohm as opposed to the 50 to 100 that I told you.
>
> The reason I suggested using 6v/1A mv voltage drop testing over ohm meter testing was two fold. First not many hams have a milliohm meter and secondly it is important to get enough power thru the contact to penetrate any oxide film. Contacts will develop film from exposure to atmosphere especially if they sit idle and are not wiped frequently.
>
> Centralab shows their phenolic and ceramic wafer switch contacts are brass alloy and silver alloy.
>
> If your Deoxit fix is not long lived and you decide to install small jumpers make sure you dont overheat the contacts as can destroy the heat treated spring temper of the contact shoes. I install the jumper out at the window on the loop that is formed when the contact is bent and riveted. Clean this area good first to brite metal and I use a little liquid flux so solder wets quickly. I usually cut leads off 1/4 watt resistors to make the jumpers.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, crgrbrts@ wrote:

> >
> > Yes - sometimes. The leading zero is intermittent and often disappears as the unit warms (indicating another connector problem, I would guess). I cleaned all the connectors on the counter board, but have not touched the PLL board, yet.
> > Sent via BlackBerry by AT&T
> >
> > -----Original Message-----
> > From: "Terry Wagoner" <wagstw46@>
> > Sender: TS-520_820_530_830@yahoogroups.com
> > Date: Thu, 20 Jun 2013 10:52:30
> > To: <TS-520_820_530_830@yahoogroups.com>
> > Reply-to: TS-520_820_530_830@yahoogroups.com
> > Subject: [TS-520_820_530_830] Re: TS-830S glitch progress
> >
> > Craig:
> >
> > Are you saying the display is normal with the exception that it is displaying an additional leading Zero?
> >
> >
> > Terry K9TW
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Craig Roberts <crgrbrts@> wrote:
> > >
> > > Thanks, Dave,
> > >
> > > Yes, as we all expected, the RF Board wafers were the culprits. All
> > > bands are now operative. One DeoxIT treatment brought back a semblence
> > > of life with intermittent dropouts. A second application seems to have
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> > > 73 and thanks again,
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> > > Craig
> > > W3CRR
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> > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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42949. Re: TS-830S glitch progress

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-20 15:23:33 UTC
From: Terry Wagoner
Topic: 42877 Message: 42949

Looked at the TS-830 counter schematic and Counter Chip Q5 TC5070P and see that Pin 4 is the Leading Zero Blanking (LZB) pin. Looking at Toshiba data sheet reveals that LZB must be "L" to suppress the leading zero on 7, 3, and 1.8 mhz. So Pin 4 must be grounded.

Two possible problems: 1. Bad solder connection at Pin 4 and/or Bad ground connection at PC board ground plane foil hold down screws.

Can measure resistance from Pin 4 to chassis ground and see what you get. With rig off should be very low value. May go up in to low double digit resistance with power on?

Try backing off the two counter board mounting screws at the back corners of the board and re-snug them. If that does not work then will have to remove board and inspect Q5 soldering under magnification.

As I mentioned I have no 1st hand experience with leading zero suppression problems with the TS830 display, but as you suggest wont be surprised if bad ground connection isnt the problem. However would think it would also cause other erratic display issues as well?

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, crgrbrts@... wrote:
>
> I plan a partial teardown and complete cleaning and inspection this weekend. That may reveal all. I still need to fix the VOX problem on the 530, too. Still, I'm havin' fun.
> Sent via BlackBerry by AT&T
>
> -----Original Message-----
> From: "Terry Wagoner" <wagstw46@...>
> Sender: TS-520_820_530_830@yahoogroups.com
> Date: Thu, 20 Jun 2013 11:59:06
> To: <TS-520_820_530_830@yahoogroups.com>
> Reply-to: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: TS-830S glitch progress
>
> Ok I have not seen this. Counter needs Bandswitch position input and DCBA PLL divider input for proper display. If you are getting proper display plus the leading zero it would seem you are getting 9vdc from RF board to Conn 4. I will look at circuit and see if I can figure out what would cause display of the additional leading zero.
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> The reason I suggested using 6v/1A mv voltage drop testing over ohm meter testing was two fold. First not many hams have a milliohm meter and secondly it is important to get enough

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> Centralab shows their phenolic and ceramic wafer switch contacts are brass alloy and silver alloy.
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> If your Deoxit fix is not long lived and you decide to install small jumpers make sure you dont overheat the contacts as can destroy the heat treated spring temper of the contact shoes. I install the jumper out at the window on the loop that is formed when the contact is bent and riveted. Clean this area good first to brite metal and I use a little liquid flux so solder wets quickly. I usually cut leads off 1/4 watt resistors to make the jumpers.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, crgrbrts@ wrote:
> >
> > Yes - sometimes. The leading zero is intermittent and often disappears as the unit warms (indicating another connector problem, I would guess). I cleaned all the connectors on the counter board, but have not touched the PLL board, yet.
> > Sent via BlackBerry by AT&T
> >
> > -----Original Message-----
> > From: "Terry Wagoner" <wagstw46@>
> > Sender: TS-520_820_530_830@yahoogroups.com
> > Date: Thu, 20 Jun 2013 10:52:30
> > To: <TS-520_820_530_830@yahoogroups.com>
> > Reply-to: TS-520_820_530_830@yahoogroups.com
> > Subject: [TS-520_820_530_830] Re: TS-830S glitch progress
> >
> > Craig:
> >
> > Are you saying the display is normal with the exception that it is displaying an additional leading Zero?
> >
> >
> > Terry K9TW
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Craig Roberts <crgrbrts@> wrote:
> > >
> > > Thanks, Dave,
> > >
> > > Yes, as we all expected, the RF Board wafers were the culprits. All
> > > bands are now operative. One DeoxIT treatment brought back a semblence
> > > of life with intermittent dropouts. A second application seems to have
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> > > One anomaly remains, and that is the mysterious and intermittent
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> > > I realize that a couple of hours of further contact cleaning and
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> > > 73 and thanks again,
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> > > Craig
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> > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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42950. Re: [TS-520_820_530_830] Re: TS-830S glitch progress

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-20 15:37:14 UTC
From: daves@...
Topic: 42877 Message: 42950

I say we go to Champps and have waffle fries with sour cream.

On Thursday 20/06/2013 at 10:24 am, Terry Wagoner wrote:
>
>
>
>
> Looked at the TS-830 counter schematic and Counter Chip Q5 TC5070P and
> see that Pin 4 is the Leading Zero Blanking (LZB) pin. Looking at
> Toshiba data sheet reveals that LZB must be "L" to suppress the
> leading zero on 7, 3, and 1.8 mhz. So Pin 4 must be grounded.
>
> Two possible problems: 1. Bad solder connection at Pin 4 and/or Bad
> ground connection at PC board ground plane foil hold down screws.
>
> Can measure resistance from Pin 4 to chassis ground and see what you
> get. With rig off should be very low value. May go up in to low double
> digit resistance with power on?
>
> Try backing off the two counter board mounting screws at the back
> corners of the board and re-snug them. If that does not work then will
> have to remove board and inspect Q5 soldering under magnification.
>
> As I mentioned I have no 1st hand experience with leading zero
> suppression problems with the TS830 display, but as you suggest wont
> be surprised if bad ground connection isnt the problem. However would
> think it would also cause other erratic display issues as well?
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, crgrbrts@... wrote:
>>
> > I plan a partial teardown and complete cleaning and inspection this
> weekend. That may reveal all. I still need to fix the VOX problem on
> the 530, too. Still, I'm havin' fun.
>> Sent via BlackBerry by AT&T
>>
>> -----Original Message-----
>> From: "Terry Wagoner" <wagstw46@...>
>> Sender: TS-520_820_530_830@yahoogroups.com
>> Date: Thu, 20 Jun 2013 11:59:06
>> To: <TS-520_820_530_830@yahoogroups.com>
>> Reply-to: TS-520_820_530_830@yahoogroups.com
>> Subject: [TS-520_820_530_830] Re: TS-830S glitch progress
>>

> > Ok I have not seen this. Counter needs Bandswitch position input and
> DCBA PLL divider input for proper display. If you are getting proper
> display plus the leading zero it would seem you are getting 9vdc from
> RF board to Conn 4. I will look at circuit and see if I can figure out
> what would cause display of the additional leading zero.
>>
> > I also mispoke yesterday about contact resistance acceptance
> criteria. I got my relay contacts confused with my rotary switch
> contacts. Centralab catalog shows factory design contacts in the range
> of 2 milliohm to 15 milliohm as opposed to the 50 to 100 that I told
> you.
>>
> > The reason I suggested using 6v/1A mv voltage drop testing over ohm
> meter testing was two fold. First not many hams have a milliohm meter
> and secondly it is important to get enough power thru the contact to
> penetrate any oxide film. Contacts will develop film from exposure to
> atmosphere especially if they sit idle and are not wiped frequently.
>>
> > Centralab shows their phenolic and ceramic wafer switch contacts are
> brass alloy and silver alloy.
>>
> > If your Deoxit fix is not long lived and you decide to install small
> jumpers make sure you dont overheat the contacts as can destroy the
> heat treated spring temper of the contact shoes. I install the jumper
> out at the window on the loop that is formed when the contact is bent
> and riveted. Clean this area good first to brite metal and I use a
> little liquid flux so solder wets quickly. I usually cut leads off 1/4
> watt resistors to make the jumpers.
>>
>> Terry K9TW
>>
>> --- In TS-520_820_530_830@yahoogroups.com, crgrbrts@ wrote:
>> >
> > > Yes - sometimes. The leading zero is intermittent and often
> disappears as the unit warms (indicating another connector problem, I
> would guess). I cleaned all the connectors on the counter board, but
> have not touched the PLL board, yet.
>> > Sent via BlackBerry by AT&T
>> >
>> > -----Original Message-----
>> > From: "Terry Wagoner" <wagstw46@>
>> > Sender: TS-520_820_530_830@yahoogroups.com
>> > Date: Thu, 20 Jun 2013 10:52:30
>> > To: <TS-520_820_530_830@yahoogroups.com>
>> > Reply-to: TS-520_820_530_830@yahoogroups.com
>> > Subject: [TS-520_820_530_830] Re: TS-830S glitch progress
>> >
>> > Craig:
>> >
> > > Are you saying the display is normal with the exception that it is

> displaying an additional leading Zero?
>> >
>> >
>> > Terry K9TW
>> >
>> >
>> >
> > > --- In TS-520_820_530_830@yahoogroups.com, Craig Roberts
> <crgrbrts@> wrote:
>> > >
>> > > Thanks, Dave,
>> > >
> > > > Yes, as we all expected, the RF Board wafers were the culprits.
> All
> > > > bands are now operative. One DeoxIT treatment brought back a
> semblence
> > > > of life with intermittent dropouts. A second application seems
> to have
> > > > had more positive and consistent results. I am tempted to remove
> the RF
> > > > Board and a give the wafers a more thorough treatment by
> removing them,
> > > > cleaning mechanically and electrically securing the rivets to
> the
> > > > copper. As I said, I am tempted -- but not moved (for the
> moment, anyway).
>> > >
>> > > One anomaly remains, and that is the mysterious and intermittent
> > > > appearance of a leading "0" on the 1.5, 3.0 and 8 MHz bands.
> cleaning
>> > > the plug-in headers on the display board had no effect.
>> > >
>> > > I realize that a couple of hours of further contact cleaning and
>> > > freshening are ahead of me. But, I'm a happy guy right now.
>> > >
>> > > 73 and thanks again,
>> > >
>> > > Craig
>> > > W3CRR
>> > >
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>> > [Non-text portions of this message have been removed]
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>> [Non-text portions of this message have been removed]
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[Non-text portions of this message have been removed]

42951. Re: [TS-520_820_530_830] Re: TS-830S glitch progress

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-20 15:51:53 UTC
From: daves@...
Topic: 42877 Message: 42951

Apologies. Please ignore previous message.

On Thursday 20/06/2013 at 10:38 am, daves@... wrote:
>
>
>
>
> I say we go to Champps and have waffle fries with sour cream.
>
> On Thursday 20/06/2013 at 10:24 am, Terry Wagoner wrote:
>>
>>
>>
>>
> > Looked at the TS-830 counter schematic and Counter Chip Q5 TC5070P
> and
>> see that Pin 4 is the Leading Zero Blanking (LZB) pin. Looking at
>> Toshiba data sheet reveals that LZB must be "L" to suppress the
>> leading zero on 7, 3, and 1.8 mhz. So Pin 4 must be grounded.
>>
>> Two possible problems: 1. Bad solder connection at Pin 4 and/or Bad
>> ground connection at PC board ground plane foil hold down screws.
>>
>> Can measure resistance from Pin 4 to chassis ground and see what you
> > get. With rig off should be very low value. May go up in to low
> double
>> digit resistance with power on?
>>
>> Try backing off the two counter board mounting screws at the back
> > corners of the board and re-snug them. If that does not work then
> will
>> have to remove board and inspect Q5 soldering under magnification.
>>
>> As I mentioned I have no 1st hand experience with leading zero
>> suppression problems with the TS830 display, but as you suggest wont
> > be surprised if bad ground connection isnt the problem. However
> would
>> think it would also cause other erratic display issues as well?
>>
>> Terry K9TW
>>
>> --- In TS-520_820_530_830@yahoogroups.com, crgrbrts@... wrote:
>>>
> > > I plan a partial teardown and complete cleaning and inspection
> this

>> weekend. That may reveal all. I still need to fix the VOX problem on
>> the 530, too. Still, I'm havin' fun.
>>> Sent via BlackBerry by AT&T
>>>
>>> -----Original Message-----
>>> From: "Terry Wagoner" <wagstw46@...>
>>> Sender: TS-520_820_530_830@yahoogroups.com
>>> Date: Thu, 20 Jun 2013 11:59:06
>>> To: <TS-520_820_530_830@yahoogroups.com>
>>> Reply-to: TS-520_820_530_830@yahoogroups.com
>>> Subject: [TS-520_820_530_830] Re: TS-830S glitch progress
>>>
> > > Ok I have not seen this. Counter needs Bandswitch position input
> and
>> DCBA PLL divider input for proper display. If you are getting proper
> > display plus the leading zero it would seem you are getting 9vdc
> from
> > RF board to Conn 4. I will look at circuit and see if I can figure
> out
>> what would cause display of the additional leading zero.
>>>
>> > I also mispoke yesterday about contact resistance acceptance
>> criteria. I got my relay contacts confused with my rotary switch
> > contacts. Centralab catalog shows factory design contacts in the
> range
>> of 2 milliohm to 15 milliohm as opposed to the 50 to 100 that I told
>> you.
>>>
> > > The reason I suggested using 6v/1A mv voltage drop testing over
> ohm
> > meter testing was two fold. First not many hams have a milliohm
> meter
>> and secondly it is important to get enough power thru the contact to
> > penetrate any oxide film. Contacts will develop film from exposure
> to
>> atmosphere especially if they sit idle and are not wiped frequently.
>>>
> > > Centralab shows their phenolic and ceramic wafer switch contacts
> are
>> brass alloy and silver alloy.
>>>
> > > If your Deoxit fix is not long lived and you decide to install
> small
>> jumpers make sure you dont overheat the contacts as can destroy the
> > heat treated spring temper of the contact shoes. I install the
> jumper
> > out at the window on the loop that is formed when the contact is
> bent
>> and riveted. Clean this area good first to brite metal and I use a
> > little liquid flux so solder wets quickly. I usually cut leads off

> 1/4
>> watt resistors to make the jumpers.
>>>
>>> Terry K9TW
>>>
>>> --- In TS-520_820_530_830@yahoogroups.com, crgrbrts@ wrote:
>>> >
>> > > Yes - sometimes. The leading zero is intermittent and often
> > disappears as the unit warms (indicating another connector problem,
> I
>> would guess). I cleaned all the connectors on the counter board, but
>> have not touched the PLL board, yet.
>>> > Sent via BlackBerry by AT&T
>>> >
>>> > -----Original Message-----
>>> > From: "Terry Wagoner" <wagstw46@>
>>> > Sender: TS-520_820_530_830@yahoogroups.com
>>> > Date: Thu, 20 Jun 2013 10:52:30
>>> > To: <TS-520_820_530_830@yahoogroups.com>
>>> > Reply-to: TS-520_820_530_830@yahoogroups.com
>>> > Subject: [TS-520_820_530_830] Re: TS-830S glitch progress
>>> >
>>> > Craig:
>>> >
> > > > Are you saying the display is normal with the exception that it
> is
>> displaying an additional leading Zero?
>>> >
>>> >
>>> > Terry K9TW
>>> >
>>> >
>>> >
>> > > --- In TS-520_820_530_830@yahoogroups.com, Craig Roberts
>> <crgrbrts@> wrote:
>>> > >
>>> > > Thanks, Dave,
>>> > >
> > > > > Yes, as we all expected, the RF Board wafers were the
> culprits.
>> All
>> > > > bands are now operative. One DeoxIT treatment brought back a
>> semblence
>> > > > of life with intermittent dropouts. A second application seems
>> to have
> > > > > had more positive and consistent results. I am tempted to
> remove
>> the RF
>> > > > Board and a give the wafers a more thorough treatment by
>> removing them,

>> > > > cleaning mechanically and electrically securing the rivets to
>> the
>> > > > copper. As I said, I am tempted -- but not moved (for the
>> moment, anyway).
>>> > >
> >> > > One anomaly remains, and that is the mysterious and
> intermittent
>> > > > appearance of a leading "0" on the 1.5, 3.0 and 8 MHz bands.
>> cleaning
>>> > > the plug-in headers on the display board had no effect.
>>> > >
> >> > > I realize that a couple of hours of further contact cleaning
> and
>>> > > freshening are ahead of me. But, I'm a happy guy right now.
>>> > >
>>> > > 73 and thanks again,
>>> > >
>>> > > Craig
>>> > > W3CRR
>>> > >
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>>> > [Non-text portions of this message have been removed]
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>>> [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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42952. Re: [TS-520_820_530_830] Re: TS-830S glitch progress

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-20 16:16:29 UTC
From: Craig Roberts
Topic: 42877 Message: 42952

> /Apologies. Please ignore previous message./
>
Why? it sounds like a nice way to spend the afternoon.

At any rate, many thanks to Terry (again). I did a bit of hold down screw re-tightening last night to no avail, so, I may have to pull the board. I did notice that one of the counter board screws was a slotted head one -- quite unlike any others in the radio. Perhaps the original got stripped or...??

Oh - as i mentioned, I intend to do a thorough cleanup of the 830 this weekend and would like to pull the front panel to soak and get the grime off. . I don't have the radio in front of me (I'm at work and it's not) but it would appear that extracting the VFO is a necessary step. Is this so and, if so, what's involved? Anything tricky?

73,

Craig
W3CRR

[Non-text portions of this message have been removed]

42953. Re: [TS-520_820_530_830] Hello

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-20 15:52:08 UTC
From: Jim Shelby
Topic: 42877 Message: 42953

Hello All,

I have just joined the group. My name is Jim and I make Kansas City my home. For some time, I've been active on 40 and 20 meters with QRP CW rigs.

I've just purchased a TS 520SE. It has problems, but nothing too serious. It's really been nice to learn about useful approaches to repair ... like Deoxit. I don't know what I would do without it!

So I'm mostly just "reading the mail" and learning a lot.

Best,

Jim
KB0WL
>
>
>

[Non-text portions of this message have been removed]

42954. Re: TS-830S glitch progress

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-20 16:41:07 UTC
From: Terry Wagoner
Topic: 42877 Message: 42954

Looks like someone had counter board out and lost a screw as both rear screws are slotted head. No need to pull VFO just two screws at rear of board and two countersunk slotted head at top center of front sub panel. Board and display and mounting bracket will come out.

Well you could try grounding Q5 Pin 4 next time you have a leading zero displayed. Just make sure you are on Pin 4. I bought a set of SMT needle point probes for my DMM and has long sharp probe tip that is insulated with just the tip exposed. Really good for getting on chip pins without slipping off them.

Regards VFO removal you will want to do that at some point to clean the rotor shaft wiper contact at rear of air variable, re-snug the PC board screws, and to Tri-Flow the gear train. Just have to remove 4 allen head metric screws and gently pull VFO forward and slide the two silicon boot mounted lamps out of the U-slots on each side. Then unplug mini-molex connector from rear shield can. Just be careful re-installing the small shield can screws as easy to cross thread them and also easy to pinch the VFO dial lamp Red power leads when re-tightening the 4 allen heads. I have seen several with very flat leads. If VFO has never been removed allen heads will have locktite on them so good idea to work them back and forth as you loosen and remove them.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Craig Roberts <crgrbrts@...> wrote:
>
> > /Apologies. Please ignore previous message./
> >
> Why? it sounds like a nice way to spend the afternoon.
>
> At any rate, many thanks to Terry (again). I did a bit of hold down
> screw re-tightening last night to no avail, so, I may have to pull the
> board. I did notice that one of the counter board screws was a slotted
> head one -- quite unlike any others in the radio. Perhaps the original
> got stripped or...??
>
> Oh - as i mentioned, I intend to do a thorough cleanup of the 830 this
> weekend and would like to pull the front panel to soak and get the grime
> off. . I don't have the radio in front of me (I'm at work and it's not)
> but it would appear that extracting the VFO is a necessary step. Is
> this so and, if so, what's involved? Anything tricky?
>
> 73,
>
> Craig
> W3CRR
>
>
>

> [Non-text portions of this message have been removed]
>

42955. Re: Hello

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-20 16:43:47 UTC
From: Terry Wagoner
Topic: 42877 Message: 42955

Jim:

Welcome to the group. Just use Deoxit sparingly on de-energized rig and dont let it pool and blow it off with canned air.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Jim Shelby <shelby3782@...> wrote:
>
>
>
> Hello All,
>
> I have just joined the group. My name is Jim and I make Kansas City my
> home. For some time, I've been active on 40 and 20 meters with QRP CW
> rigs.
>
> I've just purchased a TS 520SE. It has problems, but nothing too
> serious. It's really been nice to learn about useful approaches to
> repair ... like Deoxit. I don't know what I would do without it!
>
> So I'm mostly just "reading the mail" and learning a lot.
>
> Best,
>
> Jim
> KB0WL
> >
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

42956. Re: [TS-520_820_530_830] Re: TS-830S glitch progress

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-20 17:09:45 UTC
From: Craig Roberts
Topic: 42877 Message: 42956

You de MAN! Thanks, Terry.

Say, regarding the Hakko 808 -- I'm tempted. Does it fit into relatively snug spaces? It looks to be about the size of an old Weller soldering gun.

42957. Re: [TS-520_820_530_830] Re: Hello

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-20 17:20:09 UTC
From: Craig Roberts
Topic: 42877 Message: 42957

Welcome to Jim in KC. I will be your Kenwood guru.

Oh, sure -- Terry and the Pirates will actually answer your queries, but I perform an equally valuable service. I will ask the questions that you are too embarrassed or ashamed to pose -- and I will lead the way in making dumb-ass mistakes (with full disclosure) thus saving you time and expense.

You're welcome,

Craig
W3CRR

Oh, by the way, Jim -- do you remember the old KY-102 FM radio station? My wife was part of the on-air "morning crew" there some years ago. She was also in charge of station promotions. I tease her for missing an terrific promo opportunity by not staging a "KY Jam and Jelly Making Contest."

42958. Re: [TS-520_820_530_830] Re: TS-830S glitch progress

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-20 17:27:32 UTC
From: Ken Winterling
Topic: 42877 Message: 42958

Craig,

The barrel of the '808 is about the diameter of a "standard-sized" Weller soldering pencil, not a gun. I am at work so I can't measure mine but, from memory (bad source!), I think it is about 3/8" in diameter. It does get into close quarters. Since you only need one hand (no solder wick or solder sucker) it leaves the other hand free for manipulating and extricating desoldered parts.

I'm sure one of the '808 owners sitting at their bench can provide accurate information before I get home.

Ken
WA2LBI

On Thu, Jun 20, 2013 at 1:09 PM, Craig Roberts <crgrbrts@...> wrote:

> **
>
>
> You de MAN! Thanks, Terry.
>
> Say, regarding the Hakko 808 -- I'm tempted. Does it fit into relatively
> snug spaces? It looks to be about the size of an old Weller soldering gun.
> __._._._
>

[Non-text portions of this message have been removed]

42959. Re: [TS-520_820_530_830] Re: TS-830S glitch progress

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-20 18:11:18 UTC
From: Craig Roberts
Topic: 42877 Message: 42959

Thanks, Ken.

It sounds ideal, and is probably gentler on circuit board traces, too. eh?
>

[Non-text portions of this message have been removed]

42960. Re: [TS-520_820_530_830] Re: TS-830S glitch progress

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-20 18:13:01 UTC
From: Jim Showker
Topic: 42877 Message: 42960

Hi Craig,
I've been following this thread.

We have a page up on our site about repairing the bandswitch, with a bunch of pictures. I've done quite a few of them now, and it seems to work fine.

http://www.hybridrestore.com/bandswitch-repair/

Jim KE7OAY

On 6/20/2013 10:27 AM, Ken Winterling wrote:
>
> Craig,
>
> The barrel of the '808 is about the diameter of a "standard-sized" Weller
> soldering pencil, not a gun. I am at work so I can't measure mine but,
> from memory (bad source!), I think it is about 3/8" in diameter. It does
> get into close quarters. Since you only need one hand (no solder wick or
> solder sucker) it leaves the other hand free for manipulating and
> extricating desoldered parts.
>
> I'm sure one of the '808 owners sitting at their bench can provide
> accurate
> information before I get home.
>
> Ken
> WA2LBI
>
> On Thu, Jun 20, 2013 at 1:09 PM, Craig Roberts <crgrbrts@...
> <mailto:crgrbrts%40verizon.net>> wrote:
>
> > **
> >
> >
> > You de MAN! Thanks, Terry.
> >
> > Say, regarding the Hakko 808 -- I'm tempted. Does it fit into relatively
> > snug spaces? It looks to be about the size of an old Weller
> soldering gun.
> > __._._._
> >
>
> [Non-text portions of this message have been removed]
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>

[Non-text portions of this message have been removed]

42961. Re: TS-830S glitch progress

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-20 20:09:46 UTC
From: Terry Wagoner
Topic: 42877 Message: 42961

Several optional tips including skinny snout. They are a little salty.

I think Jimmy Lamanteer WB2KNR has bought additional tips for his. Might contact Dick W0NTA who does TS530 restorations and see what he uses. He has a website and he and Jimmmie phone numbers are listed on the Kenwood repair tech list that Mark Gilger put together. Terry

--- In TS-520_820_530_830@yahoogroups.com, Ken Winterling <wa2lbi@...> wrote:
>
> Craig,
>
> The barrel of the '808 is about the diameter of a "standard-sized" Weller
> soldering pencil, not a gun. I am at work so I can't measure mine but,
> from memory (bad source!), I think it is about 3/8" in diameter. It does
> get into close quarters. Since you only need one hand (no solder wick or
> solder sucker) it leaves the other hand free for manipulating and
> extricating desoldered parts.
>
> I'm sure one of the '808 owners sitting at their bench can provide accurate
> information before I get home.
>
> Ken
> WA2LBI
>
>
> On Thu, Jun 20, 2013 at 1:09 PM, Craig Roberts <crgrbrts@...> wrote:
>
> > **
> > >
> > >
> > > You de MAN! Thanks, Terry.
> > >
> > > Say, regarding the Hakko 808 -- I'm tempted. Does it fit into relatively
> > > snug spaces? It looks to be about the size of an old Weller soldering gun.
> > > __·_,_·_
> > >
> >
> >
> > [Non-text portions of this message have been removed]
> >

42962. Re: [TS-520_820_530_830] Hello

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-20 21:32:06 UTC
From: Joseph Stiles
Topic: 42877 Message: 42962

Jim,

welcome aboard...enjoy your "SE"...lots of knowledge here...helped me many times!

73 Joe
WB7UQU

From: Jim Shelby <shelby3782@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, June 20, 2013 8:52 AM
Subject: Re: [TS-520_820_530_830] Hello

Hello All,

I have just joined the group. My name is Jim and I make Kansas City my
home. For some time, I've been active on 40 and 20 meters with QRP CW
rigs.

I've just purchased a TS 520SE. It has problems, but nothing too
serious. It's really been nice to learn about useful approaches to
repair ... like Deoxit. I don't know what I would do without it!

So I'm mostly just "reading the mail" and learning a lot.

Best,

Jim
KB0WL
>
>
>

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[Non-text portions of this message have been removed]

42963. TS-830S minus zero

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-21 00:48:34 UTC
From: Craig Roberts
Topic: 42877 Message: 42963

Well, I replaced the non-matching Counter Board screws and the stray, leading "0" has vanished on the 160, 80 and 40 meter displays. Never mind that I re-tightend the original screws last night - twice. This time it worked (at least so far).
So, the 830S is now working perfectly normally, but I'm, still giving it a "bath" this weekend. It needs it.

Oh -- the cabinet /desperately /needs painting. Anyone had any luck going the Sherwin Williams auto-paint-store-color-matching-spray-can route?

73,

Craig

> .
>
>

[Non-text portions of this message have been removed]

42964. Re: TS-830S minus zero

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-21 00:58:41 UTC
From: Terry Wagoner
Topic: 42877 Message: 42964

Good. If it comes back just pull the assembly and clean the ground plane foils in the mounting hole area and polish the mating chassis area. With bolt missing could have some corrosion/oxidation at that mounting hole and not getting good low resistance connection. Some folks install star lockwashers, but if areas are cleaned shouldnt have to do that.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Craig Roberts <crgrbrts@...> wrote:
>
> Well, I replaced the non-matching Counter Board screws and the stray,
> leading "0" has vanished on the 160, 80 and 40 meter displays. Never
> mind that I re-tightend the original screws last night - twice. This
> time it worked (at least so far).
> So, the 830S is now working perfectly normally, but I'm, still giving it
> a "bath" this weekend. It needs it.
>
> Oh -- the cabinet /desperately /needs painting. Anyone had any luck
> going the Sherwin Williams auto-paint-store-color-matching-spray-can route?
>
> 73,
>
> Craig
>
> > .
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

42965. RE: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-21 11:31:06 UTC
From: fpath fpath
Topic: 42877 Message: 42965

Terry and Craig,

Have measure or should I say attempted to measure voltage on TP2 on audio board. No voltage being recorded at this time, however it switches the microphone on without throwing the relay. Using two tone with the MM probe on TP2 I get 125mV, but with no two tone, no voltage appears

TP3 RX 12v

TX 10.5v

Dav

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: wagstw46@...
Date: Tue, 18 Jun 2013 03:01:03 +0000
Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

Craig:

1. What happens if you remove the Mic?

2. What happens if you remove the Mic, set mic gain to 1200, rig in SSB mode and flip to send? Any RF output?

3. Do you have normal side tone? Normal semi break in CW operations? Side tone is not enabled in SSB mode?

4. Perhaps a TS-530 owner that has normal VOX operation could measure the dc voltage levels at TP-2 on audio board for you.

If I get time I will measure TP-2 dc voltages on a TS-830 for you as the VOX amp and VOX delay circuits are similar. They both sample the audio amp output and rectify it and develop a dc control voltage that is used to counter the DC voltage developed by the VOX amp which ends up being input for an emitter coupled schmitt trigger circuit to key the relay.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Craig" <crgrbrts@...> wrote:
>
> In an attempt to cure my stubborn TS-530S VOX problem (Anti-Vox has no
> effect, no matter what VOX Gain and VOX Delay settings are used unless the speaker is muted or headphones are used), I plan to dive into the AF Board to renew the 'lytics along the line.
>

> Any hints about board removal? Obviously, connectors must be gently
> unplugged and screws removed, but what about the wires soldered on
> topside? The reason I am asking is that -- more than once -- I have
> gone to great pains to access wiring or remove components in unfamiliar radios only to learn later that there was an easy, painless way to accomplish the same task known to the experienced, but not to me.
>
> Also, what are your views on completely recapping the 530 (or 830, for
> that matter, since I have one of those on the way, too)? Good
> practice? Unnecessary if symptoms of unpleasantness have not appeared?
> I already did the HV caps, but that was dead simple and quick.
>
> Thanks, gurus.
>
> 73,
>
> Craig
> W3CRR
>

[Non-text portions of this message have been removed]

42966. Re: [TS-520_820_530_830] TS-830S minus zero

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-21 13:17:33 UTC
From: Craig Roberts
Topic: 42877 Message: 42966

Like a bad penny, the unwanted "leading zero" returned this morning (we all expected this, didn't we?).

Any tricks and/or cautions when removing the Counter Board? I don't want to break anything.

Thanks and 73,

Craig
W3CRR

42967. Re: TS-830S minus zero

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-21 14:20:51 UTC
From: Terry Wagoner
Topic: 42877 Message: 42967

Did you try measuring the resistance at Pin 4 to chassis ground with the 0 displayed?

Measure for potential first (should be 0 or very low) and then measure the resistance. Then measure the resistance with rig down powered. Should be very low with rig down powered.

If 0 or very low potential at Pin 4 then temporarily ground it with jumper to chassis ground to see if 0 is blanked. If temporary grounding doesnt blank it then not likely you have a bad ground connection at Pin 4. Resoldering Pin 4 is not going to help if temporary ground jumper doesnt blank the 0.

I think finding replacement Q5 will not be easy and you will be looking at getting replacement counter board from Bob Mansker or elsewhere.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Craig Roberts <crgrbrts@...> wrote:
>
> Like a bad penny, the unwanted "leading zero" returned this morning (we
> all expected this, didn't we?).
>
> Any tricks and/or cautions when removing the Counter Board? I don't want
> to break anything.
>
> Thanks and 73,
>
> Craig
> W3CRR
>

42968. TS-520SE-InterMittant VFO

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-21 14:35:52 UTC
From: Jerry
Topic: 42968 Message: 42968

Good Morning Folks /Well my vfo is back to being intermittent again
good old tap on the knob brings it in and out/ so wud like a more permanent fix sprayed it out and that lasted a couple months/ how difficult is it to remove the vfo to really lube and clean or is it too easy to ruin it all togeather Jerry kj6ntl

42969. Re: Hello

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-21 14:40:33 UTC
From: scott10k
Topic: 42877 Message: 42969

Welcome to the Group Jim! You will find much valuable information by just reading the posts, and of course asking questions as you get into the use and care of your TS-520SE. I have two hybrids-a TS-530SP and a TS-830S, and had several issues with them in the past that this forum, especially Terry and Mike, helped me to correct. Yes-and that can of Deoxit along with some canned air is an important tool. Welcome again to the group and to the enjoyment of Kenwood hybrids.
73s, Scott, N6CIC

--- In TS-520_820_530_830@yahoogroups.com, Jim Shelby <shelby3782@...> wrote:
>
>
>
> Hello All,
>
> I have just joined the group. My name is Jim and I make Kansas City my
> home. For some time, I've been active on 40 and 20 meters with QRP CW
> rigs.
>
> I've just purchased a TS 520SE. It has problems, but nothing too
> serious. It's really been nice to learn about useful approaches to
> repair ... like Deoxit. I don't know what I would do without it!
>
> So I'm mostly just "reading the mail" and learning a lot.
>
> Best,
>
> Jim
> KB0WL
> >
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

42970. Alignment Tool Set

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-21 19:42:13 UTC
From: Don D
Topic: 42970 Message: 42970

Hi All
I just received my shipment from Milestone Technogies
http://www.mtechnologies.com/tools/index.htm#alignset
First let me stay they do not pay me to advertise,so it's just my opinion
I ordered the 10 pc and the 3 pc set
The ten pc set would be a better choice Alignment Tool Set, ABS Plastic
The quality is good and shipping was more reasonable than Ebay
This time i will align my ts830 on it's side as putting it upside down i think makes me apply more force on the align tool,and then we end up with a slug at the bottom
Just a thought

42971. Re: [TS-520_820_530_830] Alignment Tool Set

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-21 19:54:58 UTC
From: Mark Gilger
Topic: 42970 Message: 42971

Don,
Please let the group know how the 10 piece set
works out after you perform your alignment.
Thanks,
Mark

At 03:42 PM 6/21/2013, Don D wrote:
>
>
>Hi All
>I just received my shipment from Milestone Technogies
><http://www.mtechnologies.com/tools/index.htm#alignset>http://www.mtechnologies.com/tools
/index.htm#alignset
>First let me stay they do not pay me to advertise,so it's just my opinion
>I ordered the 10 pc and the 3 pc set
>The ten pc set would be a better choice Alignment Tool Set, ABS Plastic
>The quality is good and shipping was more reasonable than Ebay
>This time i will align my ts830 on it's side as
>putting it upside down i think makes me apply
>more force on the align tool,and then we end up with a slug at the bottom
>Just a thought
>
>

[Non-text portions of this message have been removed]

42972. Re: [TS-520_820_530_830] Alignment Tool Set

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-21 20:07:08 UTC
From: Don
Topic: 42970 Message: 42972

Hi Mark

I played with them on a spare rf board i have and was very pleased with them
Nice mixture of tips and the price was right.
73
Don/Ve2ud

On 21/06/2013 3:54 PM, Mark Gilger wrote:
>
> Don,
> Please let the group know how the 10 piece set
> works out after you perform your alignment.
> Thanks,
> Mark
>
> At 03:42 PM 6/21/2013, Don D wrote:
> >
> >
> >Hi All
> >I just received my shipment from Milestone Technogies
> ><http://www.mtechnologies.com/tools/index.htm#alignset>http://www.mtechnologies.com/too
ls/index.htm#alignset
> >First let me stay they do not pay me to advertise,so it's just my opinion
> >I ordered the 10 pc and the 3 pc set
> >The ten pc set would be a better choice Alignment Tool Set, ABS Plastic
> >The quality is good and shipping was more reasonable than Ebay
> >This time i will align my ts830 on it's side as
> >putting it upside down i think makes me apply
> >more force on the align tool,and then we end up with a slug at the bottom
> >Just a thought
> >
> >
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

42973. Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-22 00:08:53 UTC
From: Terry Wagoner
Topic: 42877 Message: 42973

Dave:

Thanks for attempting to measure voltages at TP-2 for Craig. I did not explain myself very well. What I was trying to confirm on a TS-530 that has a functioning VOX what the normal Anti-Vox DC "bias" or threshold voltage is.

I know what it is for a TS-830, but not for a 530 but suspect very close to same as circuits are essentially identical. The reason wanted to get this for Craig was so he could tell if his Anti-VOX circuit is working. Is it producing a DC threshold voltage when there is strong audio signal from Q6 Audio Power Amplifier being coupled to the speaker line ?

At TP-2 there can be two signals. Amplified Mic Audio (ac signal)either from the speaker or your voice and DC "bias" from the Anti-Vox circuit. The Anti-vox essentially establishes a DC threshold that the mic audio has to overcome in order to key the emitter coupled Schmitt trigger and key the relay. It does this by sampling the output of Q6 speaker line and full wave rectifying it.

Anti-vox circuit samples the Audio Power Amp Q6 output on the Speaker line and is coupled thru the wiper of the Anti-vox pot. It is amplified and then full wave rectified by Q7 and D6/D7. The output from the speaker is rectified and used as a kind of varying "bias" voltage for Anti-vox function based on level of output from Q6.

So the signal I wanted someone to measure was the DC voltage at TP-2 produced when there was no audio from Q6 and when there was a strong audio output tone from Q6 being coupled to the speaker line. I did not state that very well.

One way to do this is to use the Marker signal.

Here is how I measured this DC level at TP-2 in a TS-830:
1. Antenna on dummy load
2. RFG at "5" (need to get a no audio voltage level)
3. AFG at "2"
4. Mode LSB or USB
5. Vox Gain off
6. Anti-Vox at Full CW
7. VFO 200, Drive control 1200
8. Marker OFF
9. Measure DC voltage at TP-2 with DMM. Need to wait until voltage decays completely off. Should see +0.001 to -0.001 dcv bouncing back and forth. So essentially zero DC offset voltage at TP-2 with no signal conditions.
10. Now turn on Marker and tune VFO for approx 800hz note and peak Drive control. Watch the DMM and tune the VFO for maximum DC voltage. Should see something like + 0.0305 vdc. Just tune VFO and Drive control for maximum voltage.

When you turn off the Marker you will have to wait awhile for voltage to decay to lowest no audio signal level.

If Craigs Anti-VOX is not producing this 0.0305 vdc bias voltage then speaker sounds will produce sufficient signals to key the rig thru the mic. Cleaning and exercising the Anti-vox pot as suggested my Mike W5RKL would be first thing to try. If there is no power amp audio coming from the wiper of this pot then the Anti-vox circuit cannot produce the necessary bias or offset voltage. If cleaning pot doesnt produce 0.030 vdc at TP-2 then have to trouble shoot the Anti-vox circuit.

Another way to get a test tone out of Q6 Audio Amp would be to inject modulated RF into SO-239 from RF signal generator that has internal or external modulation capability, but suspect Marker test is as good as any.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
> Terry and Craig,
>
>
>
> Have measure or should I say attempted to measure voltage on TP2 on audio board. No voltage being recorded at this time, however it switches the microphone on without throwing the relay. Using two tone with the MM probe on TP2 I get 125mV, but with no two tone, no voltage appears
>
>

42974. RE: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-22 00:12:40 UTC
From: fpath fpath
Topic: 42877 Message: 42974

Terry,

Sorry will retry and report back shortly

73's

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: wagstw46@...
Date: Sat, 22 Jun 2013 00:08:53 +0000
Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

Dave:

Thanks for attempting to measure voltages at TP-2 for Craig. I did not explain myself very well. What I was trying to confirm on a TS-530 that has a functioning VOX what the normal Anti-Vox DC "bias" or threshold voltage is.

I know what it is for a TS-830, but not for a 530 but suspect very close to same as circuits are essentially identical. The reason wanted to get this for Craig was so he could tell if his Anti-VOX circuit is working. Is it producing a DC threshold voltage when there is strong audio signal from Q6 Audio Power Amplifier being coupled to the speaker line ?

At TP-2 there can be two signals. Amplified Mic Audio (ac signal)either from the speaker or your voice and DC "bias" from the Anti-Vox circuit. The Anti-vox essentially establishes a DC threshold that the mic audio has to overcome in order to key the emitter coupled Schmitt trigger and key the relay. It does this by sampling the output of Q6 speaker line and full wave rectifying it.

Anti-vox circuit samples the Audio Power Amp Q6 output on the Speaker line and is coupled thru the wiper of the Anti-vox pot. It is amplified and then full wave rectified by Q7 and D6/D7. The output from the speaker is rectified and used as a kind of varying "bias" voltage for Anti-vox function based on level of output from Q6.

So the signal I wanted someone to measure was the DC voltage at TP-2 produced when there was no audio from Q6 and when there was a strong audio output tone from Q6 being coupled to the speaker line. I did not state that very well.

One way to do this is to use the Marker signal.

Here is how I measured this DC level at TP-2 in a TS-830:
1. Antenna on dummy load
2. RFG at "5" (need to get a no audio voltage level)
3. AFG at "2"
4. Mode LSB or USB

5. Vox Gain off
6. Anti-Vox at Full CW
7. VFO 200, Drive control 1200
8. Marker OFF
9. Measure DC voltage at TP-2 with DMM. Need to wait until voltage decays completely off. Should see +0.001 to -0.001 dcv bouncing back and forth. So essentially zero DC offset voltage at TP-2 with no signal conditions.
10. Now turn on Marker and tune VFO for approx 800hz note and peak Drive control. Watch the DMM and tune the VFO for maximum DC voltage. Should see something like + 0.0305 vdc. Just tune VFO and Drive control for maximum voltage.

When you turn off the Marker you will have to wait awhile for voltage to decay to lowest no audio signal level.

If Craigs Anti-VOX is not producing this 0.0305 vdc bias voltage then speaker sounds will produce sufficient signals to key the rig thru the mic. Cleaning and exercising the Anti-vox pot as suggested my Mike W5RKL would be first thing to try. If there is no power amp audio coming from the wiper of this pot then the Anti-vox circuit cannot produce the necessary bias or offset voltage. If cleaning pot doesnt produce 0.030 vdc at TP-2 then have to trouble shoot the Anti-vox circuit.

Another way to get a test tone out of Q6 Audio Amp would be to inject modulated RF into SO-239 from RF signal generator that has internal or external modulation capability, but suspect Marker test is as good as any.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
> Terry and Craig,
>
>
>
> Have measure or should I say attempted to measure voltage on TP2 on audio board. No voltage being recorded at this time, however it switches the microphone on without throwing the relay. Using two tone with the MM probe on TP2 I get 125mV, but with no two tone, no voltage appears
>
>

[Non-text portions of this message have been removed]

42975. RE: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-22 00:35:10 UTC
From: fpath fpath
Topic: 42877 Message: 42975

Terry,

Have just tested both 530s. They are identical in all respects to this test procedure

TP2 0.005v at resting voltage

with marker on and tripping vox

TP2 0.0027 - 0.0031v

Previously used analogue micro volt MM, hence why it didn't respond to rapidly changing voltage.

Let me know anything else you need checked, heading to work in an hour and will be available tonight upon return

73's

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: wagstw46@...
Date: Sat, 22 Jun 2013 00:08:53 +0000
Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

Dave:

Thanks for attempting to measure voltages at TP-2 for Craig. I did not explain myself very well. What I was trying to confirm on a TS-530 that has a functioning VOX what the normal Anti-Vox DC "bias" or threshold voltage is.

I know what it is for a TS-830, but not for a 530 but suspect very close to same as circuits are essentially identical. The reason wanted to get this for Craig was so he could tell if his Anti-VOX circuit is working. Is it producing a DC threshold voltage when there is strong audio signal from Q6 Audio Power Amplifier being coupled to the speaker line ?

At TP-2 there can be two signals. Amplified Mic Audio (ac signal)either from the speaker or your voice and DC "bias" from the Anti-Vox circuit. The Anti-vox essentially establishes a DC threshold that the mic audio has to overcome in order to key the emitter coupled Schmitt trigger and key the relay. It does this by sampling the output of Q6 speaker line and full wave rectifying it.

Anti-vox circuit samples the Audio Power Amp Q6 output on the Speaker line and is coupled thru the wiper of the Anti-vox pot. It is amplified and then full wave rectified by Q7 and D6/D7. The output from the speaker is rectified and used as a kind of varying "bias" voltage for Anti-vox function based on level of output from Q6.

So the signal I wanted someone to measure was the DC voltage at TP-2 produced when there was no audio from Q6 and when there was a strong audio output tone from Q6 being coupled to the speaker line. I did not state that very well.

One way to do this is to use the Marker signal.

Here is how I measured this DC level at TP-2 in a TS-830:
1. Antenna on dummy load
2. RFG at "5" (need to get a no audio voltage level)
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4. Mode LSB or USB
5. Vox Gain off
6. Anti-Vox at Full CW
7. VFO 200, Drive control 1200
8. Marker OFF
9. Measure DC voltage at TP-2 with DMM. Need to wait until voltage decays completely off. Should see +0.001 to -0.001 dcv bouncing back and forth. So essentially zero DC offset voltage at TP-2 with no signal conditions.
10. Now turn on Marker and tune VFO for approx 800hz note and peak Drive control. Watch the DMM and tune the VFO for maximum DC voltage. Should see something like + 0.0305 vdc. Just tune VFO and Drive control for maximum voltage.

When you turn off the Marker you will have to wait awhile for voltage to decay to lowest no audio signal level.

If Craigs Anti-VOX is not producing this 0.0305 vdc bias voltage then speaker sounds will produce sufficient signals to key the rig thru the mic. Cleaning and exercising the Anti-vox pot as suggested my Mike W5RKL would be first thing to try. If there is no power amp audio coming from the wiper of this pot then the Anti-vox circuit cannot produce the necessary bias or offset voltage. If cleaning pot doesnt produce 0.030 vdc at TP-2 then have to trouble shoot the Anti-vox circuit.

Another way to get a test tone out of Q6 Audio Amp would be to inject modulated RF into SO-239 from RF signal generator that has internal or external modulation capability, but suspect Marker test is as good as any.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
> Terry and Craig,
>
>
>
> Have measure or should I say attempted to measure voltage on TP2 on audio board. No voltage being recorded at this time, however it switches the microphone on without throwing the relay. Using two tone with the MM probe on TP2 I get 125mV, but with no two tone, no voltage appears
>
>

[Non-text portions of this message have been removed]

42976. Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-22 01:45:22 UTC
From: Terry Wagoner
Topic: 42877 Message: 42976

Dave: Need to turn Anti vox pot full CW so Marker does not trip vox and see what the maximum dc voltage is at TP-2. No rush. Thanks

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
> Terry,
>
>
>
> Have just tested both 530s. They are identical in all respects to this test procedure
>
>
> TP2 0.005v at resting voltage
>
>
>
> with marker on and tripping vox
>
>
>
> TP2 0.0027 - 0.0031v
>
>
>
> Previously used analogue micro volt MM, hence why it didn't respond to rapidly changing voltage.
>
>
>
> Let me know anything else you need checked, heading to work in an hour and will be available tonight upon return
>
>
>
> 73's
>
> Dave
>
> VK5PDL
>
>
>
> To: TS-520_820_530_830@yahoogroups.com
> From: wagstw46@...
> Date: Sat, 22 Jun 2013 00:08:53 +0000

> Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
>
>
>
>
>
>
> Dave:
>
> Thanks for attempting to measure voltages at TP-2 for Craig. I did not explain myself very well. What I was trying to confirm on a TS-530 that has a functioning VOX what the normal Anti-Vox DC "bias" or threshold voltage is.
>
> I know what it is for a TS-830, but not for a 530 but suspect very close to same as circuits are essentially identical. The reason wanted to get this for Craig was so he could tell if his Anti-VOX circuit is working. Is it producing a DC threshold voltage when there is strong audio signal from Q6 Audio Power Amplifier being coupled to the speaker line ?
>
> At TP-2 there can be two signals. Amplified Mic Audio (ac signal)either from the speaker or your voice and DC "bias" from the Anti-Vox circuit. The Anti-vox essentially establishes a DC threshold that the mic audio has to overcome in order to key the emitter coupled Schmitt trigger and key the relay. It does this by sampling the output of Q6 speaker line and full wave rectifying it.
>
> Anti-vox circuit samples the Audio Power Amp Q6 output on the Speaker line and is coupled thru the wiper of the Anti-vox pot. It is amplified and then full wave rectified by Q7 and D6/D7. The output from the speaker is rectified and used as a kind of varying "bias" voltage for Anti-vox function based on level of output from Q6.
>
> So the signal I wanted someone to measure was the DC voltage at TP-2 produced when there was no audio from Q6 and when there was a strong audio output tone from Q6 being coupled to the speaker line. I did not state that very well.
>
> One way to do this is to use the Marker signal.
>
> Here is how I measured this DC level at TP-2 in a TS-830:
> 1. Antenna on dummy load
> 2. RFG at "5" (need to get a no audio voltage level)
> 3. AFG at "2"
> 4. Mode LSB or USB
> 5. Vox Gain off
> 6. Anti-Vox at Full CW
> 7. VFO 200, Drive control 1200
> 8. Marker OFF
> 9. Measure DC voltage at TP-2 with DMM. Need to wait until voltage decays completely off. Should see +0.001 to -0.001 dcv bouncing back and forth. So essentially zero DC offset voltage at TP-2 with no signal conditions.
> 10. Now turn on Marker and tune VFO for approx 800hz note and peak Drive control. Watch the DMM and tune the VFO for maximum DC voltage. Should see something like + 0.0305 vdc. Just tune VFO and Drive control for maximum voltage.
>

> When you turn off the Marker you will have to wait awhile for voltage to decay to lowest no audio signal level.
>
> If Craigs Anti-VOX is not producing this 0.0305 vdc bias voltage then speaker sounds will produce sufficient signals to key the rig thru the mic. Cleaning and exercising the Anti-vox pot as suggested my Mike W5RKL would be first thing to try. If there is no power amp audio coming from the wiper of this pot then the Anti-vox circuit cannot produce the necessary bias or offset voltage. If cleaning pot doesnt produce 0.030 vdc at TP-2 then have to trouble shoot the Anti-vox circuit.
>
> Another way to get a test tone out of Q6 Audio Amp would be to inject modulated RF into SO-239 from RF signal generator that has internal or external modulation capability, but suspect Marker test is as good as any.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@> wrote:
> >
> > Terry and Craig,
> >
> >
> >
> > Have measure or should I say attempted to measure voltage on TP2 on audio board. No voltage being recorded at this time, however it switches the microphone on without throwing the relay. Using two tone with the MM probe on TP2 I get 125mV, but with no two tone, no voltage appears
> >
> >
>
>
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

42977. Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-22 03:00:59 UTC
From: Terry Wagoner
Topic: 42877 Message: 42977

Dave:

See my Step 5. You need to turn off the Vox Gain pot. Relay should not be tripping.

You dont want any audio coming down the mic line from tone being emitted by the speaker.

The objective of this test is to see what is the maximum dc threshold level that the Anti-Vox circuit can produce at TP-2 in presence of strong audio output signal from Q6.

Terry

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Dave: Need to turn Anti vox pot full CW so Marker does not trip vox and see what the maximum dc voltage is at TP-2. No rush. Thanks
>

>

42978. W2ENY's Headphones/mic

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-22 12:38:17 UTC
From: Mike McHugh
Topic: 42978 Message: 42978

Hi folks and thank you for letting me join the group....I will strive not to let my questions sound to neophyte...
Has any of the group or anyone the group has heard about ever use the Headphones/boom mic that is offered by Bob at W2ENY's design center?????He has web site and the combo he sells should fit on my old 520s nicely but I have apprehension about pulling the trigger on the purchase......
I did write Bob and asked him if the ceramic mic would exhibit audio that is too High(treble)? That is usually the case with ceramic/crystal mics. I know the old Kenwood's have world renowned audio quality and I certainly want to keep that quality.
Any help on this issue would be highly appreciated......
Thanks again and Best of 73.s
Mike
KD2DYY
(other) mchugh321@...

42979. Re: [TS-520_820_530_830] W2ENY's Headphones/mic

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-22 14:24:20 UTC
From: W5RKL
Topic: 42978 Message: 42979

Hi Mike,

The key in any microphone and headphone use is to match the transceiver's microphone and headphone impedance ratings with the impedance of the microphone and headphones.

The TS-520 has a "high impedance" microphone rating of 50K ohms and a 4 to 16 ohms headphone impedance. When you spoke with Bob, W2ENY, did you tell him about those impedance values? If not then I recommend you contact Bob again and discuss those impedance values with him. If there's a problem with impedance, especially in the microphone, then ask if he sells an adapter, low to high impedance, that will allow the headphone/boom microphone system to work with the 520.

73
Mike W5RKL

I would write Bob
On 6/22/2013 7:38 AM, Mike McHugh wrote:
>
>
> Hi folks and thank you for letting me join the group....I will strive
> not to let my questions sound to neophyte...
> Has any of the group or anyone the group has heard about ever use the
> Headphones/boom mic that is offered by Bob at W2ENY's design
> center?????He has web site and the combo he sells should fit on my old
> 520s nicely but I have apprehension about pulling the trigger on the
> purchase......
> I did write Bob and asked him if the ceramic mic would exhibit audio
> that is too High(treble)? That is usually the case with
> ceramic/crystal mics. I know the old Kenwood's have world renowned
> audio quality and I certainly want to keep that quality.
> Any help on this issue would be highly appreciated......
> Thanks again and Best of 73.s
> Mike
> KD2DYY
> (other) mchugh321@... <mailto:mchugh321%40gmail.com>
>
>

[Non-text portions of this message have been removed]

42980. Re: [TS-520_820_530_830] Alignment Tool Set

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-22 15:07:45 UTC
From: Don
Topic: 42970 Message: 42980

Hi All
I spoke too soon about the Alignment tool set
I just used one to turn a tight slug and it twisted out of shape
Guess you get what you pay for
Back to eBay i guess
73
Don/Ve2ud

On 21/06/2013 3:42 PM, Don D wrote:
>
> Hi All
> I just received my shipment from Milestone Technogies
> http://www.mtechnologies.com/tools/index.htm#alignset
> First let me stay they do not pay me to advertise,so it's just my opinion
> I ordered the 10 pc and the 3 pc set
> The ten pc set would be a better choice Alignment Tool Set, ABS Plastic
> The quality is good and shipping was more reasonable than Ebay
> This time i will align my ts830 on it's side as putting it upside down
> i think makes me apply more force on the align tool,and then we end up
> with a slug at the bottom
> Just a thought
>
>

[Non-text portions of this message have been removed]

42981. Re: Alignment Tool Set

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-23 10:15:03 UTC
From: adrian.langford@ymail.com
Topic: 42970 Message: 42981

The tool I got from Ken K4EAA has worked very well and my ferries were a little stiff from non-use even after using penetrant.

Would love to get/see one if original tools supplied. Have never seen one mentioned with any hybrid for sale, at least not here in G-land.

73 Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Hi All
> I spoke too soon about the Alignment tool set
> I just used one to turn a tight slug and it twisted out of shape
> Guess you get what you pay for
> Back to eBay i guess
> 73
> Don/Ve2ud
>
>
>
>
> On 21/06/2013 3:42 PM, Don D wrote:
> >
> > Hi All
> > I just received my shipment from Milestone Technogies
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> > with a slug at the bottom
> > Just a thought
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>
> [Non-text portions of this message have been removed]
>

42982. Re: Alignment Tool Set

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-23 11:22:05 UTC
From: Terry Wagoner
Topic: 42970 Message: 42982

I have had no problem with Kens tool. Have several of them.

I still feel GC(Waldom) makes the best alignment tools. I have very old complete TV/Radio set. They also make several other smaller sets including an 8 piece CB set for starters or you can buy individual pieces and make up a set. They sell tools made from Delrin and the new anti-static ones.

I have never tried the Ceramic tip tools.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@..." <adrian@...> wrote:
>
> The tool I got from Ken K4EAA has worked very well and my ferries were a little stiff from non-use even after using penetrant.
>
> Would love to get/see one if original tools supplied. Have never seen one mentioned with any hybrid for sale, at least not here in G-land.
>
> 73 Adrian G4IQW
>
> --- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@> wrote:
> >
> > Hi All
> > I spoke too soon about the Alignment tool set
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> > > with a slug at the bottom

> > > Just a thought
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> >
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> >
> > [Non-text portions of this message have been removed]
> >
>

42983. Phase lock loop indicator on the TS-530 and TS-830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-23 11:07:23 UTC
From: wa4axt
Topic: 42983 Message: 42983

If you were to look at older transmitters that use a phase lock loop oscillator , you would find that such units had a light that tells the operator that the loop is locked on to the desired frequency and its ok to transmit .Unfortunately Kenwood in the printing of the owners manual for the TS_530S and probably the TS-830 did not inform the owners of these radios that they to have a lock/unlock indicator . The indicator is the units digital display . If the display goes blank on a TS-530S then that means that your pll has lost its lock . This loss of lock can occur if for example you are using a long wire antenna and some rf gets into the pll circuit or if your pll circuit is out of tune .Sometimes it happens briefly on 10m if you spin the vfo dial a little fast as the pll tries to catch up . I thought I would mention this point because when it first happened I thought I was experiencing a display failure.In conclusion I just want to point out that just because your vfo display blinks doesn't necessary mean your radio broken because their is a circuit in the radio doing the blinking to inform you of a condition .

Note: If you should see your display flicker when transmitting , then you need to stop transmitting immediately because your vfo is scanning as it tries to re lock and as a result your spewing garbage all over the radio spectrum .

42984. Re: [TS-520_820_530_830] Re: Alignment Tool Set

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-23 12:27:57 UTC
From: Don
Topic: 42970 Message: 42984

Having a good set of alignment tools is a must for the hybrid radio owners

I see Amazon has a nice collection,but i have never bought anything from
them yet.
It's the smaller tips i find that's hard to keep their shape or strength
and i think the ceramic would be a good choice,but have not seen any for
rf coils
The last set i got is fine if there is no resistance,,example i have a
few coils with the rubber bands in them,and it takes a bit more force.
I guess if you took a small piece of hardwood you could whittle one out.

http://www.e-sonic.com/aboutus/cat/A/Alignment%20tools.pdf

Don/Ve2ud

On 23/06/2013 7:22 AM, Terry Wagoner wrote:
>
> I have had no problem with Kens tool. Have several of them.
>
> I still feel GC(Waldom) makes the best alignment tools. I have very
> old complete TV/Radio set. They also make several other smaller sets
> including an 8 piece CB set for starters or you can buy individual
> pieces and make up a set. They sell tools made from Delrin and the new
> anti-static ones.
>
> I have never tried the Ceramic tip tools.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "adrian.langford@..."
> <adrian@...> wrote:
> >
> > The tool I got from Ken K4EAA has worked very well and my ferries
> were a little stiff from non-use even after using penetrant.
> >
> > Would love to get/see one if original tools supplied. Have never
> seen one mentioned with any hybrid for sale, at least not here in G-land.
> >
> > 73 Adrian G4IQW
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > >
> > > Hi All
> > > I spoke too soon about the Alignment tool set

> > > I just used one to turn a tight slug and it twisted out of shape
> > > Guess you get what you pay for
> > > Back to eBay i guess
> > > 73
> > > Don/Ve2ud
> > >
> > >
> > >
> > >
> > > On 21/06/2013 3:42 PM, Don D wrote:
> > > >
> > > > Hi All
> > > > I just received my shipment from Milestone Technogies
> > > > http://www.mtechnologies.com/tools/index.htm#alignset
> > > > First let me stay they do not pay me to advertise,so it's just
> my opinion
> > > > I ordered the 10 pc and the 3 pc set
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> > >
> > > [Non-text portions of this message have been removed]
> > >
> >
>

[Non-text portions of this message have been removed]

42985. Re: [TS-520_820_530_830] Phase lock loop indicator on the TS-530 and TS-830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-23 13:15:00 UTC
From: W5RKL
Topic: 42983 Message: 42985

I mean no disrespect but I disagree with your statements pertaining to the 530 VFO and PLL units.

First, the PLL unit does not "try to catch up". I have no idea what you are trying to say with that statement.

Second, you said "your vfo is scanning as it tries to re lock". Not true, the VFO's do NOT scan and they, themselves, do not "relock".

You said that when the display blinks that there's a circuit that's informing the operator of a condition. What are you trying to say?

I recommend you take some time and thorough study the operation of the PLL Units in the 530, 820, and 830.

73
Mike W5RKL

On 6/23/2013 6:07 AM, wa4axt wrote:
>
> If you were to look at older transmitters that use a phase lock loop
> oscillator , you would find that such units had a light that tells the
> operator that the loop is locked on to the desired frequency and its
> ok to transmit .Unfortunately Kenwood in the printing of the owners
> manual for the TS_530S and probably the TS-830 did not inform the
> owners of these radios that they to have a lock/unlock indicator . The
> indicator is the units digital display . If the display goes blank on
> a TS-530S then that means that your pll has lost its lock . This loss
> of lock can occur if for example you are using a long wire antenna and
> some rf gets into the pll circuit or if your pll circuit is out of
> tune .Sometimes it happens briefly on 10m if you spin the vfo dial a
> little fast as the pll tries to catch up . I thought I would mention
> this point because when it first happened I thought I was experiencing
> a display failure.In conclusion I just want to point out that just
> because your vfo display blinks doesn't necessary mean your radio
> broken because their is a circuit in the radio doing the blinking to
> inform you of a condition .
>
> Note: If you should see your display flicker when transmitting , then
> you need to stop transmitting immediately because your vfo is scanning
> as it tries to re lock and as a result your spewing garbage all over
> the radio spectrum .
>
>

[Non-text portions of this message have been removed]

42986. Re: Phase lock loop indicator on the TS-530 and TS-830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-23 13:42:07 UTC
From: wa4axt
Topic: 42983 Message: 42986

I got the pll info from the Kenwood TS-530 service manual .

Click on the link below to view what I read .

http://s237.photobucket.com/user/rtaylor0361/media/5cf30ece-9849-4238-9ec9-204a4fd48ee5_zps018faa90.jpg.html

--- In TS-520_820_530_830@yahoogroups.com, W5RKL <w5rkl@...> wrote:
>
> I mean no disrespect but I disagree with your statements pertaining to
> the 530 VFO and PLL units.
>
> First, the PLL unit does not "try to catch up". I have no idea what you
> are trying to say with that statement.
>
> Second, you said "your vfo is scanning as it tries to re lock". Not
> true, the VFO's do NOT scan and they, themselves, do not "relock".
>
> You said that when the display blinks that there's a circuit that's
> informing the operator of a condition. What are you trying to say?
>
> I recommend you take some time and thorough study the operation of the
> PLL Units in the 530, 820, and 830.
>
> 73
> Mike W5RKL
>
>
>
>
> On 6/23/2013 6:07 AM, wa4axt wrote:
> >
> > If you were to look at older transmitters that use a phase lock loop
> > oscillator , you would find that such units had a light that tells the
> > operator that the loop is locked on to the desired frequency and its
> > ok to transmit .Unfortunately Kenwood in the printing of the owners
> > manual for the TS_530S and probably the TS-830 did not inform the
> > owners of these radios that they to have a lock/unlock indicator . The
> > indicator is the units digital display . If the display goes blank on
> > a TS-530S then that means that your pll has lost its lock . This loss
> > of lock can occur if for example you are using a long wire antenna and
> > some rf gets into the pll circuit or if your pll circuit is out of
> > tune .Sometimes it happens briefly on 10m if you spin the vfo dial a
> > little fast as the pll tries to catch up . I thought I would mention
> > this point because when it first happened I thought I was experiencing
> > a display failure.In conclusion I just want to point out that just

> > because your vfo display blinks doesn't necessary mean your radio
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> > inform you of a condition .
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> > the radio spectrum .
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

42987. Re: [TS-520_820_530_830] Re: Alignment Tool Set

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-23 14:28:02 UTC
From: Michel van der Walle
Topic: 42970 Message: 42987

Hi Terry
I have a full set of ceramic alignment tools
Only one thing to say about them.
Outstanding.
Regards,
Michel vk3kvw

----- Original Message -----
From: Terry Wagoner
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, June 23, 2013 9:22 PM
Subject: [TS-520_820_530_830] Re: Alignment Tool Set

I have had no problem with Kens tool. Have several of them.

I still feel GC(Waldom) makes the best alignment tools. I have very old complete TV/Radio set. They also make several other smaller sets including an 8 piece CB set for starters or you can buy individual pieces and make up a set. They sell tools made from Delrin and the new anti-static ones.

I have never tried the Ceramic tip tools.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@..." <adrian@...> wrote:
>
> The tool I got from Ken K4EAA has worked very well and my ferries were a little stiff from non-use even after using penetrant.
>
> Would love to get/see one if original tools supplied. Have never seen one mentioned with any hybrid for sale, at least not here in G-land.
>
> 73 Adrian G4IQW
>
> --- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@> wrote:
> >
> > Hi All
> > I spoke too soon about the Alignment tool set
> > I just used one to turn a tight slug and it twisted out of shape
> > Guess you get what you pay for
> > Back to eBay i guess
> > 73
> > Don/Ve2ud
> >
> >
> >

> >
> > On 21/06/2013 3:42 PM, Don D wrote:
> > >
> > > Hi All
> > > I just received my shipment from Milestone Technogies
> > > http://www.mtechnologies.com/tools/index.htm#alignset
> > > First let me stay they do not pay me to advertise,so it's just my opinion
> > > I ordered the 10 pc and the 3 pc set
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> > > This time i will align my ts830 on it's side as putting it upside down
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> > > with a slug at the bottom
> > > Just a thought
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> >
> > [Non-text portions of this message have been removed]
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>

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Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 9.1.0.2900, Virus/Spyware Database: 6.21170)
http://www.pctools.com
=======

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 9.1.0.2900, Virus/Spyware Database: 6.21170)
http://www.pctools.com/
=======

[Non-text portions of this message have been removed]

42988. Re: Alignment Tool Set

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-23 14:49:41 UTC
From: Terry Wagoner
Topic: 42970 Message: 42988

Hi Michel:

I have been thinking about buying a set for some time now. I was just worried about them being easy to fracture. I will do some Google search and see what is available state side. Sometimes Amazon.Com has good prices. Do you know if the brand you have is available here?

Thanks
Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Michel van der Walle" <vk3kvw@...> wrote:
>
> Hi Terry
> I have a full set of ceramic alignment tools
> Only one thing to say about them.
> Outstanding.
> Regards,
> Michel vk3kvw
>
> ----- Original Message -----
> From: Terry Wagoner
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sunday, June 23, 2013 9:22 PM
> Subject: [TS-520_820_530_830] Re: Alignment Tool Set
>
>
>
> I have had no problem with Kens tool. Have several of them.
>
> I still feel GC(Waldom) makes the best alignment tools. I have very old complete TV/Radio set. They also make several other smaller sets including an 8 piece CB set for starters or you can buy individual pieces and make up a set. They sell tools made from Delrin and the new anti-static ones.
>
> I have never tried the Ceramic tip tools.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> >
> > The tool I got from Ken K4EAA has worked very well and my ferries were a little stiff from non-use even after using penetrant.
> >
> > Would love to get/see one if original tools supplied. Have never seen one mentioned with any hybrid for sale, at least not here in G-land.
> >
> > 73 Adrian G4IQW

> >
> > --- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@> wrote:
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> > > On 21/06/2013 3:42 PM, Don D wrote:
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> > > [Non-text portions of this message have been removed]
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> =======
> Email scanned by PC Tools - No viruses or spyware found.
> (Email Guard: 9.1.0.2900, Virus/Spyware Database: 6.21170)
> http://www.pctools.com
> =======
>
>

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> =======
>
>
> [Non-text portions of this message have been removed]
>

42989. Re: [TS-520_820_530_830] Re: Phase lock loop indicator on the TS-530 and TS-830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-23 15:23:48 UTC
From: W5RKL
Topic: 42983 Message: 42989

Bob,

That statement,

"if the PLL unlocks for any reason, it will be detected from the phase comparator output."

as it's written in the service manual, is somewhat misleading.

A PLL (Phase Lock Loop) consist of numerous circuits which include oscillators, mixers, BPF (Band Pass Filters) and dividers that are all part of the "PLL Unit" as a whole. Not all oscillators are on the PLL Unit, some are external such as the VFO for example. The PLL does not tell itself to LOCK or UNLOCK nor does the PLL Unit itself turn the display ON or OFF. Changes from LOCK to UNLOCK and vice verse as well as turning the display ON or OFF, are determined by the PD UNIT (Q19) within the PLL Unit.

Studying the PLL Unit's block diagram in the service manual on page 4 shows how the PLL Unit, the CAR Unit, and the VFO Units all work together.

The PLL Unit in the 820, 530, and 830, do not "catch up" nor do any of the hybrid VFO's "scan".

73
Mike W5RKL

On 6/23/2013 8:42 AM, wa4axt wrote:
>
>
>
> I got the pll info from the Kenwood TS-530 service manual .
>
> Click on the link below to view what I read .
>
> http://s237.photobucket.com/user/rtaylor0361/media/5cf30ece-9849-4238-9ec9-204a4fd48ee5_zps018faa90.jpg.html
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, W5RKL <w5rkl@...> wrote:
> >
> > I mean no disrespect but I disagree with your statements pertaining to
> > the 530 VFO and PLL units.
> >
> > First, the PLL unit does not "try to catch up". I have no idea what you

> > are trying to say with that statement.
> >
> > Second, you said "your vfo is scanning as it tries to re lock". Not
> > true, the VFO's do NOT scan and they, themselves, do not "relock".
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> > You said that when the display blinks that there's a circuit that's
> > informing the operator of a condition. What are you trying to say?
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> > I recommend you take some time and thorough study the operation of the
> > PLL Units in the 530, 820, and 830.
> >
> > 73
> > Mike W5RKL
> >
> >
> >
> >
> > On 6/23/2013 6:07 AM, wa4axt wrote:
> > >
> > > If you were to look at older transmitters that use a phase lock loop
> > > oscillator , you would find that such units had a light that tells
> the
> > > operator that the loop is locked on to the desired frequency and its
> > > ok to transmit .Unfortunately Kenwood in the printing of the owners
> > > manual for the TS_530S and probably the TS-830 did not inform the
> > > owners of these radios that they to have a lock/unlock indicator .
> The
> > > indicator is the units digital display . If the display goes blank on
> > > a TS-530S then that means that your pll has lost its lock . This loss
> > > of lock can occur if for example you are using a long wire antenna
> and
> > > some rf gets into the pll circuit or if your pll circuit is out of
> > > tune .Sometimes it happens briefly on 10m if you spin the vfo dial a
> > > little fast as the pll tries to catch up . I thought I would mention
> > > this point because when it first happened I thought I was
> experiencing
> > > a display failure.In conclusion I just want to point out that just
> > > because your vfo display blinks doesn't necessary mean your radio
> > > broken because their is a circuit in the radio doing the blinking to
> > > inform you of a condition .
> > >
> > > Note: If you should see your display flicker when transmitting , then
> > > you need to stop transmitting immediately because your vfo is
> scanning
> > > as it tries to re lock and as a result your spewing garbage all over
> > > the radio spectrum .
> > >
> > >
> >
> >

> >
> > [Non-text portions of this message have been removed]
> >
>
>

[Non-text portions of this message have been removed]

42990. Re: [TS-520_820_530_830] W2ENY's Headphones/mic

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-23 14:39:14 UTC
From: Mike McHugh
Topic: 42978 Message: 42990

Thanks for the input Mike.......W5RKL
I did E-mail Bob W2ENY and he stated that all his mics are ELECTRET . His web sight states that he does have a model suited for several Kenwoods and cited the 520s by number.....
I have the credit card ready..... I'm STILL tentative..... I haven't got the discretionary income that a lot of amateurs seem to have(Good for them ,however).(I sight the costs of a new ,full blown, Icom rig. Geez!
I'm still trying to keep the fun in this hobby....Oh well.....

Thanks,once more and best of 73's to all
Mike
KD2DYY

On Sat, Jun 22, 2013 7:24 AM PDT W5RKL wrote:

>Hi Mike,
>
>The key in any microphone and headphone use is to match the
>transceiver's microphone and headphone impedance ratings with the
>impedance of the microphone and headphones.
>
>The TS-520 has a "high impedance" microphone rating of 50K ohms and a 4
>to 16 ohms headphone impedance. When you spoke with Bob, W2ENY, did you
>tell him about those impedance values? If not then I recommend you
>contact Bob again and discuss those impedance values with him. If
>there's a problem with impedance, especially in the microphone, then ask
>if he sells an adapter, low to high impedance, that will allow the
>headphone/boom microphone system to work with the 520.
>
>73
>Mike W5RKL
>
>
>I would write Bob
>On 6/22/2013 7:38 AM, Mike McHugh wrote:
>>
>>
>> Hi folks and thank you for letting me join the group....I will strive
>> not to let my questions sound to neophyte...
>> Has any of the group or anyone the group has heard about ever use the
>> Headphones/boom mic that is offered by Bob at W2ENY's design
>> center?????He has web site and the combo he sells should fit on my old
>> 520s nicely but I have apprehension about pulling the trigger on the
>> purchase......
>> I did write Bob and asked him if the ceramic mic would exhibit audio

>> that is too High(treble)? That is usually the case with
>> ceramic/crystal mics. I know the old Kenwood's have world renowned
>> audio quality and I certainly want to keep that quality.
>> Any help on this issue would be highly appreciated......
>> Thanks again and Best of 73.s
>> Mike
>> KD2DYY
>> (other) mchugh321@... <mailto:mchugh321%40gmail.com>
>>
>>
>
>
>
>[Non-text portions of this message have been removed]
>

42991. TS520 S-Meter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-23 20:08:14 UTC
From: n3kvl
Topic: 42991 Message: 42991

Hi All,

A peculiar symptom has developed in my TS520S.

When the unit is first powered on, the S-Meter rises to about S3 then slowly drifts back over time as it is on.

What may be causing this effect?

Thanks
Archie

42992. Re: [TS-520_820_530_830] Re: Phase lock loop indicator on the TS-530 and TS-830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-23 20:48:20 UTC
From: W5RKL
Topic: 42983 Message: 42992

I made a "typo" by indicating "Q19" as the PLL Unit's "PD" when the PD
is actually Q17. I don't know why I hit the "9" key instead of "7" key.
The PD, as I said, is the stage that changes the state of the PLL from
LOCK to UNLOCK and vice verse plus the PD issues and removes the digital
display blanking signal.

73
Mike
W5RKL

On 6/23/2013 10:23 AM, W5RKL wrote:
>
> Bob,
>
> That statement,
>
> "if the PLL unlocks for any reason, it will be detected from the phase
> comparator output."
>
> as it's written in the service manual, is somewhat misleading.
>
> A PLL (Phase Lock Loop) consist of numerous circuits which include
> oscillators, mixers, BPF (Band Pass Filters) and dividers that are all
> part of the "PLL Unit" as a whole. Not all oscillators are on the PLL
> Unit, some are external such as the VFO for example. The PLL does not
> tell itself to LOCK or UNLOCK nor does the PLL Unit itself turn the
> display ON or OFF. Changes from LOCK to UNLOCK and vice verse as well as
> turning the display ON or OFF, are determined by the PD UNIT (Q19)
> within the PLL Unit.
>
> Studying the PLL Unit's block diagram in the service manual on page 4
> shows how the PLL Unit, the CAR Unit, and the VFO Units all work together.
>
> The PLL Unit in the 820, 530, and 830, do not "catch up" nor do any of
> the hybrid VFO's "scan".
>
> 73
> Mike W5RKL
>
> On 6/23/2013 8:42 AM, wa4axt wrote:
> >
> >
> >
> > I got the pll info from the Kenwood TS-530 service manual .

> >
> > Click on the link below to view what I read .
> >
> >
> http://s237.photobucket.com/user/rtaylor0361/media/5cf30ece-9849-4238-9ec9-204a4fd48ee5_
zps018faa90.jpg.html
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, W5RKL <w5rkl@...> wrote:
> > >
> > > I mean no disrespect but I disagree with your statements pertaining to
> > > the 530 VFO and PLL units.
> > >
> > > First, the PLL unit does not "try to catch up". I have no idea
> what you
> > > are trying to say with that statement.
> > >
> > > Second, you said "your vfo is scanning as it tries to re lock". Not
> > > true, the VFO's do NOT scan and they, themselves, do not "relock".
> > >
> > > You said that when the display blinks that there's a circuit that's
> > > informing the operator of a condition. What are you trying to say?
> > >
> > > I recommend you take some time and thorough study the operation of the
> > > PLL Units in the 530, 820, and 830.
> > >
> > > 73
> > > Mike W5RKL
> > >
> > >
> > >
> > >
> > > On 6/23/2013 6:07 AM, wa4axt wrote:
> > > >
> > > > If you were to look at older transmitters that use a phase lock loop
> > > > oscillator , you would find that such units had a light that tells
> > the
> > > > operator that the loop is locked on to the desired frequency and its
> > > > ok to transmit .Unfortunately Kenwood in the printing of the owners
> > > > manual for the TS_530S and probably the TS-830 did not inform the
> > > > owners of these radios that they to have a lock/unlock indicator .
> > The
> > > > indicator is the units digital display . If the display goes
> blank on
> > > > a TS-530S then that means that your pll has lost its lock . This
> loss
> > > > of lock can occur if for example you are using a long wire antenna
> > and
> > > > some rf gets into the pll circuit or if your pll circuit is out of

> > > > tune .Sometimes it happens briefly on 10m if you spin the vfo dial a
> > > > little fast as the pll tries to catch up . I thought I would mention
> > > > this point because when it first happened I thought I was
> > experiencing
> > > > a display failure.In conclusion I just want to point out that just
> > > > because your vfo display blinks doesn't necessary mean your radio
> > > > broken because their is a circuit in the radio doing the blinking to
> > > > inform you of a condition .
> > > >
> > > > Note: If you should see your display flicker when transmitting ,
> then
> > > > you need to stop transmitting immediately because your vfo is
> > scanning
> > > > as it tries to re lock and as a result your spewing garbage all over
> > > > the radio spectrum .
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> > > [Non-text portions of this message have been removed]
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42993. Re: TS520 S-Meter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-23 21:47:23 UTC
From: Terry Wagoner
Topic: 42991 Message: 42993

It is normal for all Hybrids to have the S-meter go up scale on power on. It will be much more pronounced if you have the antenna connected when you power the rig on. If you leave the SO-239 grounded thru your antenna switch or on the dummy load the affect can be greatly reduced.

Two things are occurring almost simultaneously. First you have to understand that your S-meter is a reverse reading volt meter that is monitoring the voltage on your AGC bus line. When you have approx 3.2vdc on the AGC bus the S-meter should read 0 and when you receive a signal the AGC detector/Amp pulls down the AGC bus voltage and the S-meter then reads up scale. The stronger the signal the lower the 3.2vdc bus voltage will go down and the S-meter will go up scale.

So when you 1st power on the rig with an antenna connected the AGC bus line is coming up from zero to normal 3.2vdc being powered by RF-1 from your AVR board. This voltage is charging the AGC timing caps and bringing the bus up to 3.2vdc. At the moment of power on the S-meter sees Zero volts on the bus and goes up scale. Also the moment you power on you have signal applied to the front end of the radio which the AGC amp and Detector sees and tries to pull the AGC bus voltage down which also drives the meter up scale. As I said sometimes hard against the peg.

Most people like to avoid slamming the meter indicating needle against the peg on power on so they leave the rig SO-239 on ground. It serves to prevent nearby lightning induced ESD into the front end and stops the S-meter from pegging. ESD much more serious threat than pegging the S-meter. Can result in losing antenna step up transformer and RF amp on RF board.

Now if your decay back down to zero is taking an inordinate amount of time you may have a problem with one of the AGC time constant electrolytic capacitors. How long is it taking for the needle to return to Zero?

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "n3kvl" <n3kvl@...> wrote:
>
> Hi All,
>
> A peculiar symptom has developed in my TS520S.
>
> When the unit is first powered on, the S-Meter rises to about S3 then slowly drifts back over time as it is on.
>
> What may be causing this effect?
>
> Thanks
> Archie
>

42994. TS-830S low output in TUNE

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 01:33:05 UTC
From: Craig Roberts
Topic: 42991 Message: 42994

So -- what causes low output in TUNE?

My TS-530S puts out about 20 watts in TUNE /SEND position at resonance

MY beleaguered TS-830S yields about 1 or 2 watts under the same conditions with meter readings too low to be useful for plate dipping. Output in CW / SSB mode is normal, though the 830 will oddly load up to 300 mA (no -- I don't run it at that, I stay about 230 mA).

It's not the driver tube (I swapped it with the known good one from the 530).

Whatcha think? (BTW, the leading "0" display problem has been replaced by an intermittent "1" on the 14 and 18 MHz bands).

Thanks again!

Craig
W3CRR

42995. RE: [Bulk] [TS-520_820_530_830] TS-830S low output in TUNE

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 01:41:13 UTC
From: Brad Allen
Topic: 42991 Message: 42995

I messed with one of these once, changed the driver tube just because and found out later the wire to the filament was defective from the socket to the board. Replacing the wire fixed it right up. I hope you are testing into a dummy load as I am not sure how you know anything is at resonance. Brad KB2CHY

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Craig Roberts
Sent: Sunday, June 23, 2013 9:33 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [Bulk] [TS-520_820_530_830] TS-830S low output in TUNE

So -- what causes low output in TUNE?

My TS-530S puts out about 20 watts in TUNE /SEND position at resonance

MY beleaguered TS-830S yields about 1 or 2 watts under the same conditions with meter readings too low to be useful for plate dipping. Output in CW / SSB mode is normal, though the 830 will oddly load up to 300 mA (no -- I don't run it at that, I stay about 230 mA).

It's not the driver tube (I swapped it with the known good one from the 530).

Whatcha think? (BTW, the leading "0" display problem has been replaced by an intermittent "1" on the 14 and 18 MHz bands).

Thanks again!

Craig
W3CRR

[Non-text portions of this message have been removed]

42996. Re: [Bulk] [TS-520_820_530_830] TS-830S low output in TUNE

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 01:56:23 UTC
From: Craig Roberts
Topic: 42991 Message: 42996

Thanks, Brad.

Oh yes, I am testing into a dummy load.

[Non-text portions of this message have been removed]

42997. Re: TS-830S low output in TUNE

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 02:20:12 UTC
From: Terry Wagoner
Topic: 42991 Message: 42997

It sounds like you have bad Screen Grid divider resistors R15 and R16 56K ohm on Rect Unit board. If you are comfortable taking voltage readings you can measure screen grid voltage at Pin 3 at the 6146 tube socket. Suggest you replace both resistors with metal film units even if you find only one bad.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Craig Roberts <crgrbrts@...> wrote:
>
> So -- what causes low output in TUNE?
>
> My TS-530S puts out about 20 watts in TUNE /SEND position at resonance
>
> MY beleaguered TS-830S yields about 1 or 2 watts under the same
> conditions with meter readings too low to be useful for plate dipping.
> Output in CW / SSB mode is normal, though the 830 will oddly load up to
> 300 mA (no -- I don't run it at that, I stay about 230 mA).
>
> It's not the driver tube (I swapped it with the known good one from the
> 530).
>
> Whatcha think? (BTW, the leading "0" display problem has been replaced
> by an intermittent "1" on the 14 and 18 MHz bands).
>
> Thanks again!
>
> Craig
> W3CRR
>

42998. Re: [TS-520_820_530_830] TS520 S-Meter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 03:05:01 UTC
From: Jim Shelby
Topic: 42991 Message: 42998

Jim, here. Sounds to me like the normal operation of the AVC circuit.
If the front panel switch is set at "Slow," it will take the AVC time to
recover to noise background. If the AVC switch is turned off, the meter
will recover quickly.

Best,

Jim Shelby
KB0WL

On 06/23/2013 03:08 PM, n3kvl wrote:
>
> Hi All,
>
> A peculiar symptom has developed in my TS520S.
>
> When the unit is first powered on, the S-Meter rises to about S3 then
> slowly drifts back over time as it is on.
>
> What may be causing this effect?
>
> Thanks
> Archie
>
>

[Non-text portions of this message have been removed]

42999. Re: [TS-520_820_530_830] Re: Alignment Tool Set

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 04:05:56 UTC
From: Michel van der Walle
Topic: 42970 Message: 42999

Hi Terry.
The brand I have here are tools from Taiyo in Japan.
They are sold in Sydney in Australia.
Complete packages or individual tools are available.
I don't know if they are available in the USA but one would think so.
If not then I am sure I could do something for you from here.
Let me know.
I hope you are feeling well again.
Regards,
Michel vk3kvw

----- Original Message -----
From: Terry Wagoner
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 24, 2013 12:49 AM
Subject: [TS-520_820_530_830] Re: Alignment Tool Set

Hi Michel:

I have been thinking about buying a set for some time now. I was just worried about them being easy to fracture. I will do some Google search and see what is available state side. Sometimes Amazon.Com has good prices. Do you know if the brand you have is available here?

Thanks
Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Michel van der Walle" <vk3kvw@...> wrote:
>
> Hi Terry
> I have a full set of ceramic alignment tools
> Only one thing to say about them.
> Outstanding.
> Regards,
> Michel vk3kvw
>
> ----- Original Message -----
> From: Terry Wagoner
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sunday, June 23, 2013 9:22 PM
> Subject: [TS-520_820_530_830] Re: Alignment Tool Set
>
>
>
> I have had no problem with Kens tool. Have several of them.
>
> I still feel GC(Waldom) makes the best alignment tools. I have very old complete TV/Radio

set. They also make several other smaller sets including an 8 piece CB set for starters or you can buy individual pieces and make up a set. They sell tools made from Delrin and the new anti-static ones.
>
> I have never tried the Ceramic tip tools.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> >
> > The tool I got from Ken K4EAA has worked very well and my ferries were a little stiff from non-use even after using penetrant.
> >
> > Would love to get/see one if original tools supplied. Have never seen one mentioned with any hybrid for sale, at least not here in G-land.
> >
> > 73 Adrian G4IQW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@> wrote:
> > >
> > > Hi All
> > > I spoke too soon about the Alignment tool set
> > > I just used one to turn a tight slug and it twisted out of shape
> > > Guess you get what you pay for
> > > Back to eBay i guess
> > > 73
> > > Don/Ve2ud
> > >
> > >
> > >
> > >
> > > On 21/06/2013 3:42 PM, Don D wrote:
> > > >
> > > > Hi All
> > > > I just received my shipment from Milestone Technogies
> > > > http://www.mtechnologies.com/tools/index.htm#alignset
> > > > First let me stay they do not pay me to advertise,so it's just my opinion
> > > > I ordered the 10 pc and the 3 pc set
> > > > The ten pc set would be a better choice Alignment Tool Set, ABS Plastic
> > > > The quality is good and shipping was more reasonable than Ebay
> > > > This time i will align my ts830 on it's side as putting it upside down
> > > > i think makes me apply more force on the align tool,and then we end up
> > > > with a slug at the bottom
> > > > Just a thought
> > > >
> > > >
> > > >
> > > >
> > > >
> > > [Non-text portions of this message have been removed]
> > >

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> =======
> Email scanned by PC Tools - No viruses or spyware found.
> (Email Guard: 9.1.0.2900, Virus/Spyware Database: 6.21170)
> http://www.pctools.com
> =======
>
>
>
> =======
> Email scanned by PC Tools - No viruses or spyware found.
> (Email Guard: 9.1.0.2900, Virus/Spyware Database: 6.21170)
> http://www.pctools.com/
> =======
>
>
> [Non-text portions of this message have been removed]
>

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 9.1.0.2900, Virus/Spyware Database: 6.21170)
http://www.pctools.com
=======

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 9.1.0.2900, Virus/Spyware Database: 6.21170)
http://www.pctools.com/
=======

[Non-text portions of this message have been removed]

43000. Re: TS520 S-Meter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 10:47:04 UTC
From: Terry Wagoner
Topic: 42991 Message: 43000

The suggestion to turn the AGC to OFF position has been mentioned here more than once in recent past. Why should a person have to remember to turn the AGC to off as part of normal power down operation to prevent pegging of the S-meter and decay back to zero on the next power on cycle?

Good practice would be to turn the Antenna switch to the ground position to accomplish two objectives: 1. Protect front end of radio from nearby lightning 2. Prevent pegging the S-meter on the next power on cycle. Grounding of SO-239 or removal of PL-259 prevents S-meter pegging/decay action on radio power on.

It seems to me much easier to faithfully develop this habit as opposed to turning AGC to Off. If you have no grounding antenna switch in your installation then you are inviting loss of antenna step up transformer and/or your RF amp. Only other way to protect against that is to unscrew the PL-259 which isnt very convenient. Antenna step-up transformers are unavailable and must be rewound. Can be done but preventive action makes more sense than corrective action to me.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Jim Shelby <shelby3782@...> wrote:
>
> Jim, here. Sounds to me like the normal operation of the AVC circuit.
> If the front panel switch is set at "Slow," it will take the AVC time to
> recover to noise background. If the AVC switch is turned off, the meter
> will recover quickly.
>
> Best,
>
> Jim Shelby
> KB0WL
>
>
>
> On 06/23/2013 03:08 PM, n3kvl wrote:
> >
> > Hi All,
> >
> > A peculiar symptom has developed in my TS520S.
> >
> > When the unit is first powered on, the S-Meter rises to about S3 then
> > slowly drifts back over time as it is on.
> >
> > What may be causing this effect?
> >
> > Thanks
> > Archie

> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

43001. TS-430S AND ITS USE OF ITS DISPLAY AS A LOCK INDICATOR

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 11:00:43 UTC
From: wa4axt
Topic: 42983 Message: 43001

http://s237.photobucket.com/user/rtaylor0361/media/Untitled_zps17e7540d.png.html

The link above describing a loss of lock condition in this 1984 Kenwood radio and its use of the display as a unlock indicator shows that pll drift related to a un-lock , open loop condition was a problem even as late as 1984 in some pll equipped radios.

43002. Re: Phase lock loop indicator on the TS-530 and TS-830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 10:40:22 UTC
From: wa4axt
Topic: 42983 Message: 43002

http://s237.photobucket.com/user/rtaylor0361/media/287736_zps01116034.jpg.html

Shown in the link above is a 1978 transceiver with a lock indicator .It was not unusual to see such early pll radios with such indicators .At some time in the future , the fcc required manufactures to install hardware that monitored the loop for a open loop condition and shut down the transmitter if the loop is broken and the vco tries to scan for re-lock . When the lock light was on the radio shown above ,the user could be assured that the VCO in the pll circuit was operating in its closed loop mode and the vco was locked to the desired frequency . If the light was off , then the pll was in open loop mode with the vco frequency drifting or scanning up or down to acquire a re -lock of the pll loop . I recently had to replace my pll board on my TS-530S after receiving reports from other hams that I was creating noise up and down the band . In hind sight I recognized that such action occurred when the digital display would flicker . This flicker unlike a lock/unlock light was just barley noticeable and that one had to be looking for it to happen to know it happened . That's why I am bring this condition to the attention of the group . I guess that by the early 1980es Kenwood thought it had the pll lock/ unlock condition licked and saw no need for a specific indicator light , but after 30 years , the pll boards alignment on these old radios radios have probably deteriorated and that's why the vfo unlock condition may be occurring I would guess.

43003. Re: Phase lock loop indicator on the TS-530 and TS-830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 10:41:10 UTC
From: wa4axt
Topic: 42983 Message: 43003

http://s237.photobucket.com/user/rtaylor0361/media/287736_zps01116034.jpg.html

Shown in the link above is a 1978 transceiver with a lock indicator .It was not unusual to see such early pll radios with such indicators .At some time in the future , the fcc required manufactures to install hardware that monitored the loop for a open loop condition and shut down the transmitter if the loop is broken and the vco tries to scan for re-lock . When the lock light was on the radio shown above ,the user could be assured that the VCO in the pll circuit was operating in its closed loop mode and the vco was locked to the desired frequency . If the light was off , then the pll was in open loop mode with the vco frequency drifting or scanning up or down to acquire a re -lock of the pll loop . I recently had to replace my pll board on my TS-530S after receiving reports from other hams that I was creating noise up and down the band . In hind sight I recognized that such action occurred when the digital display would flicker . This flicker unlike a lock/unlock light was just barley noticeable and that one had to be looking for it to happen to know it happened . That's why I am bring this condition to the attention of the group . I guess that by the early 1980es Kenwood thought it had the pll lock/ unlock condition licked and saw no need for a specific indicator light , but after 30 years , the pll boards alignment on these old radios radios have probably deteriorated and that's why the vfo unlock condition may be occurring I would guess.

43004. Re: [TS-520_820_530_830] Re: TS-830S low output in TUNE

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 12:33:55 UTC
From: Craig Roberts
Topic: 42991 Message: 43004

Thanks, Terry.

When replacing components on the rectifier board, can the board be simply flipped after removing the hold-down screws or is desoldering some or all of the many wires to the board necessary? The wires all appear, if memory serves, to be attached from a harness on one side of the board. (I ask because I am not in the vicinity of the radio to check for myself).

If it is the latter, I am tempted to cut the resistors out from the top and splice the new ones in on the lead stubs (though, as a quasi-purist, I'd rather do it the "right" way providing I can avoid damaging fragile circuit board traces.

Craig
W3CRR

43005. Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 13:53:18 UTC
From: Barry
Topic: 43005 Message: 43005

I think I'm going to sell my Yaesu FT-757GX Mark I setup - looks like I can get more power out of my TS-820 once I get it fixed and could put the money into a good antenna setup. I'm going to get a local guy to see if he can help me get the 820 back to transmitting since since it's not showing anything out right now, but it is receiving well.

I currently have an 88' end fed antenna going out to a limb about 25' up in my front yard that picks up decently well and transmitted the other day to West Virginia, but I'm curious about what kind of antenna setup you guys have.

I want to optimize what I can, even though I don't have a huge yard and am limited because of a long power line in my back yard. After using an 80 meter dipole about 55 feet in the air Saturday at Field Day with a strong Kenwood TS-2000, I got spoiled and want a nice setup - I'm tired of calling at home (using the Yaesu since the 820 isn't transmitting) and not getting many responses.

The trees that I have I'm afraid might snap a dipole if I put it up in the middle of them when we have the thunderstorms the South is so well known for, especially during the Summer. So far the end fed has survived, but we haven't had any massive storms since I put it up.

Going purely on eham.net's reviews the Zero Five antennas have great words said about them. I might consider something like this vertical:

http://www.zerofive-antennas.com/43-foot-10-160-meter-multiband-foldover-freestanding-vertical-antenna-5kw-ununn

It would be in my front yard about 10 feet from my house and 25 feet away from trees because that's about the only place I could put it.

I don't want to blow a lot of money on antennas, but I do want something really nice for $300 - $500 if possible. I know I won't get a blow it out of the water antenna for that money, but I'm curious to see what you guys could give me insight on.

Thanks as always!

Barry

Jeremiah 29:11-13 / John 3:16

43006. Re: [TS-520_820_530_830] Re: Phase lock loop indicator on the TS-530 and TS-830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 14:29:25 UTC
From: W5RKL
Topic: 42983 Message: 43006

Bob,

You said:

"If the light was off , then the pll was in open loop mode with the vco frequency drifting or scanning up or down to acquire a re -lock of the pll loop."

With all due respect, the portion of that statement where you state, "the vco frequency drifting or scanning up and down to acquire a re-lock of the pll loop" is not true. VCO's themselves do NOT scan up and down on their own for a re-lock. You keep incorrectly stating that a VCO scans to obtain a re-lock and that's simply not true! A VCO is controlled by the PD and ONLY the PD determines whether a LOCK is achieved or not, NOT a VCO on it's own!

I have no idea what you mean by "open loop mode". Explain in detail if you would please, what you mean by "open loop mode".

You said you replace the PLL board in your 530 because because a few stations told you that you were "creating noise up and down the band" and that the display was flickering. I would not have replaced a board based solely on those symptoms and reports! I would have a few questions about the reports from distant stations. Some question which are:

1. Is the noise caused by "splatter"? (Mic gain set too high)
2. Is the microphone I'm using causing distortion which appears to the distant station as noise?
3. Does the distant station have it's noise limiter turned ON due to local noise at the distant stations location? (will create similar noise indications)
4. How does the distant station know it was you, i.e., what evidence proves it was you?
5. Did you ask the distant station if they could have recorded your transmissions and play it back to you so you can hear what they are hearing?
6. Did ALL the stations in the QSO tell you the same thing or just one?

Also, what troubleshooting steps did you take that produced results that told you the PLL board could not be repaired and had to be replaced? A few simple steps such as

1. Did you check the board's mounting screws to ensure they are tight?
2. Did you clean the board's plugs to ensure they were not causing any PLL problems?
3. Did you clean the VFO's variable capacitor shaft to frame connection

4/ Did you check the individual oscillator frequencies applied to the
PLL board to ensure they are stable and the signal levels were what they
should be?

Those are a few simple steps that should have been performed first
before replacing the PLL board.

I never said the display was NOT an indicator of a PLL UNLOCK state. I
did, however, ask you what you were trying to say about a blinking
display and a circuit that's telling the operator something and so far
you have not answered that question.

73
Mike W5RKL

On 6/24/2013 5:41 AM, wa4axt wrote:
>
>
>
> http://s237.photobucket.com/user/rtaylor0361/media/287736_zps01116034.jpg.html
>
> Shown in the link above is a 1978 transceiver with a lock indicator
> .It was not unusual to see such early pll radios with such indicators
> .At some time in the future , the fcc required manufactures to install
> hardware that monitored the loop for a open loop condition and shut
> down the transmitter if the loop is broken and the vco tries to scan
> for re-lock . When the lock light was on the radio shown above ,the
> user could be assured that the VCO in the pll circuit was operating in
> its closed loop mode and the vco was locked to the desired frequency .
> If the light was off , then the pll was in open loop mode with the vco
> frequency drifting or scanning up or down to acquire a re -lock of the
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> receiving reports from other hams that I was creating noise up and
> down the band . In hind sight I recognized that such action occurred
> when the digital display would flicker . This flicker unlike a
> lock/unlock light was just barley noticeable and that one had to be
> looking for it to happen to know it happened . That's why I am bring
> this condition to the attention of the group . I guess that by the
> early 1980es Kenwood thought it had the pll lock/ unlock condition
> licked and saw no need for a specific indicator light , but after 30
> years , the pll boards alignment on these old radios radios have
> probably deteriorated and that's why the vfo unlock condition may be
> occurring I would guess.
>
>

[Non-text portions of this message have been removed]

43007. Re: TS-830S low output in TUNE

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 14:00:33 UTC
From: roberteleazer@rocketmail.com
Topic: 42991 Message: 43007

Craig:

Based on my experience of having replaced multiple components on a TS-820S rectifier board and having replaced an entire TS-520 rectifer board, you should be able to replace those resistors without entirely removing the board from the radio.

You are right to be concerned about the fragility of the circuit board traces. The age of the board combined with the tmperatures in that area result in the traces being very fragile indeed. But access is not that bad and it's not that hard to replace those traces with short lengths of wire if damaged.

Good Luck!

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, Craig Roberts <crgrbrts@...> wrote:
>
> Thanks, Terry.
>
> When replacing components on the rectifier board, can the board be
> simply flipped after removing the hold-down screws or is desoldering
> some or all of the many wires to the board necessary? The wires all
> appear, if memory serves, to be attached from a harness on one side of
> the board. (I ask because I am not in the vicinity of the radio to check
> for myself).
>
> If it is the latter, I am tempted to cut the resistors out from the top
> and splice the new ones in on the lead stubs (though, as a quasi-purist,
> I'd rather do it the "right" way providing I can avoid damaging fragile
> circuit board traces.
>
> Craig
> W3CRR
>

43008. Re: [TS-520_820_530_830] Re: TS520 S-Meter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 13:37:15 UTC
From: Jerry Barr
Topic: 42991 Message: 43008

hello Terry and group/ my TS-520SE has the pegging meter thing ,no matter if the agc is on or off or the antenna is grounded or open/ or meter switch is on alc or ip or whatever it always pegs on powerup/ it always has far as I remember/ so that is not normal?

Jerry/KJ6NTL

[Non-text portions of this message have been removed]

43009. Re: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 14:58:28 UTC
From: Craig Roberts
Topic: 43005 Message: 43009

Various factors have led me to be limited to the most basic of antennas -- the simple dipole. While I have been modestly successful in the past with these band-specific hunks of wire at a mere 25 feet AGL (above ground level), the Kenwood hybrids, TS-530S and TS-830S, that I have acquired recently have proved to be transformative. The receivers in these 30-year old machines easily equal and, at times, outstrip the newer ones I have tried. But, the real improvement has been in transmission. Perhaps because of the clarity and fidelity of hybrids' transmitted audio, I am able -- for the first time with these modest antennae -- actually work everyone I hear. I am also delighted to not only be detected at the other end, but, more often than not, complimented on the high quality of tghe audio originating from Kenwood's equally excellent MC-50 dynamic microphone.

I can only imagine what ham life would now be with a no-holds-barred gain antenna at optimal height.

73,

Craig
W3CRR

43010. Re: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 14:30:02 UTC
From: Dale Parfitt
Topic: 43005 Message: 43010

Hi Barry,

If one or both ends of your wire antennas are affixed to trees- use a pulley and weight to accommodate the movement of the trees.

At HF, manmade noise is primarily vertically polarized- so I would think a vertical antenna would only exaccerbate your noise problems. However, a horizontal dipole could be as bad if you do not take steps to eliminate common mode from the coax- typically by using an appropriate BALUN.

GL,

Dale W4OP
----- Original Message -----
From: Barry
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 24, 2013 9:53 AM
Subject: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

I think I'm going to sell my Yaesu FT-757GX Mark I setup - looks like I can get more power out of my TS-820 once I get it fixed and could put the money into a good antenna setup. I'm going to get a local guy to see if he can help me get the 820 back to transmitting since since it's not showing anything out right now, but it is receiving well.

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The trees that I have I'm afraid might snap a dipole if I put it up in the middle of them when we have the thunderstorms the South is so well known for, especially during the Summer. So far the end fed has survived, but we haven't had any massive storms since I put it up.

Going purely on eham.net's reviews the Zero Five antennas have great words said about them. I might consider something like this vertical:

http://www.zerofive-antennas.com/43-foot-10-160-meter-multiband-foldover-freestanding-vertical-antenna-5kw-unun

It would be in my front yard about 10 feet from my house and 25 feet away from trees because that's about the only place I could put it.

I don't want to blow a lot of money on antennas, but I do want something really nice for $300 - $500 if possible. I know I won't get a blow it out of the water antenna for that money, but I'm curious to see what you guys could give me insight on.

Thanks as always!

Barry

Jeremiah 29:11-13 / John 3:16

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.2904 / Virus Database: 3199/6404 - Release Date: 06/12/13
Internal Virus Database is out of date.

[Non-text portions of this message have been removed]

43011. RE: [Bulk] [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 15:31:39 UTC
From: Brad Allen
Topic: 43005 Message: 43011

Barry that 757 Is not a bad radio and I am not normally a YEASU fan, and the 757 has it's share of receive sensitivity issues.. I am Kenwood 100%. I have 4 TS-940 units, not to mention the TS-930 in mint condition and I have a TS-2000. I prefer the 940 over the 2000, but operate the 2000 just as much. My antenna, well I could string wire all over the place and I don't. You can fold antennas, slope them to get the length you can work with etc. Even on a small lot, you can do wonders. I have a good suggestion. I have a COMET CT-250B. I will tell you right now it's good for 200 watts only, but then again, I don't run more than 100 or so. It is a vertical which really needs no radials, but a ground is necessary. It works well, looks good if seen and is not priced all that high although is not cheap. Solid construction and I got free support even after 6 years of ownership. 3 screws and a couple clamps get it about 30 ft off the ground and you are good to go. Ground rods for RF are best placed at a angle as RF only penetrates a short distance below the surface.

Your theory of getting contacts is not really correct. Putting the money into the antenna and quality coax is what you SHOULD do. So you have a Kenwood that has a hot receiver, they are noted for that anyway, so split, use the 757 transmitter and the Kenwood receiver, with a switch over network for a while. Split operation like that is done a lot. It really is the antenna and the coax that makes the station and a decent radio helps, but is not the key to contacts. Neither is raising your power. You have to DOUBLE your power to move 1 s-unit on a meter. Even if you could get 200 watts out of your Kenwood, you would be disappointed with the results. It takes careful listening and operator patience to snag the world with a modest in your budget type station, but don't be embarrassed about it.

Another antenna is a dipole and gave me awesome results were a COBRA Senior. You could also try a COBRA junior as well. You have what you have for equipment; maximize it with a decent antenna that will give you reasonable results. Brad KB2CHY.

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Barry
Sent: Monday, June 24, 2013 9:53 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [Bulk] [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

I think I'm going to sell my Yaesu FT-757GX Mark I setup - looks like I can get more power out of my TS-820 once I get it fixed and could put the money into a good antenna setup. I'm going to get a local guy to see if he can

help me get the 820 back to transmitting since since it's not showing anything out right now, but it is receiving well.

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The trees that I have I'm afraid might snap a dipole if I put it up in the middle of them when we have the thunderstorms the South is so well known for, especially during the Summer. So far the end fed has survived, but we haven't had any massive storms since I put it up.

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It would be in my front yard about 10 feet from my house and 25 feet away from trees because that's about the only place I could put it.

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Thanks as always!

Barry

Jeremiah 29:11-13 / John 3:16

[Non-text portions of this message have been removed]

43012. Re: Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 15:34:39 UTC
From: Barry
Topic: 43005 Message: 43012

Not sure why I hadn't thought about that, Dale - just put the pulley up as far as I can in the tree after I put a ladder up on it?

Barry

Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, "Dale Parfitt" <parinc1@...> wrote:
>
> Hi Barry,
>
> If one or both ends of your wire antennas are affixed to trees- use a pulley and weight to accommodate the movement of the trees.
>
> At HF, manmade noise is primarily vertically polarized- so I would think a vertical antenna would only exaccerbate your noise problems. However, a horizontal dipole could be as bad if you do not take steps to eliminate common mode from the coax- typically by using an appropriate BALUN.
>
> GL,
>
> Dale W4OP

43013. Re: Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 14:15:37 UTC
From: Sal Cerda
Topic: 43005 Message: 43013

Barry,
You would be so much happier if you built an antenna yourself. Spending that kind of money on a wire does not make sense once you have discovered that you have the power to make antennas for very little.

Perhaps if you describe your lot size, house placement, fences etc. others may chime in with a practical design which works for your situation. A simple dipole is hard to beat for the money.
With a tuner, my HomeDepot 14 gauge electrical wire 80 meter dipole gets out on 80, 40, 20, 17 and 15 meters. I worked south Brazil last night on my TS530. You can too.
Sal

[Non-text portions of this message have been removed]

43014. Re: TS520 S-Meter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 16:31:11 UTC
From: Terry Wagoner
Topic: 42991 Message: 43014

Jerry:

First of all the panel meter is always in ALC or S-meter function in Receive mode where ever you have the meter selector switch set at. When rig is in Send then the meter switch can be used to select the transmit monitoring positions of ALC, Ip, HV, and RF.

The 520S and SE are virtually the same radios with some very minor exceptions. The AGC and S-meter circuits are identical and should behave the same as the 520S.

I have very little hands on experience with the 520SE, but quite a bit with the other hybrid models. So I cannot tell you with 100% certainty that your S-meter should not peg and then decay back to zero in initial power on with the antenna removed, grounded or on a dummy load.

I can tell you that I have never seen a hybrid that does not work in that manner. In my experience with the antenna feed line grounded or removed from the rig about highest meter deflection I have see is approx S-3.

So do I understand that if you ground your SO-239 or unscrew the coax feed line from it and then power on the radio that your S-meter will peg FSD and then drift back down to zero? If this is true I have no explanation for that behavior.

Perhaps other TS-520SE owners can comment here.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Jerry Barr <kj6ntl@...> wrote:
>
> hello Terry and group/ my TS-520SE has the pegging meter thing ,no matter if the agc is on or off or the antenna is grounded or open/ or meter switch is on alc or ip or whatever it always pegs on powerup/ it always has far as I remember/ so that is not normal?
>
> Jerry/KJ6NTL
>
> [Non-text portions of this message have been removed]
>

43015. Re: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 15:07:06 UTC
From: John Davidson
Topic: 43005 Message: 43015

To Barry (no ham call given) and all.
I would not blow $400 on a piece of aluminum pipe. not a cost effective solution.
I would go to the big home improvement store and buy a 150 ft roll of #14 THHN wire , some pully assemblies and get on line and order some end insulators and a roll of coax (someone always has ads in the ham magazines for coax) and some PL259 connectors, insulators and put up a dipole with weighted pully strain relief on the ends. If you want to invest another hundred + , get a balanced line tuner and do the twinlead feedline instead of coax feed for multibands with one long dipole.
You have to decide what band or bands you want to start on and calculate dipole lengths for this band.
Last BUT NOT LEAST. you cant work DX easily with a low antenna, GET IT HIGHER way up in the trees you have..
Good luck

From: Barry <bonnevilleblb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 24, 2013 9:53 AM
Subject: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

I think I'm going to sell my Yaesu FT-757GX Mark I setup - looks like I can get more power out of my TS-820 once I get it fixed and could put the money into a good antenna setup. I'm going to get a local guy to see if he can help me get the 820 back to transmitting since since it's not showing anything out right now, but it is receiving well.

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Thanks as always!

Barry

Jeremiah 29:11-13 / John 3:16

[Non-text portions of this message have been removed]

43016. Re: [TS-520_820_530_830] Re: TS-830S low output in TUNE

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 15:52:31 UTC
From: Craig Roberts
Topic: 42991 Message: 43016

Thanks, Robert.

Given the risk to circuit board traces, and lacking at present the magical Hakko 808 desoldering thingie favored by Terry and friends, I may just go the "topside splicing route", at least for the time being. If the new resistors actually do the trick (and the schematic indicates they may very well correct the glitch), I may then formalize the installation from the copper side. I dunno.

Frankly, I'm not sure I'm any happier with the possibility of having to install wire jumpers on the bottom of the board than I am with splicing in components from the top. I have used the splicing technique for years on antique radio restorations and have thus avoided damaging fragile connection points and adjacent components. It's not as pretty as complete component removals and replacements, but it's safer, easier -- and it works.

Hey -- if this decision is the toughest I have to make right now, life's going pretty darned well, eh?

Oh, last night I discovered that I have on hand every imaginable metal film resistor manufactured -- except a pair of 56K 1/2 watters :-) .

73,
Craig
W3CRR

[Non-text portions of this message have been removed]

43017. TS-820S RF-clipper vs normal mode TP2 IF-unit

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 16:00:35 UTC
From: hfdxer@ymail.com
Topic: 43017 Message: 43017

Recently I repaired a TS-820S which will be donated to a young HAM.

Yesterday I made a few QSO's with it and received good audio reports.
From the reports I received, there was not much difference between PROC ON and PROC OFF, also noticed by the average power reading on the Watt meter here. Actually, with PROC OFF I could get more avg power.

I am now in the process of checking/adjusting the rig cf. service manual specs in total.

When arriving at the RF-clipper part, I could not get the same audio levels between PROC ON/OFF into the 1st TX-mixer, as measured at TP2 of the IF-unit.
The carrierfrequency is 451.90 kHz.

Situation:

MIC GAIN is at 12 o'clock:

With the RF-clipper on, I measure a beautiful sine wave, when whistling, with 560 mVpp, measured at TP2 with VR7 at max.

With the RF-clipper off, the peak-peak voltage is significantly higher and with strong whistling I can reach 2.8Vpp (~4 x 560 mV (!).
At this level the audio is distorted as I see flattened tops.

When the MIC GAIN (front) is turned fully CW:

With the RF-clipper on, I reach 2.8Vpp, with VR7 max. No distortion.

With the RF-clipper off, I reach the same 2.8 Vpp easily and create square waves ;-)

It seems to me that the level of the first MIC amp (Q19) is (much) higher than the output of the clipper amp (Q23).

If I am reading the circuit diagram correctly, the outputs of both Q19 and Q23 are fed into Q20.

I also varied the LO-frequency to determine if there might be an optimum in the three 455 kHz filter responses, but no gain.

To equalize the two levels, I'm thinking of shortening R121 (1k) in order to increase the gain of Q30, and/or lowering R122 (47k)

Before doing that, perhaps somebody could help me out on this?

73, Remco PA3FYM

43018. Re: Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 15:31:03 UTC
From: Barry
Topic: 43005 Message: 43018

What size dipole do you have, Craig? The ones we were using Saturday were about 50' or so in the air and looked to be 80m sized dipole setups. Every contact we tried to make, even though there were several pileups, we pretty much made. That was on the TS-2000, and I bet if I'd been able to transmit with my 820 it would have worked well, too.

I know there's no way for me to get a 50' high dipole up, but I might could get 30' or 40' high. There again, I'm afraid my trees may rip it apart during a storm with limbs flinging everywhere.

Barry - KK4RXN

Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, Craig Roberts <crgrbrts@...> wrote:
>
> Various factors have led me to be limited to the most basic of antennas
> -- the simple dipole. While I have been modestly successful in the past
> with these band-specific hunks of wire at a mere 25 feet AGL (above
> ground level), the Kenwood hybrids, TS-530S and TS-830S, that I have
> acquired recently have proved to be transformative. The receivers in
> these 30-year old machines easily equal and, at times, outstrip the
> newer ones I have tried. But, the real improvement has been in
> transmission. Perhaps because of the clarity and fidelity of hybrids'
> transmitted audio, I am able -- for the first time with these modest
> antennae -- actually work everyone I hear. I am also delighted to not
> only be detected at the other end, but, more often than not,
> complimented on the high quality of tghe audio originating from
> Kenwood's equally excellent MC-50 dynamic microphone.
>
> I can only imagine what ham life would now be with a no-holds-barred
> gain antenna at optimal height.
>
> 73,
>
> Craig
> W3CRR
>

43019. Re: [TS-520_820_530_830] Re: Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 17:01:34 UTC
From: Dale Parfitt
Topic: 43005 Message: 43019

Yes. I use 1 gallon water jugs for weight- usually about half full and add some rubbing alcohol if they will be subject to freezing.

Dale W4OP
----- Original Message -----
From: Barry
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 24, 2013 11:34 AM
Subject: [TS-520_820_530_830] Re: Curious about your antenna setup with Kenwoods

Not sure why I hadn't thought about that, Dale - just put the pulley up as far as I can in the tree after I put a ladder up on it?

Barry

Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, "Dale Parfitt" <parinc1@...> wrote:
>
> Hi Barry,
>
> If one or both ends of your wire antennas are affixed to trees- use a pulley and weight to accommodate the movement of the trees.
>
> At HF, manmade noise is primarily vertically polarized- so I would think a vertical antenna would only exaccerbate your noise problems. However, a horizontal dipole could be as bad if you do not take steps to eliminate common mode from the coax- typically by using an appropriate BALUN.
>
> GL,
>
> Dale W4OP

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.2904 / Virus Database: 3199/6404 - Release Date: 06/12/13
Internal Virus Database is out of date.

[Non-text portions of this message have been removed]

43020. RE: [Bulk] Re: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 17:21:29 UTC
From: Brad Allen
Topic: 43005 Message: 43020

There is nothing at all wrong with a vertical that works. You don't spend $400.00 on the pipe, the bulk of the cost is the fact you won't need a tuner at all because the comet has a network that brings the SWR low in the Ham Bands. Most dipoles need a tuner which just says you are tuning random and therefore is eating up power in heat and components. Just because the dipole can be TUNED does not make it efficient. The COMET is an efficient compromise antenna. It does in fact work, and that is what counts. Brad KB2CHY

_____

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of John Davidson
Sent: Monday, June 24, 2013 11:07 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [Bulk] Re: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

To Barry (no ham call given) and all.
I would not blow $400 on a piece of aluminum pipe. not a cost effective solution.
I would go to the big home improvement store and buy a 150 ft roll of #14 THHN wire , some pully assemblies and get on line and order some end insulators and a roll of coax (someone always has ads in the ham magazines for coax) and some PL259 connectors, insulators and put up a dipole with weighted pully strain relief on the ends. If you want to invest another hundred + , get a balanced line tuner and do the twinlead feedline instead of coax feed for multibands with one long dipole.
You have to decide what band or bands you want to start on and calculate dipole lengths for this band.
Last BUT NOT LEAST. you cant work DX easily with a low antenna, GET IT HIGHER way up in the trees you have..
Good luck

_____
From: Barry <bonnevilleblb@... <mailto:bonnevilleblb%40yahoo.com> >
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Monday, June 24, 2013 9:53 AM
Subject: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

I think I'm going to sell my Yaesu FT-757GX Mark I setup - looks like I can get more power out of my TS-820 once I get it fixed and could put the money into a good antenna setup. I'm going to get a local guy to see if he can help me get the 820 back to transmitting since since it's not showing

anything out right now, but it is receiving well.

I currently have an 88' end fed antenna going out to a limb about 25' up in my front yard that picks up decently well and transmitted the other day to West Virginia, but I'm curious about what kind of antenna setup you guys have.

I want to optimize what I can, even though I don't have a huge yard and am limited because of a long power line in my back yard. After using an 80 meter dipole about 55 feet in the air Saturday at Field Day with a strong Kenwood TS-2000, I got spoiled and want a nice setup - I'm tired of calling at home (using the Yaesu since the 820 isn't transmitting) and not getting many responses.

The trees that I have I'm afraid might snap a dipole if I put it up in the middle of them when we have the thunderstorms the South is so well known for, especially during the Summer. So far the end fed has survived, but we haven't had any massive storms since I put it up.

Going purely on eham.net's reviews the Zero Five antennas have great words said about them. I might consider something like this vertical:

http://www.zerofive-antennas.com/43-foot-10-160-meter-multiband-foldover-freestanding-vertical-antenna-5kw-ununn

It would be in my front yard about 10 feet from my house and 25 feet away from trees because that's about the only place I could put it.

I don't want to blow a lot of money on antennas, but I do want something really nice for $300 - $500 if possible. I know I won't get a blow it out of the water antenna for that money, but I'm curious to see what you guys could give me insight on.

Thanks as always!

Barry

Jeremiah 29:11-13 / John 3:16

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

43021. Re: [Bulk] Re: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 17:34:00 UTC
From: John Davidson
Topic: 43005 Message: 43021

I don't know why you would state this like a fact?
I have 2 dipoles and one other Fan Dipole, all are fed with coax cables, and none of them need a tuner or any kind of 4:1
or 9:1 balun to have low SWR.

_____
From: Brad Allen <kb2chy@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 24, 2013 1:21 PM
Subject: RE: [Bulk] Re: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

. Most dipoles need a tuner which just says you are tuning random and
therefore is eating up power in heat and components. Just because the dipole
can be TUNED does not make it efficient.. Brad
KB2CHY
been

[Non-text portions of this message have been removed]

43022. Re: [TS-520_820_530_830] TS-830S low output in TUNE

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 17:44:38 UTC
From: John Davidson
Topic: 42991 Message: 43022

The tune position has contacts with resistors connected to lower the screen voltage etc. to run reduced power while initially tuning, to prevent tube damage by overcurrents.
Low output in normal operating (CW) position requires troubleshooting.

From: Craig Roberts <crgrbrts@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, June 23, 2013 9:33 PM
Subject: [TS-520_820_530_830] TS-830S low output in TUNE

So -- what causes low output in TUNE?

My TS-530S puts out about 20 watts in TUNE /SEND position at resonance

MY beleaguered TS-830S yields about 1 or 2 watts under the same conditions with meter readings too low to be useful for plate dipping. Output in CW / SSB mode is normal, though the 830 will oddly load up to 300 mA (no -- I don't run it at that, I stay about 230 mA).

It's not the driver tube (I swapped it with the known good one from the 530).

Thanks again!

Craig
W3CRR

[Non-text portions of this message have been removed]

43023. Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 17:45:28 UTC
From: Don D
Topic: 43023 Message: 43023

Hi All
Early TS830's
I am finding out that the early 830's had problems with soldering,and was corrected With the later models
Before you reinstall a board,check all the connectors as i had #8 & #9 plus the vco connections[rf board] all lose and had to resolder them as i kept losing my drive.
Check to make sure the board is well grounded.

I am looking to but a DS-2 for my Ts830
73
Don/Ve2ud

43024. Re: Phase lock loop indicator on the TS-530 and TS-830

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 17:43:50 UTC
From: wa4axt
Topic: 42983 Message: 43024

--- In TS-520_820_530_830@yahoogroups.com, W5RKL <w5rkl@...> wrote:
>
The pll in the TS-530s is a form of feedback controlled device where its output is a function of its input , which is usually a reference oscillator , and its output . as shown in the drawing in the link below .

http://s237.photobucket.com/user/rtaylor0361/media/imagesCAIUH2LH_zps668f2415.jpg.html

The vco will move to what ever frequency it needs to move to in order to drive the output of the phase detector to zero (locked condition) . For example if your reference clock is 1 and the divider is set to 1 then the output of the vco will be 1 (1-1=0) . If the divider is set to two the then the vco output will be two because that's what the vco has to output in order to get a 2/2 (output of the divider) -1 (reference oscillator) = 0 to the phase comparator . How much the vco bounces above and below the desired frequency before it locks on to the desired frequency is dependent on the loop filter that feeds the vco.
I am not to great at explaining things things so I hope you can grasp what I am saying .

In conclusion the thing to realize is that in a feedback system the vco output is a function of both its output and input and the radios programmable divider forces the vco to move to the frequency you want the pll to output. .

Note: The problem with my signal was confirmed by me using a remote hams.com receiver .

> Bob,
>
> You said:
>
> "If the light was off , then the pll was in open loop mode with the vco
> frequency drifting or scanning up or down to acquire a re -lock of the
> pll loop."
>
> With all due respect, the portion of that statement where you state,
> "the vco frequency drifting or scanning up and down to acquire a re-lock
> of the pll loop" is not true. VCO's themselves do NOT scan up and down
> on their own for a re-lock. You keep incorrectly stating that a VCO
> scans to obtain a re-lock and that's simply not true! A VCO is
> controlled by the PD and ONLY the PD determines whether a LOCK is
> achieved or not, NOT a VCO on it's own!
>
> I have no idea what you mean by "open loop mode". Explain in detail if
> you would please, what you mean by "open loop mode".
>
> You said you replace the PLL board in your 530 because because a few
> stations told you that you were "creating noise up and down the band"
> and that the display was flickering. I would not have replaced a board
> based solely on those symptoms and reports! I would have a few questions

> about the reports from distant stations. Some question which are:
>
> 1. Is the noise caused by "splatter"? (Mic gain set too high)
> 2. Is the microphone I'm using causing distortion which appears to the
> distant station as noise?
> 3. Does the distant station have it's noise limiter turned ON due to
> local noise at the distant stations location? (will create similar noise
> indications)
> 4. How does the distant station know it was you, i.e., what evidence
> proves it was you?
> 5. Did you ask the distant station if they could have recorded your
> transmissions and play it back to you so you can hear what they are hearing?
> 6. Did ALL the stations in the QSO tell you the same thing or just one?
>
> Also, what troubleshooting steps did you take that produced results that
> told you the PLL board could not be repaired and had to be replaced? A
> few simple steps such as
>
> 1. Did you check the board's mounting screws to ensure they are tight?
> 2. Did you clean the board's plugs to ensure they were not causing any
> PLL problems?
> 3. Did you clean the VFO's variable capacitor shaft to frame connection
> 4/ Did you check the individual oscillator frequencies applied to the
> PLL board to ensure they are stable and the signal levels were what they
> should be?
>
> Those are a few simple steps that should have been performed first
> before replacing the PLL board.
>
> I never said the display was NOT an indicator of a PLL UNLOCK state. I
> did, however, ask you what you were trying to say about a blinking
> display and a circuit that's telling the operator something and so far
> you have not answered that question.
>
> 73
> Mike W5RKL
>
>
>
>
> On 6/24/2013 5:41 AM, wa4axt wrote:
> >
> >
> >
> > http://s237.photobucket.com/user/rtaylor0361/media/287736_zps01116034.jpg.html
> >
> > Shown in the link above is a 1978 transceiver with a lock indicator
> > .It was not unusual to see such early pll radios with such indicators
> > .At some time in the future , the fcc required manufactures to install
> > hardware that monitored the loop for a open loop condition and shut

> > down the transmitter if the loop is broken and the vco tries to scan
> > for re-lock . When the lock light was on the radio shown above ,the
> > user could be assured that the VCO in the pll circuit was operating in
> > its closed loop mode and the vco was locked to the desired frequency .
> > If the light was off , then the pll was in open loop mode with the vco
> > frequency drifting or scanning up or down to acquire a re -lock of the
> > pll loop . I recently had to replace my pll board on my TS-530S after
> > receiving reports from other hams that I was creating noise up and
> > down the band . In hind sight I recognized that such action occurred
> > when the digital display would flicker . This flicker unlike a
> > lock/unlock light was just barley noticeable and that one had to be
> > looking for it to happen to know it happened . That's why I am bring
> > this condition to the attention of the group . I guess that by the
> > early 1980es Kenwood thought it had the pll lock/ unlock condition
> > licked and saw no need for a specific indicator light , but after 30
> > years , the pll boards alignment on these old radios radios have
> > probably deteriorated and that's why the vfo unlock condition may be
> > occurring I would guess.
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

43025. RE: [Bulk] Re: [Bulk] Re: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 17:53:13 UTC
From: Brad Allen
Topic: 43005 Message: 43025

Fact: That unless tuned to a specific band, a tuner is most likely needed for a dipole. The statement below is general in nature and does start with the word MOST. Brad KB2CHY

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of John Davidson
Sent: Monday, June 24, 2013 1:34 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [Bulk] Re: [Bulk] Re: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

I don't know why you would state this like a fact?
I have 2 dipoles and one other Fan Dipole, all are fed with coax cables, and none of them need a tuner or any kind of 4:1
or 9:1 balun to have low SWR.

From: Brad Allen <kb2chy@... <mailto:kb2chy%40frontiernet.net> >
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Monday, June 24, 2013 1:21 PM
Subject: RE: [Bulk] Re: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

. Most dipoles need a tuner which just says you are tuning random and therefore is eating up power in heat and components. Just because the dipole can be TUNED does not make it efficient.. Brad
KB2CHY
been

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

43026. Re: Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 18:12:48 UTC
From: Brian Allen
Topic: 43005 Message: 43026

I have a kenwood 520 and 830. For the low bands I use a doublet antenna. 20- 6 meters, a K4KIO Hex Beam. I would invest the $500 in a hex beam. They are light, low swr, and a great performer. Check out http://www.na4rr.com/. He sells a low cost hex beam.

[Non-text portions of this message have been removed]

43027. Re: [TS-520_820_530_830] TS-830S low output in TUNE

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 18:35:22 UTC
From: Craig Roberts
Topic: 42991 Message: 43027

Thanks, John,

I enjoyed reading your QRZ.com narrative!

The theory (thanks, Terry) is that at least one of the two 56K resistors of which you speak has gone south. Output in the TUNE position is now only a watt or two as opposed to the normal +/- 20 watt output I get on my companion TS-530S. This makes tuning up in the TUNE position problematic since meter deflection in the iP position is too little to be at all useful in preliminary dipping of the plate.

CW output is normal (100 + watts on all bands except on the possibly misaligned 160 meters), so, operationally, the TUNE glitch is more of an inconvenience than a real problem. I overcome it by tuning up with manually reduced power (like every other "conventional" radio I've owned), but I hate to have a radio that's not fully operational in all respects, even if there's a "workaround."

73 and thanks again, John,

Craig
W3CRR

43028. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 18:52:07 UTC
From: Terry Wagoner
Topic: 43023 Message: 43028

Your counsel is good. I never return any board without inspecting all molex connector pin soldering under good light and magnification. I plug a molex plug into the socket on the board to ensure each pin is seated and then wiggle the plug as I observe. Very common to find pins that are essentially floating as if the factory solder never wetted to the pin. I remove all the old solder and polish the pin to remove any oxidation and use a small amount of liquid flux to resolder. Trying to simply reheat is usually futile. Failure to make this inspection is silly as you have already invested the time in board removal. After you pull more than one connector off a board or return it and have to remove it again (rework) you will be a believer in inspection.

Only other problem that is hard to detect is if the trace has cracked at the transition to the Pin pad. This does happen and can be hard to spot. Removing all the old solder helps you spot a moving pad.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@...> wrote:
>
> Hi All
> Early TS830's
> I am finding out that the early 830's had problems with soldering,and was corrected With the later models
> Before you reinstall a board,check all the connectors as i had #8 & #9 plus the vco connections[rf board] all lose and had to resolder them as i kept losing my drive.
> Check to make sure the board is well grounded.
>
> I am looking to but a DS-2 for my Ts830
> 73
> Don/Ve2ud
>

43029. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 19:13:38 UTC
From: Bob Macklin
Topic: 43023 Message: 43029

Terry,

Have you tied reinforcing the Molex connectors with a small amount of epoxy over the connection area?

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Terry Wagoner
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 24, 2013 11:52 AM
Subject: [TS-520_820_530_830] Re: Early TS830's

Your counsel is good. I never return any board without inspecting all molex connector pin soldering under good light and magnification. I plug a molex plug into the socket on the board to ensure each pin is seated and then wiggle the plug as I observe. Very common to find pins that are essentially floating as if the factory solder never wetted to the pin. I remove all the old solder and polish the pin to remove any oxidation and use a small amount of liquid flux to resolder. Trying to simply reheat is usually futile. Failure to make this inspection is silly as you have already invested the time in board removal. After you pull more than one connector off a board or return it and have to remove it again (rework) you will be a believer in inspection.

Only other problem that is hard to detect is if the trace has cracked at the transition to the Pin pad. This does happen and can be hard to spot. Removing all the old solder helps you spot a moving pad.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@...> wrote:
>
> Hi All
> Early TS830's
> I am finding out that the early 830's had problems with soldering,and was corrected With the later models
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> Check to make sure the board is well grounded.
>
> I am looking to but a DS-2 for my Ts830
> 73
> Don/Ve2ud
>

[Non-text portions of this message have been removed]

43030. Re: TS-820S RF-clipper vs normal mode TP2 IF-unit

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 19:27:25 UTC
From: Terry Wagoner
Topic: 43017 Message: 43030

Remco:

The service manual processor alignment steps are flawed much like most of the manual.

Go to Ken K4EAA website and look under FAQs and read his alignment procedure.

Requires an audio generator and an O-scope. Set audio generator for 1000 hz and a level of approx 3 to 5 mv. Connect scope to TP-2 and adjust Processor 455Khz carrier oscillator trimmer TC-4 for maximum P-P level at TP-2. You will then change generator to 300 hz at same output level and adjust TC-4 for half the P-P level you had at 1000 hz. You are adjusting the -6dB point on the slope of the 455khz filters. You will have to go back and forth couple of times to get it right.

Just follow the rest of Kens procedure. I have used it and it works well.

If you have any questions about the procedure come back and ask. It is pretty straight forward.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "hfdxer@..." <hfdxer@...> wrote:
>
> Recently I repaired a TS-820S which will be donated to a young HAM.
>
> Yesterday I made a few QSO's with it and received good audio reports.
> From the reports I received, there was not much difference between PROC ON and PROC OFF, also noticed by the average power reading on the Watt meter here. Actually, with PROC OFF I could get more avg power.
>
> I am now in the process of checking/adjusting the rig cf. service
> manual specs in total.
>
> When arriving at the RF-clipper part, I could not get the same audio levels between PROC ON/OFF into the 1st TX-mixer, as measured at TP2 of the IF-unit.
> The carrierfrequency is 451.90 kHz.
>
> Situation:
>
> MIC GAIN is at 12 o'clock:
>
> With the RF-clipper on, I measure a beautiful sine wave, when whistling, with 560 mVpp, measured at TP2 with VR7 at max.
>
> With the RF-clipper off, the peak-peak voltage is significantly
> higher and with strong whistling I can reach 2.8Vpp (~4 x 560 mV (!).
> At this level the audio is distorted as I see flattened tops.
>

> When the MIC GAIN (front) is turned fully CW:
>
> With the RF-clipper on, I reach 2.8Vpp, with VR7 max. No distortion.
>
> With the RF-clipper off, I reach the same 2.8 Vpp easily and create
> square waves ;-)
>
> It seems to me that the level of the first MIC amp (Q19) is (much)
> higher than the output of the clipper amp (Q23).
>
> If I am reading the circuit diagram correctly, the outputs of both
> Q19 and Q23 are fed into Q20.
>
> I also varied the LO-frequency to determine if there might be an
> optimum in the three 455 kHz filter responses, but no gain.
>
> To equalize the two levels, I'm thinking of
> shortening R121 (1k) in order to increase the gain of Q30, and/or lowering R122 (47k)
>
> Before doing that, perhaps somebody could help me out on this?
>
> 73, Remco PA3FYM
>

43031. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 19:43:57 UTC
From: Terry Wagoner
Topic: 43023 Message: 43031

Hi Bob:

I have had several rigs here where owner applied JB weld or some kind of epoxy around the Molex connectors. I think they did this as they experienced pulling connectors off the boards and it is there attempt at a fix for that. Anyone who owns these rigs or works on them enough will pull a connector off a board. Not fun but it happens. I can see where someone might think based on that experience they should glue the connector body to the board as a cure.

I dont think there is any good reason to do this. First of all I dont think Kenwood ever envisioned frequent need for unplug/plug cycles on these connectors.

I never rock the plugs side to side as I apply upward pressure as I fear cracking the trace to pad junction. I always try to apply upward force and gentle end to end rocking. End to end is far less likely to rock a pin in its pad. If you make sure all pins are soldered well and you Deoxit the male/female interface and get a good wipe on them then should never be any reason to have to pull them to address intermittent problems. Certainly not with any regularity.

I think I see more cobbled up IF boards than any other due to the frequent removal and install of filters.

So I never glue any molex connectors to the boards. I am not sure that I could spec a glue that would bond well to this connector material as I do not know precisely what it is made of. Perhaps nylon?

I grew up in a maintenance world where we did not use glue to restore bearing fits or for any other repairs. Glue was considered for the backyard mechanic. Welding repair was done and fabrication of new parts, but never glue anything together. I know modern glues have come a long way, but I just cant bring myself to glue the Molex connector to the boards. Old fashioned notions.

Terry K9TW
--- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@...> wrote:
>
> Terry,
>
> Have you tied reinforcing the Molex connectors with a small amount of epoxy over the connection area?
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Terry Wagoner
> To: TS-520_820_530_830@...m

> Sent: Monday, June 24, 2013 11:52 AM
> Subject: [TS-520_820_530_830] Re: Early TS830's
>
>
>
> Your counsel is good. I never return any board without inspecting all molex connector pin soldering under good light and magnification. I plug a molex plug into the socket on the board to ensure each pin is seated and then wiggle the plug as I observe. Very common to find pins that are essentially floating as if the factory solder never wetted to the pin. I remove all the old solder and polish the pin to remove any oxidation and use a small amount of liquid flux to resolder. Trying to simply reheat is usually futile. Failure to make this inspection is silly as you have already invested the time in board removal. After you pull more than one connector off a board or return it and have to remove it again (rework) you will be a believer in inspection.
>
> Only other problem that is hard to detect is if the trace has cracked at the transition to the Pin pad. This does happen and can be hard to spot. Removing all the old solder helps you spot a moving pad.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> >
> > Hi All
> > Early TS830's
> > I am finding out that the early 830's had problems with soldering,and was corrected With the later models
> > Before you reinstall a board,check all the connectors as i had #8 & #9 plus the vco connections[rf board] all lose and had to resolder them as i kept losing my drive.
> > Check to make sure the board is well grounded.
> >
> > I am looking to but a DS-2 for my Ts830
> > 73
> > Don/Ve2ud
> >
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

43032. Re: Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 19:11:30 UTC
From: Barry
Topic: 43005 Message: 43032

How high do you have yours? I MIGHT could get one 35 feet in the air, and I might be able to get one 102' long or so.

Barry
KK4RXN

Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, Sal Cerda <sal.cerda@...> wrote:
>
> Barry,
> You would be so much happier if you built an antenna yourself. Spending
> that kind of money on a wire does not make sense once you have discovered
> that you have the power to make antennas for very little.
>
> Perhaps if you describe your lot size, house placement, fences etc. others
> may chime in with a practical design which works for your situation. A
> simple dipole is hard to beat for the money.
> With a tuner, my HomeDepot 14 gauge electrical wire 80 meter dipole gets
> out on 80, 40, 20, 17 and 15 meters. I worked south Brazil last night on
> my TS530. You can too.
> Sal
>
>
> [Non-text portions of this message have been removed]
>

43033. Re: [TS-520_820_530_830] Re: Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 20:12:51 UTC
From: Jerry Barr
Topic: 43005 Message: 43033

If u have four trees in ure prop /that form a rectangle square etc u might consider a loop I found it better and quieter then a dipole /course mine is 573 ft long and fifty ft in air / arrows shot over branches worked for me fishing line etc/ be changing qth soon and gonna missa that loop g5rv jr works good

Jerry KJ6NTL

From: Barry <bonnevilleblb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 24, 2013 12:11 PM
Subject: [TS-520_820_530_830] Re: Curious about your antenna setup with Kenwoods

How high do you have yours? I MIGHT could get one 35 feet in the air, and I might be able to get one 102' long or so.

Barry
KK4RXN

Jeremiah 29:11-13 / John 3:16

--- In mailto:TS-520_820_530_830%40yahoogroups.com, Sal Cerda <sal.cerda@...> wrote:
>
> Barry,
> You would be so much happier if you built an antenna yourself. Spending
> that kind of money on a wire does not make sense once you have discovered
> that you have the power to make antennas for very little.
>
> Perhaps if you describe your lot size, house placement, fences etc. others
> may chime in with a practical design which works for your situation. A
> simple dipole is hard to beat for the money.
> With a tuner, my HomeDepot 14 gauge electrical wire 80 meter dipole gets
> out on 80, 40, 20, 17 and 15 meters. I worked south Brazil last night on
> my TS530. You can too.
> Sal
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

43034. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 20:38:43 UTC
From: Craig Roberts
Topic: 43023 Message: 43034

What constitutes an "early" TS-830S, serial number-wise?

The epoxy discussion reminds me of an incident from my Heath Company days. I was in the marketing department and among my duties was visiting Heathkit retail stores to assist with customer service practice compliance. The corporate promotional slogan at the time was "We won't let you fail." It was a kindly but unfortunate sentiment.

One evening at the Cleveland east side store, a short, stocky, hirsute gentleman of apparent eastern European extraction (his surname comprised a nearly unbroken series of consonants) struggled in singlehandedly with a huge GR-900 Heathkit console TV in tow, complete with weighty cabinet. He slammed the behemoth in front of the service counter, pointed to the "We won't let you fail" sign overhead and growled, "I fail -- you fix!" It took three of us to drag the TV into the back room, wherein our tech extracted the chassis, and, after removing the CRT, flipped it over.

At first we were baffled by what we saw, but soon determined that the television had been assembled with Liquid Solder -- the components literally glued together. After peering out into the showroom and regarding the customer's dark and glowering countenance, it was determined that our best course of action was to order a new chassis kit from Benton Harbor and assemble it for our dissatisfied client. This we did over the course of the next two weeks.

If you ever wonder why Heathkit went out of business, consider this story. Some say Zenith killed the company. Now, what do YOU think?

73,

Craig
W3CRR
former "Ham at Heath"

43035. Re: Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 21:58:52 UTC
From: k5hfg
Topic: 43005 Message: 43035

Hello Barry,
I have been following your posts about your antenna dilemma. Now, please do not be offended. YOU need to do some studying before you wade into this arena. The best Hybrid in the world will do you no good until you have informed yourself about how antennas work and the fact that they are the most important part of your shack. I have been constructing antennas since the mid 70's. I hold only a General ticket but I have read and studied everything about antennas. Now most of the selection is usually left to ones own desire and their amount of back pocket money. I have seen every kind of antenna advertisement you can think of and I use dipoles and an old trusty long wire. Either of these antennas will get around the world plus you have the pleasure of accomplishment. " I built this and it works!" feels good. Now you need to obtain a mid 70's ARRL antenna handbook and while you are waiting for it you can get on hamuniverse dot com and glean some info from their antenna design section. Forget the razzle dazzle types and dig into the simple dipoles and end feds first. My advise is to build to resonance for whatever band you choose to operate. I am not a fan of multi band antennas but built correctly they do work fine. I have recently built some coaxial dipoles and have had good success. Their BW is very good and allows you to utilize a fairly wide portion of your chosen band. But start out simple. Also, I am hearing a good deal of bad press on tuners. I would suggest you invest in a good one and roll out a few hundred feet of minimum 14 gage plastic coated wire to start. Get your antenna as high as you can. But you can read all about the how to in the antenna handbook. Quite a few tuners on Ebay but I prefer hamfest buying. You get to see what someone calls mint condition. If you have any problems you are in the right group. Let me know how you make out if you choose to study. I wish you success on your upcoming upgrade attempt. 73, Don K5HFG

--- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@...> wrote:
>
> How high do you have yours? I MIGHT could get one 35 feet in the air, and I might be able to get one 102' long or so.
>
> Barry
> KK4RXN

43036. Re: [TS-520_820_530_830] Re: Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 22:09:04 UTC
From: Bob Macklin
Topic: 43005 Message: 43036

If you use a resonant dipole antenna with your hybrid you do not need an antenna tuner. It is built into the hybrid.

Good multiband antennas are difficult to build.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: k5hfg
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 24, 2013 2:58 PM
Subject: [TS-520_820_530_830] Re: Curious about your antenna setup with Kenwoods

Hello Barry,
I have been following your posts about your antenna dilemma. Now, please do not be offended. YOU need to do some studying before you wade into this arena. The best Hybrid in the world will do you no good until you have informed yourself about how antennas work and the fact that they are the most important part of your shack. I have been constructing antennas since the mid 70's. I hold only a General ticket but I have read and studied everything about antennas. Now most of the selection is usually left to ones own desire and their amount of back pocket money. I have seen every kind of antenna advertisement you can think of and I use dipoles and an old trusty long wire. Either of these antennas will get around the world plus you have the pleasure of accomplishment. " I built this and it works!" feels good. Now you need to obtain a mid 70's ARRL antenna handbook and while you are waiting for it you can get on hamuniverse dot com and glean some info from their antenna design section. Forget the razzle dazzle types and dig into the simple dipoles and end feds first. My advise is to build to resonance for whatever band you choose to operate. I am not a fan of multi band antennas but built correctly they do work fine. I have recently built some coaxial dipoles and have had good success. Their BW is very good and allows you to utilize a fairly wide portion of your chosen band. But start out simple. Also, I am hearing a good deal of bad press on tuners. I would suggest you invest in a good one and roll out a few hundred feet of minimum 14 gage plastic coated wire to start. Get your antenna as high as you can. But you can read all about the how to in the antenna handbook. Quite a few tuners on Ebay but I prefer hamfest buying. You get to see what someone calls mint condition. If you have any problems you are in the right group. Let me know how you make out if you choose to study. I wish you success on your upcoming upgrade attempt. 73, Don K5HFG

--- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@...> wrote:
>
> How high do you have yours? I MIGHT could get one 35 feet in the air, and I might be able to get one 102' long or so.
>

> Barry
> KK4RXN

[Non-text portions of this message have been removed]

43037. Re: [TS-520_820_530_830] Re: Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 22:15:30 UTC
From: Dale Parfitt
Topic: 43005 Message: 43037

For a nice treatment of the flawed bazooka designs (which achieve their minimal increase in BW through loss and fat conductors- NOT through reactance cancelling) see:
http://vk1od.net/antenna/DoubleBazooka/index.htm

Walt Maxwell and Frank Witt have also contributed elegant math analysis of why the bazooka does not achieve its BW by the means proposed by the designers.

Dale W4OP

----- Original Message -----
From: k5hfg
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 24, 2013 5:58 PM
Subject: [TS-520_820_530_830] Re: Curious about your antenna setup with Kenwoods

Hello Barry,
I have been following your posts about your antenna dilemma. Now, please do not be offended. YOU need to do some studying before you wade into this arena. The best Hybrid in the world will do you no good until you have informed yourself about how antennas work and the fact that they are the most important part of your shack. I have been constructing antennas since the mid 70's. I hold only a General ticket but I have read and studied everything about antennas. Now most of the selection is usually left to ones own desire and their amount of back pocket money. I have seen every kind of antenna advertisement you can think of and I use dipoles and an old trusty long wire. Either of these antennas will get around the world plus you have the pleasure of accomplishment. " I built this and it works!" feels good. Now you need to obtain a mid 70's ARRL antenna handbook and while you are waiting for it you can get on hamuniverse dot com and glean some info from their antenna design section. Forget the razzle dazzle types and dig into the simple dipoles and end feds first. My advise is to build to resonance for whatever band you choose to operate. I am not a fan of multi band antennas but built correctly they do work fine. I have recently built some coaxial dipoles and have had good success. Their BW is very good and allows you to utilize a fairly wide portion of your chosen band. But start out simple. Also, I am hearing a good deal of bad press on tuners. I would suggest you invest in a good one and roll out a few hundred feet of minimum 14 gage plastic coated wire to start. Get your antenna as high as you can. But you can read all about the how to in the antenna handbook. Quite a few tuners on Ebay but I prefer hamfest buying. You get to see what someone calls mint condition. If you have any problems you are in the right group. Let me know how you make out if you choose to study. I wish you success on your upcoming upgrade attempt. 73, Don K5HFG

--- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@...> wrote:
>
> How high do you have yours? I MIGHT could get one 35 feet in the air, and I might be able to get one 102' long or so.
>

> Barry
> KK4RXN

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.2904 / Virus Database: 3199/6404 - Release Date: 06/12/13
Internal Virus Database is out of date.

[Non-text portions of this message have been removed]

43038. Re: [TS-520_820_530_830] Re: Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 22:26:48 UTC
From: Bob Lazarow
Topic: 43005 Message: 43038

My experiences: The best antenna I personally owned was a tri-band 2 element Quad that I used to operate with a '520 many years ago. For those unfamiliar, this Quad had two pair of 15 foot bamboo rods in the shape of two "X"s, each X at the end of an 8 foot boom. The wiring for each band 20-15-10 ran around the perimeter of each X.

That being said, I purchased a SteppIR 20-6m Vertical a few years back, put in 16 radials, etc. It is...ok, it does load up without a tuner on all of it's bands. Barefoot, as below.

Two year's ago, to get on 40m, I decided to purchase a BUXCOMM 40 Windom (offset fed dipole). Up about 20 feet - best I could do. It has out shown the vertical under every circumstance. First DX contact with my TS-830s on SSB 20m I broke through a mini-pileup and worked Slovenia. The came SANDY..no tree, not much Windom left...will try again new QTH

73

Bob/WA2JAJ

On 6/24/2013 2:12 PM, Brian Allen wrote:
>
> I have a kenwood 520 and 830. For the low bands I use a doublet
> antenna. 20- 6 meters, a K4KIO Hex Beam. I would invest the $500 in a
> hex beam. They are light, low swr, and a great performer. Check out
> http://www.na4rr.com/. He sells a low cost hex beam.
>
> [Non-text portions of this message have been removed]
>
>
>
> No virus found in this message.
> Checked by AVG - www.avg.com <http://www.avg.com>
> Version: 2013.0.3345 / Virus Database: 3199/6436 - Release Date: 06/24/13
>

[Non-text portions of this message have been removed]

43039. Re: [TS-520_820_530_830] Re: Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 22:39:19 UTC
From: Bob Lazarow
Topic: 43005 Message: 43039

Part 2

I bought a commercial Windom for convenience. They can be easy home built. Many designs, information, on the Net and elsewhere. In my opinion, it is a very decent multi-band antenna if you can get it above 25 feet or so. They are NOT short=space antennas. See EHAM reviews if you are interested in my particular antenna. The BUXCOMM website has a decent write up on the Windom concept.

Bob?Wa2JAJ

On 6/24/2013 6:26 PM, Bob Lazarow wrote:
>
> My experiences: The best antenna I personally owned was a tri-band 2
> element Quad that I used to operate with a '520 many years ago. For
> those unfamiliar, this Quad had two pair of 15 foot bamboo rods in the
> shape of two "X"s, each X at the end of an 8 foot boom. The wiring for
> each band 20-15-10 ran around the perimeter of each X.
>
> That being said, I purchased a SteppIR 20-6m Vertical a few years back,
> put in 16 radials, etc. It is...ok, it does load up without a tuner on
> all of it's bands. Barefoot, as below.
>
> Two year's ago, to get on 40m, I decided to purchase a BUXCOMM 40 Windom
> (offset fed dipole). Up about 20 feet - best I could do. It has out
> shown the vertical under every circumstance. First DX contact with my
> TS-830s on SSB 20m I broke through a mini-pileup and worked Slovenia.
> The came SANDY..no tree, not much Windom left...will try again new QTH
>
> 73
>
> Bob/WA2JAJ
>
> On 6/24/2013 2:12 PM, Brian Allen wrote:
> >
> > I have a kenwood 520 and 830. For the low bands I use a doublet
> > antenna. 20- 6 meters, a K4KIO Hex Beam. I would invest the $500 in a
> > hex beam. They are light, low swr, and a great performer. Check out
> > http://www.na4rr.com/. He sells a low cost hex beam.
> >
> > [Non-text portions of this message have been removed]
> >
> >
> >

> > No virus found in this message.
> > Checked by AVG - www.avg.com <http://www.avg.com>
> > Version: 2013.0.3345 / Virus Database: 3199/6436 - Release Date:
> 06/24/13
> >
>
> [Non-text portions of this message have been removed]
>
>
>
> No virus found in this message.
> Checked by AVG - www.avg.com <http://www.avg.com>
> Version: 2013.0.3345 / Virus Database: 3199/6436 - Release Date: 06/24/13
>

[Non-text portions of this message have been removed]

43040. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 22:40:09 UTC
From: Terry Wagoner
Topic: 43023 Message: 43040

As far as I know the 1,000,000 series were the first. Probably 1981. QST review was May of 81 as I recall. You see lot of the 1,000,000 and 2,000,000 series being parted out.

I have a 2 million and a 4 million series both full filtered. My 4 million was built in 1985 and I have the original purchase invoice.

I would not buy a 1 million series.

I have had a couple of 6 million series on the bench and one that had documentation of a new purchase in 1990.

There have been several iterations of IF boards with changes to the AGC timing constant capacitors for one thing.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Craig Roberts <crgrbrts@...> wrote:
>
> What constitutes an "early" TS-830S, serial number-wise?
>
> The epoxy discussion reminds me of an incident from my Heath Company
> days. I was in the marketing department and among my duties was visiting
> Heathkit retail stores to assist with customer service practice
> compliance. The corporate promotional slogan at the time was "We won't
> let you fail." It was a kindly but unfortunate sentiment.
>
> One evening at the Cleveland east side store, a short, stocky, hirsute
> gentleman of apparent eastern European extraction (his surname comprised
> a nearly unbroken series of consonants) struggled in singlehandedly with
> a huge GR-900 Heathkit console TV in tow, complete with weighty cabinet.
> He slammed the behemoth in front of the service counter, pointed to the
> "We won't let you fail" sign overhead and growled, "I fail -- you fix!"
> It took three of us to drag the TV into the back room, wherein our tech
> extracted the chassis, and, after removing the CRT, flipped it over.
>
> At first we were baffled by what we saw, but soon determined that the
> television had been assembled with Liquid Solder -- the components
> literally glued together. After peering out into the showroom and
> regarding the customer's dark and glowering countenance, it was
> determined that our best course of action was to order a new chassis kit
> from Benton Harbor and assemble it for our dissatisfied client. This we
> did over the course of the next two weeks.
>
> If you ever wonder why Heathkit went out of business, consider this
> story. Some say Zenith killed the company. Now, what do YOU think?
>

> 73,
>
> Craig
> W3CRR
> former "Ham at Heath"
>

43041. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 22:49:16 UTC
From: Craig Roberts
Topic: 43023 Message: 43041

Well, then -- my TS-830S is serial #1030340.

Shucks! I shouldn't have asked. :-)

Well, at any rate, it's pretty much working. I should receive my 56K screen voltage divider resistors in a couple of days. I'll let you know how that works out.

Craig

43042. Re: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 22:53:11 UTC
From: KB1TCD
Topic: 43005 Message: 43042

We've been very lucky with a simple G5RV Jr antenna we picked up at HRO in Salem, NH three summers ago.
We were heading back to Maine from some quick business I had to deal with in Connecticut and stopped by the store.
The antenna was on special for $25.00 and we couldn't resist.
Once we hooked it up 45 plus feet above ground and running about 130 ft of coax into the house it gives us 1:8 swr and below on 40, 30, 20, 17, 15, 12, 10 and 6m.
No tuner required using all three rigs: TS-830S, TS-120, Yaesu 897D.
We've made hundreds of DX contacts using 100 watts and a $25 antenna!

73 de Jose Douglas, KB1TCD

43043. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 23:05:23 UTC
From: Don
Topic: 43023 Message: 43043

My Ebay special serial number is 1111111 dc transformer maybe 1979?

my other two mint ones are 3010538,and 7070035

Don/Ve2ud

On 24/06/2013 6:40 PM, Terry Wagoner wrote:
>
> As far as I know the 1,000,000 series were the first. Probably 1981.
> QST review was May of 81 as I recall. You see lot of the 1,000,000 and
> 2,000,000 series being parted out.
>
> I have a 2 million and a 4 million series both full filtered. My 4
> million was built in 1985 and I have the original purchase invoice.
>
> I would not buy a 1 million series.
>
> I have had a couple of 6 million series on the bench and one that had
> documentation of a new purchase in 1990.
>
> There have been several iterations of IF boards with changes to the
> AGC timing constant capacitors for one thing.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Craig Roberts
> <crgrbrts@...> wrote:
> >
> > What constitutes an "early" TS-830S, serial number-wise?
> >
> > The epoxy discussion reminds me of an incident from my Heath Company
> > days. I was in the marketing department and among my duties was
> visiting
> > Heathkit retail stores to assist with customer service practice
> > compliance. The corporate promotional slogan at the time was "We won't
> > let you fail." It was a kindly but unfortunate sentiment.
> >
> > One evening at the Cleveland east side store, a short, stocky, hirsute
> > gentleman of apparent eastern European extraction (his surname
> comprised
> > a nearly unbroken series of consonants) struggled in singlehandedly
> with
> > a huge GR-900 Heathkit console TV in tow, complete with weighty
> cabinet.
> > He slammed the behemoth in front of the service counter, pointed to the

> > "We won't let you fail" sign overhead and growled, "I fail -- you fix!"
> > It took three of us to drag the TV into the back room, wherein our tech
> > extracted the chassis, and, after removing the CRT, flipped it over.
> >
> > At first we were baffled by what we saw, but soon determined that the
> > television had been assembled with Liquid Solder -- the components
> > literally glued together. After peering out into the showroom and
> > regarding the customer's dark and glowering countenance, it was
> > determined that our best course of action was to order a new chassis
> kit
> > from Benton Harbor and assemble it for our dissatisfied client. This we
> > did over the course of the next two weeks.
> >
> > If you ever wonder why Heathkit went out of business, consider this
> > story. Some say Zenith killed the company. Now, what do YOU think?
> >
> > 73,
> >
> > Craig
> > W3CRR
> > former "Ham at Heath"
> >
>
>

[Non-text portions of this message have been removed]

43044. Re: TS-820S RF-clipper vs normal mode TP2 IF-unit

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 22:28:43 UTC
From: hfdxer@ymail.com
Topic: 43017 Message: 43044

Hello Terry,

Thanks for the sensible hint!

Remco

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Remco:
>
> The service manual processor alignment steps are flawed much like most of the manual.
>
> Go to Ken K4EAA website and look under FAQs and read his alignment procedure.
>
> Requires an audio generator and an O-scope. Set audio generator for 1000 hz and a level of approx 3 to 5 mv. Connect scope to TP-2 and adjust Processor 455Khz carrier oscillator trimmer TC-4 for maximum P-P level at TP-2. You will then change generator to 300 hz at same output level and adjust TC-4 for half the P-P level you had at 1000 hz. You are adjusting the -6dB point on the slope of the 455khz filters. You will have to go back and forth couple of times to get it right.
>
> Just follow the rest of Kens procedure. I have used it and it works well.
>
> If you have any questions about the procedure come back and ask. It is pretty straight forward.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "hfdxer@" <hfdxer@> wrote:
> >
> > Recently I repaired a TS-820S which will be donated to a young HAM.
> >
> > Yesterday I made a few QSO's with it and received good audio reports.
> > From the reports I received, there was not much difference between PROC ON and PROC OFF, also noticed by the average power reading on the Watt meter here. Actually, with PROC OFF I could get more avg power.
> >
> > I am now in the process of checking/adjusting the rig cf. service
> > manual specs in total.
> >
> > When arriving at the RF-clipper part, I could not get the same audio levels between PROC ON/OFF into the 1st TX-mixer, as measured at TP2 of the IF-unit.
> > The carrierfrequency is 451.90 kHz.
> >
> > Situation:
> >

> > MIC GAIN is at 12 o'clock:
> >
> > With the RF-clipper on, I measure a beautiful sine wave, when whistling, with 560 mVpp, measured at TP2 with VR7 at max.
> >
> > With the RF-clipper off, the peak-peak voltage is significantly
> > higher and with strong whistling I can reach 2.8Vpp (~4 x 560 mV (!).
> > At this level the audio is distorted as I see flattened tops.
> >
> > When the MIC GAIN (front) is turned fully CW:
> >
> > With the RF-clipper on, I reach 2.8Vpp, with VR7 max. No distortion.
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> > With the RF-clipper off, I reach the same 2.8 Vpp easily and create
> > square waves ;-)
> >
> > It seems to me that the level of the first MIC amp (Q19) is (much)
> > higher than the output of the clipper amp (Q23).
> >
> > If I am reading the circuit diagram correctly, the outputs of both
> > Q19 and Q23 are fed into Q20.
> >
> > I also varied the LO-frequency to determine if there might be an
> > optimum in the three 455 kHz filter responses, but no gain.
> >
> > To equalize the two levels, I'm thinking of
> > shortening R121 (1k) in order to increase the gain of Q30, and/or lowering R122 (47k)
> >
> > Before doing that, perhaps somebody could help me out on this?
> >
> > 73, Remco PA3FYM
> >
>

43045. Re: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 23:35:16 UTC
From: Jerry Barr
Topic: 43005 Message: 43045

what kinda coax did u use on the g5rvjr

Jerry KJ6NTL

From: KB1TCD <kb1tcd@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 24, 2013 3:53 PM
Subject: Re: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

We've been very lucky with a simple G5RV Jr antenna we picked up at HRO
in Salem, NH three summers ago.
We were heading back to Maine from some quick business I had to deal
with in Connecticut and stopped by the store.
The antenna was on special for $25.00 and we couldn't resist.
Once we hooked it up 45 plus feet above ground and running about 130 ft
of coax into the house it gives us 1:8 swr and below on 40, 30, 20, 17,
15, 12, 10 and 6m.
No tuner required using all three rigs: TS-830S, TS-120, Yaesu 897D.
We've made hundreds of DX contacts using 100 watts and a $25 antenna!

73 de Jose Douglas, KB1TCD

[Non-text portions of this message have been removed]

43046. TS-529 Low power

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 23:52:40 UTC
From: geagent21
Topic: 43046 Message: 43046

I just got my 10 meter antenna in the air and tuned. Tried out my TS-520 tonight. Receives very well. Did the tune up in prep to transmit. Checked power output and external meter shows 70 watts on CW but on USB it bounces up to 10 watts and drops back to 0. If I hold the mic key down it will cycle up and down but no higher than 10 watts.
Any ideas?

I also pulled the cover off the other day to see what filters were installed. It has both the SW and the SSB filters but I see no way to switch off and on. What should I be looking for?
73
Greg
KC9VVU

43047. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 23:53:27 UTC
From: Terry Wagoner
Topic: 43023 Message: 43047

Better than having no TS830 and you have no idea if it has all original 1 million series boards in it. Just enjoy it and get it in best state of tune that you can.

My point was if you are shopping for a TS-830 try to get as late a serial number as you can. Probably most Ebay units are 2 million series rigs. No one seems to state or ask about it.

I guess would be true with just about any first production runs of anything. Pretty common for second run to have some changes. Some can be signifcant and others just enhancements. I dont know of any serious design flaws with the original TS830s that had to be corrected.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Craig Roberts <crgrbrts@...> wrote:
>
> Well, then -- my TS-830S is serial #1030340.
>
> Shucks! I shouldn't have asked. :-)
>
> Well, at any rate, it's pretty much working. I should receive my 56K
> screen voltage divider resistors in a couple of days. I'll let you know
> how that works out.
>
> Craig
>

43048. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 23:55:36 UTC
From: Terry Wagoner
Topic: 43023 Message: 43048

Don:

Mint is a relative term! I will be happy to take that 7 million off your hands!

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> My Ebay special serial number is 1111111 dc transformer maybe 1979?
>
> my other two mint ones are 3010538,and 7070035
>
> Don/Ve2ud
>
>
> On 24/06/2013 6:40 PM, Terry Wagoner wrote:
> >
> > As far as I know the 1,000,000 series were the first. Probably 1981.
> > QST review was May of 81 as I recall. You see lot of the 1,000,000 and
> > 2,000,000 series being parted out.
> >
> > I have a 2 million and a 4 million series both full filtered. My 4
> > million was built in 1985 and I have the original purchase invoice.
> >
> > I would not buy a 1 million series.
> >
> > I have had a couple of 6 million series on the bench and one that had
> > documentation of a new purchase in 1990.
> >
> > There have been several iterations of IF boards with changes to the
> > AGC timing constant capacitors for one thing.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Craig Roberts
> > <crgrbrts@> wrote:
> > >
> > > What constitutes an "early" TS-830S, serial number-wise?
> > >
> > > The epoxy discussion reminds me of an incident from my Heath Company
> > > days. I was in the marketing department and among my duties was
> > visiting
> > > Heathkit retail stores to assist with customer service practice
> > > compliance. The corporate promotional slogan at the time was "We won't
> > > let you fail." It was a kindly but unfortunate sentiment.

> > >
> > > One evening at the Cleveland east side store, a short, stocky, hirsute
> > > gentleman of apparent eastern European extraction (his surname
> > comprised
> > > a nearly unbroken series of consonants) struggled in singlehandedly
> > with
> > > a huge GR-900 Heathkit console TV in tow, complete with weighty
> > cabinet.
> > > He slammed the behemoth in front of the service counter, pointed to the
> > > "We won't let you fail" sign overhead and growled, "I fail -- you fix!"
> > > It took three of us to drag the TV into the back room, wherein our tech
> > > extracted the chassis, and, after removing the CRT, flipped it over.
> > >
> > > At first we were baffled by what we saw, but soon determined that the
> > > television had been assembled with Liquid Solder -- the components
> > > literally glued together. After peering out into the showroom and
> > > regarding the customer's dark and glowering countenance, it was
> > > determined that our best course of action was to order a new chassis
> > kit
> > > from Benton Harbor and assemble it for our dissatisfied client. This we
> > > did over the course of the next two weeks.
> > >
> > > If you ever wonder why Heathkit went out of business, consider this
> > > story. Some say Zenith killed the company. Now, what do YOU think?
> > >
> > > 73,
> > >
> > > Craig
> > > W3CRR
> > > former "Ham at Heath"
> > >
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

43049. Re: Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-24 23:56:33 UTC
From: scott10k
Topic: 43005 Message: 43049

Hi Barry,
I have always had good luck with dipoles cut to resonance for the center of the band I want to operate in. One way around your worry about the winds snapping the ends of a dipole is to configure it as an inverted V which case the ends will droop and you can allow for plenty of slack. With a dipole cut to resonance you don't need a balun or even a tuner, unless you want to operate way off of resonance say on 80 meters. Dipoles are cheap and quite a bit of fun to experiment with. With all of your trees you could also considered a square loop and/or delta loop wire antenna (see the ARRL handbook for some recommended configurations).

For multi-band operation I found that a G5RV works quite well, although a tuner may be needed on some bands.

Good luck and let us know what you decide!

73s, Scott, N6CIC

--- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@...> wrote:
>
> I think I'm going to sell my Yaesu FT-757GX Mark I setup - looks like I can get more power out of my TS-820 once I get it fixed and could put the money into a good antenna setup. I'm going to get a local guy to see if he can help me get the 820 back to transmitting since since it's not showing anything out right now, but it is receiving well.
>
> I currently have an 88' end fed antenna going out to a limb about 25' up in my front yard that picks up decently well and transmitted the other day to West Virginia, but I'm curious about what kind of antenna setup you guys have.
>
> I want to optimize what I can, even though I don't have a huge yard and am limited because of a long power line in my back yard. After using an 80 meter dipole about 55 feet in the air Saturday at Field Day with a strong Kenwood TS-2000, I got spoiled and want a nice setup - I'm tired of calling at home (using the Yaesu since the 820 isn't transmitting) and not getting many responses.
>
> The trees that I have I'm afraid might snap a dipole if I put it up in the middle of them when we have the thunderstorms the South is so well known for, especially during the Summer. So far the end fed has survived, but we haven't had any massive storms since I put it up.
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> Going purely on eham.net's reviews the Zero Five antennas have great words said about them. I might consider something like this vertical:
>
> http://www.zerofive-antennas.com/43-foot-10-160-meter-multiband-foldover-freestanding-vertical-antenna-5kw-unun
>
> It would be in my front yard about 10 feet from my house and 25 feet away from trees

because that's about the only place I could put it.
>
> I don't want to blow a lot of money on antennas, but I do want something really nice for $300 - $500 if possible. I know I won't get a blow it out of the water antenna for that money, but I'm curious to see what you guys could give me insight on.
>
> Thanks as always!
>
> Barry
>
> ---------
>
> Jeremiah 29:11-13 / John 3:16
>

43050. Re: TS-820S RF-clipper vs normal mode TP2 IF-unit

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 00:06:41 UTC
From: Terry Wagoner
Topic: 43017 Message: 43050

OK--I assume you have an O-scope? If not, and you have a Freq Counter you could go to TP-3 and adjust TC-4 for 455khz as a starting point.

Also there is a Service Bulletin No. 9 11/17/1976 that you can find with a Google search. I have never tried to run it. You may want to take a look at it. Many of these bulletins are flawed but I have no experience with this one. A cursory look tells me it looks OK.

Maybe one of the other members has had success with this procedure?

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "hfdxer@..." <hfdxer@...> wrote:
>
> Hello Terry,
>
> Thanks for the sensible hint!
>
> Remco
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Remco:
> >
> > The service manual processor alignment steps are flawed much like most of the manual.
> >
> > Go to Ken K4EAA website and look under FAQs and read his alignment procedure.
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> > Requires an audio generator and an O-scope. Set audio generator for 1000 hz and a level of approx 3 to 5 mv. Connect scope to TP-2 and adjust Processor 455Khz carrier oscillator trimmer TC-4 for maximum P-P level at TP-2. You will then change generator to 300 hz at same output level and adjust TC-4 for half the P-P level you had at 1000 hz. You are adjusting the -6dB point on the slope of the 455khz filters. You will have to go back and forth couple of times to get it right.
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> > Just follow the rest of Kens procedure. I have used it and it works well.
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> > If you have any questions about the procedure come back and ask. It is pretty straight forward.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "hfdxer@" <hfdxer@> wrote:
> > >
> > > Recently I repaired a TS-820S which will be donated to a young HAM.
> > >
> > > Yesterday I made a few QSO's with it and received good audio reports.

> > > From the reports I received, there was not much difference between PROC ON and PROC OFF, also noticed by the average power reading on the Watt meter here. Actually, with PROC OFF I could get more avg power.
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> > > The carrierfrequency is 451.90 kHz.
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> > > Situation:
> > >
> > > MIC GAIN is at 12 o'clock:
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> > > With the RF-clipper on, I measure a beautiful sine wave, when whistling, with 560 mVpp, measured at TP2 with VR7 at max.
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> > > optimum in the three 455 kHz filter responses, but no gain.
> > >
> > > To equalize the two levels, I'm thinking of
> > > shortening R121 (1k) in order to increase the gain of Q30, and/or lowering R122 (47k)
> > >
> > > Before doing that, perhaps somebody could help me out on this?
> > >
> > > 73, Remco PA3FYM
> > >
> >
>

43051. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 00:25:16 UTC
From: Don
Topic: 43023 Message: 43051

Terry
It has $300 of Inrad filters in it.
It also has about one hr transmit time and about 7 hours of rec time

I could give you a better deal on the Ebay special hi hi
I have been at least a year playing with the Ebay special and just
getting it to respond back to my treatment.Lots of bad solder joints as
per my posts.
When doing receiver adjustments,i made a mistake by over looking
transmit if coil adjustment's.
I had to really turn up the carrier 3/4 of the way to get good drive
and by adjusting T4 it is now fine as it was way out of adjustment.
I am running a 6146b and a 6146a as that's all i had on hand,and
getting 100 watts out.
It serve's as a good trainer.

When is your book coming out!

Don/Ve2ud

On 24/06/2013 7:55 PM, Terry Wagoner wrote:
>
> Don:
>
> Mint is a relative term! I will be happy to take that 7 million off
> your hands!
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
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> > My Ebay special serial number is 1111111 dc transformer maybe 1979?
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> >
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> > >
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> > >

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> > > --- In TS-520_820_530_830@yahoogroups.com
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> > > >
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> > > > One evening at the Cleveland east side store, a short, stocky,
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> > > > At first we were baffled by what we saw, but soon determined
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> chassis
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> > > > If you ever wonder why Heathkit went out of business, consider this
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> > > > 73,
> > > >
> > > > Craig
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> > > > former "Ham at Heath"
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> > >
> > >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
>

[Non-text portions of this message have been removed]

43052. Re: Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 00:25:52 UTC
From: Terry Wagoner
Topic: 43005 Message: 43052

Scott:

Very good advice. Last time I had a tuner was in the late 70s when I ran tuned feeders to get multi-band operation. Back then balanced tuners like the Johnson matchbox were the norm. I got tired of the hassle and went back to resonant dipoles cut as you describe and have run that way for years with the occasional foray into trap dipoles, fan dipoles, coaxial dipoles etc. I always ended back with resonant dipoles. I just put up my first home built OCF dipole fed by 4:1 current balun at the "sweet" spot and in inverted Vee config with apex at 45 feet and ends at approx 20 feet. It works very well. If I had listened to all the negative press would never have tried it.

I no longer have room for any loops, but as you note if you do they are worth trying. Wire beams are fun also. Many moons ago built 8JKs and ZL specials. Of course had the 14AVQ trap vertical, but never had a decent radial system. Never had room for phased verticals.

I guess about only one I would not recommend is random length end fed due to high Z feed point and the hassles of rf in shack and messing with counterpoise.

I always encourage any one with enough room to experiment with all kinds of wire antennas. Never let anyone tell you it wont work. Try it for yourself. It is one area left in the hobby where you can build it yourself and get the learning and self-satisfaction with not much cash outlay.

Hams have been looking for a simple, multiband, wide bandwidth, coax fed, no tuner antenna for years. I am still looking!

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "scott10k" <scottandalene@...> wrote:
>
> Hi Barry,
> I have always had good luck with dipoles cut to resonance for the center of the band I want to operate in. One way around your worry about the winds snapping the ends of a dipole is to configure it as an inverted V which case the ends will droop and you can allow for plenty of slack. With a dipole cut to resonance you don't need a balun or even a tuner, unless you want to operate way off of resonance say on 80 meters. Dipoles are cheap and quite a bit of fun to experiment with. With all of your trees you could also considered a square loop and/or delta loop wire antenna (see the ARRL handbook for some recommended configurations).
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> For multi-band operation I found that a G5RV works quite well, although a tuner may be needed on some bands.
>
> Good luck and let us know what you decide!
>
> 73s, Scott, N6CIC
>

>
>
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> >
> > Thanks as always!
> >
> > Barry
> >
> > ---------
> >
> > Jeremiah 29:11-13 / John 3:16
> >
>

43053. Re: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 00:26:23 UTC
From: KB1TCD
Topic: 43005 Message: 43053

Jerry,

Just cheap RG-58/U from Radio Shack...

73

Jose KB1TCD

On 6/24/2013 7:35 PM, Jerry Barr wrote:
> what kinda coax did u use on the g5rvjr
>
> Jerry KJ6NTL

43054. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 01:05:34 UTC
From: Terry Wagoner
Topic: 43023 Message: 43054

Don:

Well cant blame me for trying!

Yes with low TIF signal or low VCO signal the TX Mixer output will suffer. The TIF signal from the IF board is not much more than approx 15mv and Mixer needs approx 180mv to work well and about 1 volt of VCO LO signal. If T4 is not peaked will be a problem. You just never know what the former owners have touched.

I always recommend that people do the complete Sect 6 alignment steps in the Owners Operating manual to get them close and then go on later to a complete Service Manual alignment that requires some test gear. You can usually get rig in pretty good state of tune by just doing Sect 6 for RX and TX.

Sect 6 will direct you to peak T4.

No book any time soon. I have thought a lot about a You Tube Hybrid users video series, but have never made one and growing up in nuclear power I understand how important the quality of the video production is. Poor video production can easily spoil the message. I guess today an amateur trainer can get pretty good results with not large investment in a camera, mic and lighting.

Best teaching model is Tell, Show, Practice, Feedback/Coaching. With this medium all we can do is Tell. With Video can Tell, go to white board and Show, and then go to rig and test bench and demonstrate how to do. If well done only 2nd best to hands on with a live instructor.

A "B" and an "A"! Man Glen Zook K9STH would have a heart attack! I have run all kinds of combinations in a pinch, but generally try not to mix. Usually no real problem if you can neutralize and if you dont operate on 10 meters not likely a problem anyway. I have one here that came with a S2001 and a 6146W and it runs fine.

73s Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Terry
> It has $300 of Inrad filters in it.
> It also has about one hr transmit time and about 7 hours of rec time
>
> I could give you a better deal on the Ebay special hi hi
> I have been at least a year playing with the Ebay special and just
> getting it to respond back to my treatment.Lots of bad solder joints as
> per my posts.
> When doing receiver adjustments,i made a mistake by over looking
> transmit if coil adjustment's.
> I had to really turn up the carrier 3/4 of the way to get good drive

> and by adjusting T4 it is now fine as it was way out of adjustment.
> I am running a 6146b and a 6146a as that's all i had on hand,and
> getting 100 watts out.
> It serve's as a good trainer.
>
> When is your book coming out!
>
> Don/Ve2ud
>
>
>
>
>
>

43055. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 01:44:07 UTC
From: Don
Topic: 43023 Message: 43055

Terry
I also have two KB-1 deluxe vfo knobs,one for the rig and the other on the vfo.
They are close to bronze in color.Wish i had ordered one of ken's limted addition ones.
When you make your posts you put such great detail in them,plus making them in a way that's very understandable and the post you made about using the vfo,instead of the main dial made a lot of sense to me as i had not thought about that before indeed.
Is the turning ratio different on the vfo as it seems smoother.as it has a different feel to it.VFO 230
You are on the money about the tubes as i had to neutralize[still not 100%] as they were doing funny things on ten meters.
I think there would be a good demand for a book on the Hybrids,but as i am more of a visual person You tube would be fine,and think about it you could live forever on there hi hi

Not being worthy to carry your toolbox
73
Don/Ve2ud

On 24/06/2013 9:05 PM, Terry Wagoner wrote:
>
> Don:
>
> Well cant blame me for trying!
>
> Yes with low TIF signal or low VCO signal the TX Mixer output will
> suffer. The TIF signal from the IF board is not much more than approx
> 15mv and Mixer needs approx 180mv to work well and about 1 volt of VCO
> LO signal. If T4 is not peaked will be a problem. You just never know
> what the former owners have touched.
>
> I always recommend that people do the complete Sect 6 alignment steps
> in the Owners Operating manual to get them close and then go on later
> to a complete Service Manual alignment that requires some test gear.
> You can usually get rig in pretty good state of tune by just doing
> Sect 6 for RX and TX.
>
> Sect 6 will direct you to peak T4.
>
> No book any time soon. I have thought a lot about a You Tube Hybrid
> users video series, but have never made one and growing up in nuclear
> power I understand how important the quality of the video production
> is. Poor video production can easily spoil the message. I guess today

> an amateur trainer can get pretty good results with not large
> investment in a camera, mic and lighting.
>
> Best teaching model is Tell, Show, Practice, Feedback/Coaching. With
> this medium all we can do is Tell. With Video can Tell, go to white
> board and Show, and then go to rig and test bench and demonstrate how
> to do. If well done only 2nd best to hands on with a live instructor.
>
> A "B" and an "A"! Man Glen Zook K9STH would have a heart attack! I
> have run all kinds of combinations in a pinch, but generally try not
> to mix. Usually no real problem if you can neutralize and if you dont
> operate on 10 meters not likely a problem anyway. I have one here that
> came with a S2001 and a 6146W and it runs fine.
>
> 73s Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> > Terry
> > It has $300 of Inrad filters in it.
> > It also has about one hr transmit time and about 7 hours of rec time
> >
> > I could give you a better deal on the Ebay special hi hi
> > I have been at least a year playing with the Ebay special and just
> > getting it to respond back to my treatment.Lots of bad solder joints as
> > per my posts.
> > When doing receiver adjustments,i made a mistake by over looking
> > transmit if coil adjustment's.
> > I had to really turn up the carrier 3/4 of the way to get good drive
> > and by adjusting T4 it is now fine as it was way out of adjustment.
> > I am running a 6146b and a 6146a as that's all i had on hand,and
> > getting 100 watts out.
> > It serve's as a good trainer.
> >
> > When is your book coming out!
> >
> > Don/Ve2ud
> >
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>

[Non-text portions of this message have been removed]

43056. Re: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 02:51:29 UTC
From: Jerry Barr
Topic: 43005 Message: 43056

wow that stuff is so lossy/ even rg58x is lossy but a 130 foot whoo/like 3-4 db per hundred/ I use it on a vertical and my other antennas but shorter runs and one pce of radio shack stuff 20 foot had ten db loss brand new so I don't trust that stuff at all but I have no place close to get rg-8 or equivalent without paying horrendas shipping/ but if it works for u maybe better supplier etc/ who nos

Jerry KJ6NTL

_____
From: KB1TCD <kb1tcd@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 24, 2013 5:26 PM
Subject: Re: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

Jerry,

Just cheap RG-58/U from Radio Shack...

73

Jose KB1TCD

On 6/24/2013 7:35 PM, Jerry Barr wrote:
> what kinda coax did u use on the g5rvjr
>
> Jerry KJ6NTL

[Non-text portions of this message have been removed]

43057. Re: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 03:02:50 UTC
From: Dale Parfitt
Topic: 43005 Message: 43057

According to Belden RG-58 has 0.68 db loss/100' at 80M and 2dB loss/100' at 10M.

Dale W4OP

----- Original Message -----
From: Jerry Barr
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 24, 2013 10:51 PM
Subject: Re: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

wow that stuff is so lossy/ even rg58x is lossy but a 130 foot whoo/like 3-4 db per hundred/ I use it on a vertical and my other antennas but shorter runs and one pce of radio shack stuff 20 foot had ten db loss brand new so I don't trust that stuff at all but I have no place close to get rg-8 or equivalent without paying horrendas shipping/ but if it works for u maybe better supplier etc/ who nos

Jerry KJ6NTL

From: KB1TCD <kb1tcd@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 24, 2013 5:26 PM
Subject: Re: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

Jerry,

Just cheap RG-58/U from Radio Shack...

73

Jose KB1TCD

On 6/24/2013 7:35 PM, Jerry Barr wrote:
> what kinda coax did u use on the g5rvjr
>
> Jerry KJ6NTL

[Non-text portions of this message have been removed]

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.2904 / Virus Database: 3199/6404 - Release Date: 06/12/13
Internal Virus Database is out of date.

[Non-text portions of this message have been removed]

43058. Re: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 03:34:40 UTC
From: Jerry Barr
Topic: 43005 Message: 43058

well all and good but do u believe radio shack is buying beldon nothing I got from them even remotely suggests that what I have seen from RS is some china knockoff/ beldon does make some good cable but kinda pricy and worth it

Jerry KJ6NTL

From: Dale Parfitt <parinc1@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 24, 2013 8:02 PM
Subject: Re: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

According to Belden RG-58 has 0.68 db loss/100' at 80M and 2dB loss/100' at 10M.

Dale W4OP

----- Original Message -----
From: Jerry Barr
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Monday, June 24, 2013 10:51 PM
Subject: Re: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

wow that stuff is so lossy/ even rg58x is lossy but a 130 foot whoo/like 3-4 db per hundred/ I use it on a vertical and my other antennas but shorter runs and one pce of radio shack stuff 20 foot had ten db loss brand new so I don't trust that stuff at all but I have no place close to get rg-8 or equivalent without paying horrendas shipping/ but if it works for u maybe better supplier etc/ who nos

Jerry KJ6NTL

From: KB1TCD <mailto:kb1tcd%40gmail.com>
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Monday, June 24, 2013 5:26 PM
Subject: Re: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

Jerry,

Just cheap RG-58/U from Radio Shack...

73

Jose KB1TCD

On 6/24/2013 7:35 PM, Jerry Barr wrote:
> what kinda coax did u use on the g5rvjr
>

> Jerry KJ6NTL

[Non-text portions of this message have been removed]

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.2904 / Virus Database: 3199/6404 - Release Date: 06/12/13
Internal Virus Database is out of date.

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

43059. Re: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 04:08:05 UTC
From: Jim S
Topic: 43005 Message: 43059

Radio Shack cable has had a horrible reputation over the years. The shield is only about 50% braid and leaks RF like a sieve . Belden has held the standard for excellence years, and RS the standard for just the opposite. No, all cables are NOT created equal !

Jim AG3Y

On 6/24/2013 11:34 PM, Jerry Barr wrote:
>
> well all and good but do u believe radio shack is buying beldon
> nothing I got from them even remotely suggests that what I have seen
> from RS is some china knockoff/ beldon does make some good cable but
> kinda pricy and worth it
>
> Jerry KJ6NTL
>
>
> _____
> From: Dale Parfitt <parinc1@... <mailto:parinc1%40frontier.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Monday, June 24, 2013 8:02 PM
> Subject: Re: [TS-520_820_530_830] Curious about your antenna setup
> with Kenwoods
>
>
>
>
> According to Belden RG-58 has 0.68 db loss/100' at 80M and 2dB
> loss/100' at 10M.
>
> Dale W4OP
>
> ----- Original Message -----
> From: Jerry Barr
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Monday, June 24, 2013 10:51 PM
> Subject: Re: [TS-520_820_530_830] Curious about your antenna setup
> with Kenwoods
>
> wow that stuff is so lossy/ even rg58x is lossy but a 130 foot
> whoo/like 3-4 db per hundred/ I use it on a vertical and my other
> antennas but shorter runs and one pce of radio shack stuff 20 foot had
> ten db loss brand new so I don't trust that stuff at all but I have no

> place close to get rg-8 or equivalent without paying horrendas
> shipping/ but if it works for u maybe better supplier etc/ who nos
>
> Jerry KJ6NTL
>
> _____
> From: KB1TCD <mailto:kb1tcd%40gmail.com>
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Monday, June 24, 2013 5:26 PM
> Subject: Re: [TS-520_820_530_830] Curious about your antenna setup
> with Kenwoods
>
> Jerry,
>
> Just cheap RG-58/U from Radio Shack...
>
> 73
>
> Jose KB1TCD
>
> On 6/24/2013 7:35 PM, Jerry Barr wrote:
> > what kinda coax did u use on the g5rvjr
> >
> > Jerry KJ6NTL
>
> [Non-text portions of this message have been removed]
>
> No virus found in this message.
> Checked by AVG - www.avg.com
> Version: 2013.0.2904 / Virus Database: 3199/6404 - Release Date: 06/12/13
> Internal Virus Database is out of date.
>
> [Non-text portions of this message have been removed]
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

43060. Re: Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 04:11:42 UTC
From: wa4axt
Topic: 43005 Message: 43060

I have two dipole antennas supported by trees .
As you know the trees are going to do what the trees want to do so their has to be a way to prevent your dipole from breaking as the trees move . I went to the hardware store and bought some springs to fix that problem and have never had a dipole snap because of tree movement . One end of each dipole is pulled tight with a spring in line that allows the rope to give as the trees moves . Also I would go with a balanced ,center fed antenna because that's the best way to get the max power to the antenna and the least amount of feed line radiation .Verticals should not be used in areas where their are fences ,houses etc near by because the radiation efficiency is not only dependent on its ground plane near by but other obstacles as much as a 1/4 mile away on a ground mounted vertical. Of center fed antennas like the Carolina windom and the G5RV are really feed line radiators that waste energy so stay away from such antennas . Check out my antenna .I got the wire for next to nothing at a thrift store . I used bamboo poles I found out by the trash to elevate the center part of my antenna , its fed with 450 ohm ladder line from MFJ , a cheap home made 1to 1 balun using a core from Amidon and antenna tuner I won at a Hamfeast .This feed line combo assures me that most of the power gets where I want it to go and that's into the antenna.

Link to qrz.com page .

http://www.qrz.com/db/WA4AXT

--- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@...> wrote:
>
> I think I'm going to sell my Mark I setup - looks like I can get more power out of my TS-820 once I get it fixed and could put the money into a good antenna setup. I'm going to get a local guy to see if he can help me get the 820 back to transmitting since since it's not showing anything out right now, but it is receiving well.
>
> I currently have an 88' end fed antenna going out to a limb about 25' up in my front yard that picks up decently well and transmitted the other day to West Virginia, but I'm curious about what kind of antenna setup you guys have.
>
> I want to optimize what I can, even though I don't have a huge yard and am limited because of a long power line in my back yard. After using an 80 meter dipole about 55 feet in the air Saturday at Field Day with a strong Kenwood TS-2000, I got spoiled and want a nice setup - I'm tired of calling at home (using the Yaesu since the 820 isn't transmitting) and not getting many responses.
>
> The trees that I have I'm afraid might snap a dipole if I put it up in the middle of them when we have the thunderstorms the South is so well known for, especially during the Summer. So far the end fed has survived, but we haven't had any massive storms since I put it up.
>
> Going purely on eham.net's reviews the Zero Five antennas have great words said about them. I might consider something like this vertical:

>
> http://www.zerofive-antennas.com/43-foot-10-160-meter-multiband-foldover-freestanding-vertical-antenna-5kw-unun
>
> It would be in my front yard about 10 feet from my house and 25 feet away from trees because that's about the only place I could put it.
>
> I don't want to blow a lot of money on antennas, but I do want something really nice for $300 - $500 if possible. I know I won't get a blow it out of the water antenna for that money, but I'm curious to see what you guys could give me insight on.
>
> Thanks as always!
>
> Barry
>
> ---------
>
> Jeremiah 29:11-13 / John 3:16
>

43061. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 10:36:11 UTC
From: Terry Wagoner
Topic: 43023 Message: 43061

Don:

Having original KB-1 knobs are as good as having gold coins based on what I see them go for on Ebay.

I bought two of Kens knobs in the dark shiny bronze.

No the gear train in the VFO 240 is exact same as the gear train in the radio vfo. Just very little or no wear on it. Weak link is the front bushing. It is not a bearing. It is just a press fit into the front metal plate. Some folks "repair" it by disassembly and prick punching the metal around the hole to raise the metal and restore the fit. I think there are pictures of this repair in the Files section. Gordon has had some success by installing a C-cup or bellville washer on the shaft, but this is really addressing axial play and not radial play so much.

I known my responses get long but I hate to just give an answer without some basis behind it. Memorizing the answer is not learning. Ok to accept some things on faith as a novice, but hopefully will not be satisfied with that and will have enough interest to crack open a book.

Terry K9TW

43062. Re: Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 11:39:13 UTC
From: Terry Wagoner
Topic: 43005 Message: 43062

Carry this thought out with your 2 mtr cushcraft beam mounted above your tribander and fed with 100 feet of good quality Belden RG-58.

Belden 8219
Matched loss = 5.6 dB
Additional loss due to 2:1 vswr = 0.48 dB
Total loss = 6.08
Power in = 100 watts
Power out = 24.7 watts

We fuss a lot about VSWR but note that 2:1 load mismatch only results in approx 1/2 dB additional loss over the feedline loss.

Here is same calc using Belden 8213 (RG-11)

Matched loss = 1.62 dB
Additional loss due to 2:1 vswr = 0.28 dB
Total loss = 1.9 dB
Power in = 100 watts
Power out = 64.6 watts

At 28mhz the total loss with RG-11 would be 0.8 dB or 83.5 watts out with 0.14 dB of the loss due to 2:1 vswr.

At 28Mhz the total loss with RG-58 would be 2.5 dB or 55.6 watts out with 0.3 dB of the loss due to 2:1 vswr.

I did not spend any time looking for Radio Shack RG-58 specs. My guess is probably has more loss per foot, but I do not know that for certain.

Moral of the story is keep feedline loss in mind and put your money in your antenna system and dont go crazy about 1:1 vswr. With right antenna system and 100 watts from your hybrid you can have a lot of fun (assumes good propagation).

Not much more fun than breaking a big gun DX pile up with a barefoot Kenwood hybrid!

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Dale Parfitt" <parinc1@...> wrote:
>
>
> According to Belden RG-58 has 0.68 db loss/100' at 80M and 2dB loss/100' at 10M.
>
> Dale W4OP
>
> ----- Original Message -----
> From: Jerry Barr
> To: TS-520_820_530_830@yahoogroups.com

> Sent: Monday, June 24, 2013 10:51 PM
> Subject: Re: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods
>
>
>
> wow that stuff is so lossy/ even rg58x is lossy but a 130 foot whoo/like 3-4 db per hundred/ I use it on a vertical and my other antennas but shorter runs and one pce of radio shack stuff 20 foot had ten db loss brand new so I don't trust that stuff at all but I have no place close to get rg-8 or equivalent without paying horrendas shipping/ but if it works for u maybe better supplier etc/ who nos
>
> Jerry KJ6NTL
>
>
> _____
> From: KB1TCD <kb1tcd@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, June 24, 2013 5:26 PM
> Subject: Re: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods
>
>
>
> Jerry,
>
> Just cheap RG-58/U from Radio Shack...
>
> 73
>
> Jose KB1TCD
>
> On 6/24/2013 7:35 PM, Jerry Barr wrote:
> > what kinda coax did u use on the g5rvjr
> >
> > Jerry KJ6NTL
>
> [Non-text portions of this message have been removed]
>
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> Version: 2013.0.2904 / Virus Database: 3199/6404 - Release Date: 06/12/13
> Internal Virus Database is out of date.
>
>
> [Non-text portions of this message have been removed]
>

43063. Two hybrid questions

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 12:40:08 UTC
From: Craig Roberts
Topic: 43023 Message: 43063

160 meters on both my 530S and 830S is inoperative. All other bands exhibit full power (100 watts +).
Any idea why?

Are there any tricks or cautions to share about removing the counter board with its fragile fluorescent tube? (The first digit on my 830S contiues its quirkiness, vanishing at times or flashing "0" or "1" alternately and randomly).

Thanks,

Craig

43064. Re: Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 12:43:11 UTC
From: Barry
Topic: 43005 Message: 43064

Great information from everybody about the antennas. I do have an Antenna Handbook that my Uncle let me have from about 20 years ago, and he's got all kinds of Post-It notes through the whole thing. I have had so much going on with studying and passing the Tech exam plus lots of other events that I haven't had much time to study any more other than for the General... but since there is such great response on dipoles, I'm going to probably build my own.

I understand the general principles in making a dipole and should be able to do well with it. Now that I have a better feel for how to keep from snapping one, I should be in pretty good shape.

I sure appreciate the feedback and welcome any more. I appreciate all the help, and hopefully soon I'll have the 820 up and rolling to transmit! In the meantime I'm usually calling with the Yaesu between 8 and 11 pm on 28.400 trying to see if I can get anyone to respond.

Barry
KK4RXN

Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@...> wrote:
>
> I think I'm going to sell my Yaesu FT-757GX Mark I setup - looks like I can get more power out of my TS-820 once I get it fixed and could put the money into a good antenna setup. I'm going to get a local guy to see if he can help me get the 820 back to transmitting since since it's not showing anything out right now, but it is receiving well.
>
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> I want to optimize what I can, even though I don't have a huge yard and am limited because of a long power line in my back yard. After using an 80 meter dipole about 55 feet in the air Saturday at Field Day with a strong Kenwood TS-2000, I got spoiled and want a nice setup - I'm tired of calling at home (using the Yaesu since the 820 isn't transmitting) and not getting many responses.
>
> The trees that I have I'm afraid might snap a dipole if I put it up in the middle of them when we have the thunderstorms the South is so well known for, especially during the Summer. So far the end fed has survived, but we haven't had any massive storms since I put it up.
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> Going purely on eham.net's reviews the Zero Five antennas have great words said about

them. I might consider something like this vertical:
>
> http://www.zerofive-antennas.com/43-foot-10-160-meter-multiband-foldover-freestanding-vertical-antenna-5kw-unun
>
> It would be in my front yard about 10 feet from my house and 25 feet away from trees because that's about the only place I could put it.
>
> I don't want to blow a lot of money on antennas, but I do want something really nice for $300 - $500 if possible. I know I won't get a blow it out of the water antenna for that money, but I'm curious to see what you guys could give me insight on.
>
> Thanks as always!
>
> Barry
>
> ---------
>
> Jeremiah 29:11-13 / John 3:16
>

43065. Re: Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 12:58:18 UTC
From: Terry Wagoner
Topic: 43005 Message: 43065

Barry:

Are you aware there are quite a few low power CW propagation beacons on 10 meters? If you cannot copy these then most likely futile to call CQ if band is not open. With time you will find yourself doing more listening than calling to snag more contacts.

Try listening from around 28.190 to 28.300.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@...> wrote:
>
> Great information from everybody about the antennas. I do have an Antenna Handbook that my Uncle let me have from about 20 years ago, and he's got all kinds of Post-It notes through the whole thing. I have had so much going on with studying and passing the Tech exam plus lots of other events that I haven't had much time to study any more other than for the General... but since there is such great response on dipoles, I'm going to probably build my own.
>
> I understand the general principles in making a dipole and should be able to do well with it. Now that I have a better feel for how to keep from snapping one, I should be in pretty good shape.
>
> I sure appreciate the feedback and welcome any more. I appreciate all the help, and hopefully soon I'll have the 820 up and rolling to transmit! In the meantime I'm usually calling with the Yaesu between 8 and 11 pm on 28.400 trying to see if I can get anyone to respond.
>
>
> Barry
> KK4RXN
>
> ---------
>
> Jeremiah 29:11-13 / John 3:16
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@> wrote:
> >
> > I think I'm going to sell my Yaesu FT-757GX Mark I setup - looks like I can get more power out of my TS-820 once I get it fixed and could put the money into a good antenna setup. I'm going to get a local guy to see if he can help me get the 820 back to transmitting since since it's not showing anything out right now, but it is receiving well.
> >
> > I currently have an 88' end fed antenna going out to a limb about 25' up in my front yard that picks up decently well and transmitted the other day to West Virginia, but I'm

curious about what kind of antenna setup you guys have.
> >
> > I want to optimize what I can, even though I don't have a huge yard and am limited because of a long power line in my back yard. After using an 80 meter dipole about 55 feet in the air Saturday at Field Day with a strong Kenwood TS-2000, I got spoiled and want a nice setup - I'm tired of calling at home (using the Yaesu since the 820 isn't transmitting) and not getting many responses.
> >
> > The trees that I have I'm afraid might snap a dipole if I put it up in the middle of them when we have the thunderstorms the South is so well known for, especially during the Summer. So far the end fed has survived, but we haven't had any massive storms since I put it up.
> >
> > Going purely on eham.net's reviews the Zero Five antennas have great words said about them. I might consider something like this vertical:
> >
> > http://www.zerofive-antennas.com/43-foot-10-160-meter-multiband-foldover-freestanding-vertical-antenna-5kw-unun
> >
> > It would be in my front yard about 10 feet from my house and 25 feet away from trees because that's about the only place I could put it.
> >
> > I don't want to blow a lot of money on antennas, but I do want something really nice for $300 - $500 if possible. I know I won't get a blow it out of the water antenna for that money, but I'm curious to see what you guys could give me insight on.
> >
> > Thanks as always!
> >
> > Barry
> >
> > ---------
> >
> > Jeremiah 29:11-13 / John 3:16
> >
>

43066. Re: [TS-520_820_530_830] Re: Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 13:14:28 UTC
From: Don
Topic: 43005 Message: 43066

Hi Barry

I had a 40 meter antenna with a 10 meter antenna above it about 5
spacing and both feed independently[RG58],as i don't like tuners.
I got accused of using a linear amp,as i broke a lot of pole ups with my
ts520 barefoot.
As it was my first antenna.i just thought it was just good operating
skills and location.
I forget why i removed my 40 meter antenna,but now my 10 meter antenna
was not performing like it did.
After scratching my head,i came to the conclusion that the 40 meter
antenna was acting as a reflector.
A wire antenna will do the job just fine and there is lots of good books
on the subject.
W1FB'S Antenna Notebook
Wire Antennas by William Orr

Experiment as you maybe surprised at the results you will get.

73
Don/Ve2ud

On 25/06/2013 8:43 AM, Barry wrote:
>
> Great information from everybody about the antennas. I do have an
> Antenna Handbook that my Uncle let me have from about 20 years ago,
> and he's got all kinds of Post-It notes through the whole thing. I
> have had so much going on with studying and passing the Tech exam plus
> lots of other events that I haven't had much time to study any more
> other than for the General... but since there is such great response
> on dipoles, I'm going to probably build my own.
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> able to do well with it. Now that I have a better feel for how to keep
> from snapping one, I should be in pretty good shape.
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> the help, and hopefully soon I'll have the 820 up and rolling to
> transmit! In the meantime I'm usually calling with the Yaesu between 8
> and 11 pm on 28.400 trying to see if I can get anyone to respond.
>
> Barry
> KK4RXN
>
> ---------

>
> Jeremiah 29:11-13 / John 3:16
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Barry"
> <bonnevilleblb@...> wrote:
> >
> > I think I'm going to sell my Yaesu FT-757GX Mark I setup - looks
> like I can get more power out of my TS-820 once I get it fixed and
> could put the money into a good antenna setup. I'm going to get a
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> something really nice for $300 - $500 if possible. I know I won't get
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> see what you guys could give me insight on.
> >
> > Thanks as always!
> >
> > Barry
> >

> > ---------
> >
> > Jeremiah 29:11-13 / John 3:16
> >
>
>

[Non-text portions of this message have been removed]

43067. Re: [TS-520_820_530_830] Re: Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 13:23:26 UTC
From: Don
Topic: 43005 Message: 43067

Make that pile ups not pole ups lol
Don

On 25/06/2013 9:14 AM, Don wrote:
>
> Hi Barry
>
> I had a 40 meter antenna with a 10 meter antenna above it about 5
> spacing and both feed independently[RG58],as i don't like tuners.
> I got accused of using a linear amp,as i broke a lot of pole ups with my
> ts520 barefoot.
> As it was my first antenna.i just thought it was just good operating
> skills and location.
> I forget why i removed my 40 meter antenna,but now my 10 meter antenna
> was not performing like it did.
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> antenna was acting as a reflector.
> A wire antenna will do the job just fine and there is lots of good books
> on the subject.
> W1FB'S Antenna Notebook
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>
> Experiment as you maybe surprised at the results you will get.
>
> 73
> Don/Ve2ud
>
> On 25/06/2013 8:43 AM, Barry wrote:
> >
> > Great information from everybody about the antennas. I do have an
> > Antenna Handbook that my Uncle let me have from about 20 years ago,
> > and he's got all kinds of Post-It notes through the whole thing. I
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> > on dipoles, I'm going to probably build my own.
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> > I sure appreciate the feedback and welcome any more. I appreciate all
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> > transmit! In the meantime I'm usually calling with the Yaesu between 8

> > and 11 pm on 28.400 trying to see if I can get anyone to respond.
> >
> > Barry
> > KK4RXN
> >
> > ---------
> >
> > Jeremiah 29:11-13 / John 3:16
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Barry"
> > <bonnevilleblb@...> wrote:
> > >
> > > I think I'm going to sell my Yaesu FT-757GX Mark I setup - looks
> > like I can get more power out of my TS-820 once I get it fixed and
> > could put the money into a good antenna setup. I'm going to get a
> > local guy to see if he can help me get the 820 back to transmitting
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> > receiving well.
> > >
> > > I currently have an 88' end fed antenna going out to a limb about
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> > > I want to optimize what I can, even though I don't have a huge yard
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> > transmitting) and not getting many responses.
> > >
> > > The trees that I have I'm afraid might snap a dipole if I put it up
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> > > Thanks as always!
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> > > Barry
> > >
> > > ---------
> > >
> > > Jeremiah 29:11-13 / John 3:16
> > >
> >
> >
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

43068. Re: [TS-520_820_530_830] Re: Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 13:44:58 UTC
From: Craig Roberts
Topic: 43005 Message: 43068

The late L.B. Cebik, W4RNL, devoted his career to antenna research and experimentation. A website devoted to his work (http://www.cebik.com) is a terrific source of information. Full access does require a paid subscription but I have found it , and several of L.B.'s books, worthwhile.

73,

Craig
W3CRR

43069. Re: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 14:37:07 UTC
From: John Davidson
Topic: 43005 Message: 43069

Would you be surprized if I told you your SWR at the rig, with that antenna, would show much higher (Maybe unacceptable) if you used better quality coax cable ?
It's true, your reflected (as well as the forward) power is consumed by cable loss in the 130 ft of RG58 you mentioned. The result is the low SWR reading at the rig.

From: KB1TCD <kb1tcd@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 24, 2013 6:53 PM
Subject: Re: [TS-520_820_530_830] Curious about your antenna setup with Kenwoods

We've been very lucky with a simple G5RV Jr antenna we picked up at HRO
in Salem, NH three summers ago.
We were heading back to Maine from some quick business I had to deal
with in Connecticut and stopped by the store.
The antenna was on special for $25.00 and we couldn't resist.
Once we hooked it up 45 plus feet above ground and running about 130 ft
of coax into the house it gives us 1:8 swr and below on 40, 30, 20, 17,
15, 12, 10 and 6m.
No tuner required using all three rigs: TS-830S, TS-120, Yaesu 897D.
We've made hundreds of DX contacts using 100 watts and a $25 antenna!

73 de Jose Douglas, KB1TCD

[Non-text portions of this message have been removed]

43070. SCHEMA TS-830M

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 13:51:50 UTC
From: vierugo
Topic: 43070 Message: 43070

Hello to all

I found a ts-830M but the schema provided is that of the TS-830S
there is someone who has the schema of this equipment in high resolution?
(the diagram and the manual found on Internet is difficult to read and you can not see clearly the various links)

thanks for attention

Ugo

43071. Re: Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 14:45:17 UTC
From: Barry
Topic: 43005 Message: 43071

Great info, Terry. I'm going to do some more research and try out a dipole with the RG-11 soon.

Barry
KK4RXN

Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Carry this thought out with your 2 mtr cushcraft beam mounted above your tribander and fed with 100 feet of good quality Belden RG-58.
>
> Belden 8219
> Matched loss = 5.6 dB
> Additional loss due to 2:1 vswr = 0.48 dB
> Total loss = 6.08
> Power in = 100 watts
> Power out = 24.7 watts
>
> We fuss a lot about VSWR but note that 2:1 load mismatch only results in approx 1/2 dB additional loss over the feedline loss.
>
> Here is same calc using Belden 8213 (RG-11)
>
> Matched loss = 1.62 dB
> Additional loss due to 2:1 vswr = 0.28 dB
> Total loss = 1.9 dB
> Power in = 100 watts
> Power out = 64.6 watts
>
> At 28mhz the total loss with RG-11 would be 0.8 dB or 83.5 watts out with 0.14 dB of the loss due to 2:1 vswr.
>
> At 28Mhz the total loss with RG-58 would be 2.5 dB or 55.6 watts out with 0.3 dB of the loss due to 2:1 vswr.
>
> I did not spend any time looking for Radio Shack RG-58 specs. My guess is probably has more loss per foot, but I do not know that for certain.
>
> Moral of the story is keep feedline loss in mind and put your money in your antenna system and dont go crazy about 1:1 vswr. With right antenna system and 100 watts from your hybrid you can have a lot of fun (assumes good propagation).
>
> Not much more fun than breaking a big gun DX pile up with a barefoot Kenwood hybrid!
>

> Terry K9TW

43072. Re: Curious about your antenna setup with Kenwoods

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 15:40:13 UTC
From: Terry Wagoner
Topic: 43005 Message: 43072

I did not mean to infer that you have to use RG-11 or RG-8 or LMR 400 with even lower loss for your first dipole. Many folks use RG-8X (mini) as it is easier to handle. Just wanted to show the affect of line loss as you go up in frequency and to demonstrate that line loss was more of factor than 2:1 swr. Many folks feed their dipoles with good quality 8X and make plenty of contacts.

Belden 9258 (RG-8X) 100 feet

At 14.2 mhz and 1:5 to 1 SWR

Total loss = 1.1 dB

100 watts input = 77 watts output

LMR-400 would only have 0.5 dB loss for 89 watts output

Remember for 1 S-unit on receiving end it takes 6 db or 4:1 increase in power. That means if you have 77 watts output to get 1 S-unit increase on receiving end it would take 4 x 77 or 308 watts out. So a 1 dB loss is not anything to lose sleep over. With a wire antenna that has some modest gain the ERP can more than overcome the 1 dB feedline loss.

If you plan on running power at later date then might want to stay away from RG58 as it is typically rated for around 1000 watts and 8X is around 1500 and 8, 11, and LMR400 all handle 2000 easily.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@...> wrote:
>
> Great info, Terry. I'm going to do some more research and try out a dipole with the RG-11 soon.
>
> Barry
> KK4RXN
>
> Jeremiah 29:11-13 / John 3:16
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Carry this thought out with your 2 mtr cushcraft beam mounted above your tribander and fed with 100 feet of good quality Belden RG-58.
> >
> > Belden 8219
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> >
> > Not much more fun than breaking a big gun DX pile up with a barefoot Kenwood hybrid!
> >
> > Terry K9TW
>

43073. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 16:10:01 UTC
From: n6wk@...
Topic: 43023 Message: 43073

Terry,
I find that once I install the wave washer, I get rid of both Axial and
radial play to the extent is is almost nonexistent any longer.

73,
Gordon
N6WK

On 6/25/2013 3:36 AM, Terry Wagoner wrote:
>
> Don:
>
> Having original KB-1 knobs are as good as having gold coins based on
> what I see them go for on Ebay.
>
> I bought two of Kens knobs in the dark shiny bronze.
>
> No the gear train in the VFO 240 is exact same as the gear train in
> the radio vfo. Just very little or no wear on it. Weak link is the
> front bushing. It is not a bearing. It is just a press fit into the
> front metal plate. Some folks "repair" it by disassembly and prick
> punching the metal around the hole to raise the metal and restore the
> fit. I think there are pictures of this repair in the Files section.
> Gordon has had some success by installing a C-cup or bellville washer
> on the shaft, but this is really addressing axial play and not radial
> play so much.
>
> I known my responses get long but I hate to just give an answer
> without some basis behind it. Memorizing the answer is not learning.
> Ok to accept some things on faith as a novice, but hopefully will not
> be satisfied with that and will have enough interest to crack open a book.
>
> Terry K9TW
>
>

43074. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 17:01:51 UTC
From: Terry Wagoner
Topic: 43023 Message: 43074

Hi Gordon:

Good to hear from you. Well that is great. Not sure how it does that, but take your word for it and certainly much easier to install than prick punching the mounting plate. Maybe if the washer id is pretty close to shaft od then the force of the washer compression prevents shaft from moving up/down and side to side as well as taking out the end play?

Might want to tell folks where you get the washers. I think last one I tried I got out of a brake shoe hardware kit? I think it was metric?

Have not had to repair one in awhile. The last customer I called to ask him if he wanted it repaired by prick punch method stated he had not noticed any problem. It wobbled like it was on an eccentric. I guess some folks have different threshold for what is acceptable. I once borrowed a truck from a friend to haul some furniture and the shocks were so worn I thought I was on a bucking bronco. He apparently hadnt noticed!

Take Care
Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Terry,
> I find that once I install the wave washer, I get rid of both Axial and
> radial play to the extent is is almost nonexistent any longer.
>
> 73,
> Gordon
> N6WK
>
>
> On 6/25/2013 3:36 AM, Terry Wagoner wrote:
> >
> > Don:
> >
> > Having original KB-1 knobs are as good as having gold coins based on
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> > be satisfied with that and will have enough interest to crack open a book.
> >
> > Terry K9TW
> >
> >
>

43075. Re: TS-820S RF-clipper vs normal mode TP2 IF-unit

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 17:46:43 UTC
From: hfdxer@ymail.com
Topic: 43017 Message: 43075

Hi Terry,

I did what K4EEA described, and you suggested, and read the bulletin you referred to.
But... I've still mixed feelings concerning PROC OFF.

This is what I did. Made a tone generator (circuit diagram
shamelessly stolen from the IC-202S CW side tone generator ;-)
with two settings: 1000 Hz and 300 Hz. (1000 Hz R = 3k48, 300 Hz R= 16k9.
When fed with ca. 5V it generates a perfect sine wave.
With a potmeter I can adjust the output level of the tone generator,
measured on my scope.

MIC GAIN 12 o'clock, 7 MHz, USB.

I followed the variety of adjustment procedures and found out that
the results are similar. Indeed there is a -6dB issue around 300 Hz,
measured at TP2 of the IF-unit.
During the measurements a counter was attached to TP3 of the IF-unit.

With the audio/tone input level used I was able to equalize
the PROC ON and PROC OFF levels with VR7.

But still.. I could not measure more than ~600 mVpp @TP2 with PROC ON.
The AF output of the clipper seems to limit around 600 mVpp
no matter how loud the inserted tone is.
When switching to PROC OFF I can adjust the tone to ca. 2.8 Vpp
before clipping, measured @TP2 on the IF-unit.
Thus, the same as I observed yesterday, now being it more comfortable
as I have a continuous whistle ;-)

Next I did the following measurement: determine how many audio level
is needed in the ring mixer (D26 - D29) to reach maximum output power
(around 90W here). With a 1 kHz tone this amounts 350 mVpp, measured
@TP2 with a scope. With more audio level the TX-chain runs into compression.

This value is around half the value which the RF-clipper generates.
So, that must be okay.

Still I am able to generate 2.8Vpp with in the PROC OFF mode, from
which I conclude that the microphone amp itself produces too much level?

Remco PA3FYM

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> OK--I assume you have an O-scope? If not, and you have a Freq Counter you could go to
TP-3 and adjust TC-4 for 455khz as a starting point.
>

> Also there is a Service Bulletin No. 9 11/17/1976 that you can find with a Google search. I have never tried to run it. You may want to take a look at it. Many of these bulletins are flawed but I have no experience with this one. A cursory look tells me it looks OK.
>
> Maybe one of the other members has had success with this procedure?
>
> Terry K9TW
>

43076. Re: [TS-520_820_530_830] SCHEMA TS-830M

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 18:21:40 UTC
From: n6wk@...
Topic: 43070 Message: 43076

Here is the 830S/M Schematics

73,
Gordon

On 6/25/2013 6:51 AM, vierugo wrote:
>
> Hello to all
>
> I found a ts-830M but the schema provided is that of the TS-830S
> there is someone who has the schema of this equipment in high resolution?
> (the diagram and the manual found on Internet is difficult to read and
> you can not see clearly the various links)
>
> thanks for attention
>
> Ugo
>
>

[Non-text portions of this message have been removed]

43077. Re: TS-820S RF-clipper vs normal mode TP2 IF-unit

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 19:06:02 UTC
From: Terry Wagoner
Topic: 43017 Message: 43077

Remco:

I have the covers on my TS-820 at this time, but if needed can remove and make some measurements for you later this week.

What signal level are you injecting at 1Khz into mic line with mic gain at 1200 to produce 2.8v P-P at TP-2? Should not have more than 5mv rms or 14mv P-P from your new tone generator.

How much Carrier Oscillator signal level do you have at CA2 and TP-5?

It should be around 300mv rms. If you can get on the wiper of VR-5 you should see approx 900mv to 1.0v rms of carrier osc signal (amplified by Q17). I know these levels from memory.

This is your Local Osc signal for the Balanced modulator. Normally you want the LO to be much higher than the audio level. 2.8v P-P audio input into the balanced modulator does not seem right to me. Even 600mv seems high to me. Most diode ring modulators see approx 20 db ratio between LO and AF/RF input or approx 10:1 voltage ratio so I guess I would have expected to see something on the order of approx 250mv P-P audio input and approx 2.5v P-P Carrier Osc (LO) input to the Balanced Modulator.

Look at your Carrier Osc levels and I will see if I can find some info on normal audio input level to the Bal Mod in my notes.

We have some other experienced 820 owners who may have this level in their notes?

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "hfdxer@..." <hfdxer@...> wrote:
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43078. Re: SCHEMA TS-830M

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 19:01:06 UTC
From: vierugo
Topic: 43070 Message: 43078

thank's to K6GGO and N6WK for all material sended

Now the schema and instruction are very clear can be expanded
with zoom without lost particular

Grazie
Ugo (IZ5GHG)

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Here is the 830S/M Schematics
>
> 73,
> Gordon
>
> On 6/25/2013 6:51 AM, vierugo wrote:
> >
> > Hello to all
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> > I found a ts-830M but the schema provided is that of the TS-830S
> > there is someone who has the schema of this equipment in high resolution?
> > (the diagram and the manual found on Internet is difficult to read and
> > you can not see clearly the various links)
> >
> > thanks for attention
> >
> > Ugo
> >
> >
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>
> [Non-text portions of this message have been removed]
>

43079. Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 22:59:48 UTC
From: Don D
Topic: 43023 Message: 43079

Well my last step was to put a microphone on the ebay special and try it out.
Output is fine on all bands on cw
When i transmitted on either side band all i got was garble.
I could see output on my power meter,but no audio was heard,just weird sounds.
I can hear myself fine on the monitor position.
The microphone i used was a old tuner mic with a preamp
I had to crank up the preamp high to get output
My mc50 would not work at all.

On cw it is fine except jumps up in frequency by 800 Hz on transmit.

Don/Ve2ud

43080. Re: TS-820S RF-clipper vs normal mode TP2 IF-unit

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-25 22:58:12 UTC
From: hfdxer@ymail.com
Topic: 43017 Message: 43080

Terry:

I measure around 900 mVpp @TP5/CA2 with my scope (1:1 probe, Z = ~1 MΩ or so,
double checked it just before this writing)
In the service manual I downloaded I see that somebody wrote '0.88V'
next to TP5 thus, naively thinking, that's within range, and I did
not touch T1 on the CAR-1 unit.
However, the same 'service manual' (page 45) states that the 'RF VTVM'
should read 50 mV which converts to 50 * sqrt(2) = 70 mVpp, which
is approx. 13x lower (?)

Concerning your remarks about signal levels/ratios commonly used
with ring mixers, I agree.
Therefore I stated before that I had 'mixed feelings'.

I reached the wiper of VR5, and after keying the TX,
I measure 2 Vpp carrier, which is 2/sqrt(2) = 1.4 Vrms.
Speaking about 'amplification of Q17' ;-)
Thus my levels seem a bit higher than the ones you report, but not
not seriously higher, I reckon.

The measurements on how much audio (1 KHz) has to be injected to
reach full output, measured at the MIC input on the front of the rig,
I will perform later.

The measurement will be done with the same probe and scope
and the MIC input is 'loaded' with 2 kΩ, being the resistance
of the level potmeter of the tone generator.

Now I am curious about signal levels of others @TP2
relative to PROC ON and OFF, in conjunction with full output.

NB. I receive good audio reports, and better reports with the
RF-clipper on. However, when this rig is shipped to the new owner
I want to be sure that everything is in mint condition.

Remco PA3FYM

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Remco:
>
> I have the covers on my TS-820 at this time, but if needed can remove and make some
measurements for you later this week.
>
> What signal level are you injecting at 1Khz into mic line with mic gain at 1200 to
produce 2.8v P-P at TP-2? Should not have more than 5mv rms or 14mv P-P from your new tone

generator.
>
> How much Carrier Oscillator signal level do you have at CA2 and TP-5?
>
> It should be around 300mv rms. If you can get on the wiper of VR-5 you should see approx 900mv to 1.0v rms of carrier osc signal (amplified by Q17). I know these levels from memory.
>
> This is your Local Osc signal for the Balanced modulator. Normally you want the LO to be much higher than the audio level. 2.8v P-P audio input into the balanced modulator does not seem right to me. Even 600mv seems high to me. Most diode ring modulators see approx 20 db ratio between LO and AF/RF input or approx 10:1 voltage ratio so I guess I would have expected to see something on the order of approx 250mv P-P audio input and approx 2.5v P-P Carrier Osc (LO) input to the Balanced Modulator.
>
> Look at your Carrier Osc levels and I will see if I can find some info on normal audio input level to the Bal Mod in my notes.
>
> We have some other experienced 820 owners who may have this level in their notes?
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "hfdxer@" <hfdxer@> wrote:
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43081. Re: TS-820S RF-clipper vs normal mode TP2 IF-unit

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 01:10:03 UTC
From: Terry Wagoner
Topic: 43017 Message: 43081

Remco:

50 Mv listed in the service manual is wrong. The radio would not work with Carrier Osc level of 50mv. Some folks think it was a typo and should be 500mv. That is not correct. About the max you can get out of the Carrier Osc by adjusting T1 is approx 450mv. 300mv listed on the CAR board schematic for CA-2 and C1-A at Connector CJ3 is the correct level. Same level for the TS-530 and the TS-830.

I think your O-scope measurements are suspect. Do you have a 50 ohm feedthru terminator or a 50 ohm input on your scope? If so, repeat your readings using 50 ohms termination.

If not scope a VTVM with an RF probe?

I pulled the covers off my TS-820 and I used my Boonton 92E RF Millivolt meter (it is caled) to measure the following:

14.2Mhz
Mic gain at 1200
SG Switch Off
CW mode

1. CA-2 and TP-5 at IF board (TP-5 is back under the side rail). Flip to send = 300mv rms (set on slow side of the peak)
2. I could not get on VR-5 wiper, but could get on R53 47 ohm resistor. Flip to send = 860mv rms
3. I injected 5mv at 1000Hz into the mic jack. Flip to send. TP-2 = 145mv rms.

The .88 volts you see on the schematic is the value from the TX Level Diagram in the Service Manual around page 42. 880mv rms is about as low a LO level that you want to see. Nothing wrong with 1.0v rms level. If LO is too high can have trouble with carrier leakage in the output and if too low then conversion loss can increase. Rule of thumb is you want to see approx 20 db ratio between LO and AF input levels.

For the Balanced Modulator to work you to not want the Audio input signal to be changing the conductive state of the ring diodes. That is the job of the LO. The LO sets the output (IF) frequency pulses and the AF sets the amplitude of those pulses. If you had really had 2.8v P-P audio input into the Balanced Modulator your on air SSB reports would be distorted.

If you do not have a 50 ohm input on your scope or a 50 ohm feedthru terminator that you can use at scope Vertical amp input then connect a BNC tee there and connect a couple of 100 ohm resistors in parallel across the open end of the tee.

If you cant take 50 ohm readings with your scope do you have a VTVM and RF probe? If so take readings with it.

I can repeat the reading using my scope terminated with 50 ohms but the Boonton is very accurate so I am confident my readings are good and what I am use to seeing.

Terry K9TW

>
> >
>

43082. Re: TS-820S RF-clipper vs normal mode TP2 IF-unit

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 01:52:08 UTC
From: Terry Wagoner
Topic: 43017 Message: 43082

Remco:

Sorry I mis-spoke. I took another look at your readings. No need to take 50 ohm readings.

1. 900mv P-P at TP-5/CA-2 = 900/2.828 = 318mv rms = Perfect Carrier Osc level from Car Osc board.

2. 2 volts P-P at VR-5 wiper = 2.0/2.828= 707mv rms = a little low but not sure how you got on the wiper. What is the bandwidth of the scope you are using? A 20mhz BW scope measuring a 9mhz signal will read approx 6.5% low. Doesnt look like this is reason for 707mv at wiper.

3. Only reading then that is really suspect is the 2.8v P-P at TP-2. 2.8/2.828 = 990mv rms. This should not be possible with 5mv rms input at mic line. Need to make sure you are using 5mv input level signal.

4. With 5mv @ 1Khz injected into the mic jack with Mic gain at 1200 you should see something close to 145mv rms or 145 x 2.828 = 410mv P-P

5. 700mv rms LO signal and 145mv rms audio input to Balanced Mod will work. 140mv/700mv = 20% or 14dB. Ratio is Ok.

Sorry about false alarm. I need to look closer at your readings.

Regarding your comment about getting good reports. It is not uncommon to get get audio reports if the processor is aligned properly and not pushed too hard. In theory it was the best processor that Kenwood put in the hybrids.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "hfdxer@..." <hfdxer@...> wrote:
>
> Terry:
>
> I measure around 900 mVpp @TP5/CA2 with my scope (1:1 probe, Z = ~1 MΩ or so,
> double checked it just before this writing)
> In the service manual I downloaded I see that somebody wrote '0.88V'
> next to TP5 thus, naively thinking, that's within range, and I did
> not touch T1 on the CAR-1 unit.
> However, the same 'service manual' (page 45) states that the 'RF VTVM'
> should read 50 mV which converts to 50 * sqrt(2) = 70 mVpp, which
> is approx. 13x lower (?)
>
> Concerning your remarks about signal levels/ratios commonly used
> with ring mixers, I agree.
> Therefore I stated before that I had 'mixed feelings'.
>

> I reached the wiper of VR5, and after keying the TX,
> I measure 2 Vpp carrier, which is 2/sqrt(2) = 1.4 Vrms.
> Speaking about 'amplification of Q17' ;-)
> Thus my levels seem a bit higher than the ones you report, but not
> not seriously higher, I reckon.
>
> The measurements on how much audio (1 KHz) has to be injected to
> reach full output, measured at the MIC input on the front of the rig,
> I will perform later.
>
> The measurement will be done with the same probe and scope
> and the MIC input is 'loaded' with 2 kΩ, being the resistance
> of the level potmeter of the tone generator.
>
> Now I am curious about signal levels of others @TP2
> relative to PROC ON and OFF, in conjunction with full output.
>
> NB. I receive good audio reports, and better reports with the
> RF-clipper on. However, when this rig is shipped to the new owner
> I want to be sure that everything is in mint condition.
>
> Remco PA3FYM
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Remco:
> >
> > I have the covers on my TS-820 at this time, but if needed can remove and make some measurements for you later this week.
> >
> > What signal level are you injecting at 1Khz into mic line with mic gain at 1200 to produce 2.8v P-P at TP-2? Should not have more than 5mv rms or 14mv P-P from your new tone generator.
> >
> > How much Carrier Oscillator signal level do you have at CA2 and TP-5?
> >
> > It should be around 300mv rms. If you can get on the wiper of VR-5 you should see approx 900mv to 1.0v rms of carrier osc signal (amplified by Q17). I know these levels from memory.
> >
> > This is your Local Osc signal for the Balanced modulator. Normally you want the LO to be much higher than the audio level. 2.8v P-P audio input into the balanced modulator does not seem right to me. Even 600mv seems high to me. Most diode ring modulators see approx 20 db ratio between LO and AF/RF input or approx 10:1 voltage ratio so I guess I would have expected to see something on the order of approx 250mv P-P audio input and approx 2.5v P-P Carrier Osc (LO) input to the Balanced Modulator.
> >
> > Look at your Carrier Osc levels and I will see if I can find some info on normal audio input level to the Bal Mod in my notes.
> >
> > We have some other experienced 820 owners who may have this level in their notes?
> >

> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "hfdxer@" <hfdxer@> wrote:
> > >
> > >
> > >

43083. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 02:20:27 UTC
From: w5rkl
Topic: 43023 Message: 43083

The 800Hz change in CW is normal.

73
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@...> wrote:
>
>
> Well my last step was to put a microphone on the ebay special and try it out.
> Output is fine on all bands on cw
> When i transmitted on either side band all i got was garble.
> I could see output on my power meter,but no audio was heard,just weird sounds.
> I can hear myself fine on the monitor position.
> The microphone i used was a old tuner mic with a preamp
> I had to crank up the preamp high to get output
> My mc50 would not work at all.
>
> On cw it is fine except jumps up in frequency by 800 Hz on transmit.
>
> Don/Ve2ud
>

43084. Re: TS-820S RF-clipper vs normal mode TP2 IF-unit

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 07:29:43 UTC
From: hfdxer@ymail.com
Topic: 43017 Message: 43084

Hi Terry,

Thanks for the replies and effort :-)
I also mis-spoke concerning the conversion P-P -> RMS, I should
have added the factor '2', thus RMS = P-P/2.8. Anyway ... ;-)

The scope I use is a Hitachi V-1565 100 MHz scope,
thus for 8.83 MHz I do not suspect the readings.
Please refer to http://i.imgur.com/0rBKQtk.jpg @TP5 IF-unit.
(P10x = 2V, thus 1:1 probe = 0.2V/div -> 4.5 * 0.2 = 900 mVpp,
T-base = 50 ns/div, thus 2.2 * 50E-9 = 0.11 µs = 9 MHz)

About how I got 'on' the wiper: I used a cut off lead from a
resistor, halfway bent in 90 degrees, clamped it in the probe and
pressed it 'under' VR5, after pushing away C83 and L15 a bit.

Concerning the 0.88V I referred to, please look at
http://i.imgur.com/OlTtvk8.jpg (which is p55 b.t.w.) down left corner.
On page 42 I see 0.88V, but it looks like that is on the wiper,
(and measured with a VTVM? thus on the scope it should read 2.8 * 0.88 = 1.76 Vpp).

I do not have a real VTVM. I tried to use my digital multi meter,
but its band width is too low.

Concerning the 2.8 Vpp @TP2, I think I expressed myself wrong:
I do not need 2.8 Vpp audio to drive the rig to full output.
I noticed that, while the clipper output
seems limited to ~600 mVpp (and at this level the rig delivers
full output easily), when switching to PROC OFF I can increase the
amplitude of the audio at the MIC input (on the front) to 2.8 Vpp @TP2
before I measure clipping @TP2. MIC GAIN knob on the front is @12 hrs.

Grmpff, I get confused with all the readings and values ;-)

What I will do is re-re-measure the situation again and describe it
as unambiguous as possible.

Concerning the RF-clipper: yes, that's really an asset. Imho the only
way to give a linear modulated TX the proper punch.

Remco PA3FYM

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Remco:
>
> Sorry I mis-spoke. I took another look at your readings. No need to take 50 ohm readings.

>
> 1. 900mv P-P at TP-5/CA-2 = 900/2.828 = 318mv rms = Perfect Carrier Osc level from Car Osc board.
>
> 2. 2 volts P-P at VR-5 wiper = 2.0/2.828= 707mv rms = a little low but not sure how you got on the wiper. What is the bandwidth of the scope you are using? A 20mhz BW scope measuring a 9mhz signal will read approx 6.5% low. Doesnt look like this is reason for 707mv at wiper.
>
> 3. Only reading then that is really suspect is the 2.8v P-P at TP-2. 2.8/2.828 = 990mv rms. This should not be possible with 5mv rms input at mic line. Need to make sure you are using 5mv input level signal.
>
> 4. With 5mv @ 1Khz injected into the mic jack with Mic gain at 1200 you should see something close to 145mv rms or 145 x 2.828 = 410mv P-P
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> 5. 700mv rms LO signal and 145mv rms audio input to Balanced Mod will work. 140mv/700mv = 20% or 14dB. Ratio is Ok.
>
> Sorry about false alarm. I need to look closer at your readings.
>
> Regarding your comment about getting good reports. It is not uncommon to get get audio reports if the processor is aligned properly and not pushed too hard. In theory it was the best processor that Kenwood put in the hybrids.
>
> Terry K9TW

43085. Re: TS-820S RF-clipper vs normal mode TP2 IF-unit

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 10:51:46 UTC
From: Terry Wagoner
Topic: 43017 Message: 43085

Remco:

The TX Level Diagram readings are all taken with a RF VTVM and are in RMS. So the 0.88 volts shown at the wiper of VR-5 at the Balanced Modulator is 880mv rms read by a RF millivolt meter. 880 x 2.828 = 2488mv P-P or 2.488v P-P on your Scope.

OK scope BW is good and no correction required due to BW limitations.

I will repeat readings using my Scope.

Clever way to get on VR-5 leads!

OK I thought you were reading 2.8v P-P audio level at TP-2 with 5mv 1 khz test signal into mic line.

Yes F= 1/T so 1/.11 x 10-6 = 9.09 Mhz. Close but not precise. Best to use Freq Counter to measure Carrier Osc frequency. My new scope measures and displays frequency on the screen and is pretty close, but I still use my HP counter to measure and set Oscillator trimmers.

Terry
K9TW

--- In TS-520_820_530_830@yahoogroups.com, "hfdxer@..." <hfdxer@...> wrote:
>
>
>
> Hi Terry,
>
> Thanks for the replies and effort :-)
> I also mis-spoke concerning the conversion P-P -> RMS, I should
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> The scope I use is a Hitachi V-1565 100 MHz scope,
> thus for 8.83 MHz I do not suspect the readings.
> Please refer to http://i.imgur.com/0rBKQtk.jpg @TP5 IF-unit.
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> resistor, halfway bent in 90 degrees, clamped it in the probe and
> pressed it 'under' VR5, after pushing away C83 and L15 a bit.
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> Concerning the 0.88V I referred to, please look at
> http://i.imgur.com/OlTtvk8.jpg (which is p55 b.t.w.) down left corner.
> On page 42 I see 0.88V, but it looks like that is on the wiper,
> (and measured with a VTVM? thus on the scope it should read 2.8 * 0.88 = 1.76 Vpp).

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> I do not have a real VTVM. I tried to use my digital multi meter,
> but its band width is too low.
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> Concerning the 2.8 Vpp @TP2, I think I expressed myself wrong:
> I do not need 2.8 Vpp audio to drive the rig to full output.
> I noticed that, while the clipper output
> seems limited to ~600 mVpp (and at this level the rig delivers
> full output easily), when switching to PROC OFF I can increase the
> amplitude of the audio at the MIC input (on the front) to 2.8 Vpp @TP2
> before I measure clipping @TP2. MIC GAIN knob on the front is @12 hrs.
>
> Grmpff, I get confused with all the readings and values ;-)
>
> What I will do is re-re-measure the situation again and describe it
> as unambiguous as possible.
>
> Concerning the RF-clipper: yes, that's really an asset. Imho the only
> way to give a linear modulated TX the proper punch.
>
> Remco PA3FYM
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Remco:
> >
> > Sorry I mis-spoke. I took another look at your readings. No need to take 50 ohm readings.
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> > 1. 900mv P-P at TP-5/CA-2 = 900/2.828 = 318mv rms = Perfect Carrier Osc level from Car Osc board.
> >
> > 2. 2 volts P-P at VR-5 wiper = 2.0/2.828= 707mv rms = a little low but not sure how you got on the wiper. What is the bandwidth of the scope you are using? A 20mhz BW scope measuring a 9mhz signal will read approx 6.5% low. Doesnt look like this is reason for 707mv at wiper.
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> > 3. Only reading then that is really suspect is the 2.8v P-P at TP-2. 2.8/2.828 = 990mv rms. This should not be possible with 5mv rms input at mic line. Need to make sure you are using 5mv input level signal.
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> > 4. With 5mv @ 1Khz injected into the mic jack with Mic gain at 1200 you should see something close to 145mv rms or 145 x 2.828 = 410mv P-P
> >
> > 5. 700mv rms LO signal and 145mv rms audio input to Balanced Mod will work. 140mv/700mv = 20% or 14dB. Ratio is Ok.
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> > Sorry about false alarm. I need to look closer at your readings.
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> > Regarding your comment about getting good reports. It is not uncommon to get get audio reports if the processor is

aligned properly and not pushed too hard. In theory it was the best processor that Kenwood put in the hybrids.
> >
> > Terry K9TW
>

43086. Re: TS-820S RF-clipper vs normal mode TP2 IF-unit

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 11:05:46 UTC
From: Terry Wagoner
Topic: 43017 Message: 43086

I forgot to mention. I would change or cross off the 0.88v at TP-5 on your X-ray board view so not to confuse it with the 0.88v level shown on the TX Level Diagram at the Balanced Modulator.

Of course you know that TP-5 and Wiper of VR-5 are very different levels.

The (58) is referring to page 58 where the Car Osc board schematic is shown and you can see the .3v rms oscillator level. .3 x 2.828 = 848mv P-P.

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Remco:
>
> The TX Level Diagram readings are all taken with a RF VTVM and are in RMS. So the 0.88 volts shown at the wiper of VR-5 at the Balanced Modulator is 880mv rms read by a RF millivolt meter. 880 x 2.828 = 2488mv P-P or 2.488v P-P on your Scope.
>
> OK scope BW is good and no correction required due to BW limitations.
>
> I will repeat readings using my Scope.
>
> Clever way to get on VR-5 leads!
>
> OK I thought you were reading 2.8v P-P audio level at TP-2 with 5mv 1 khz test signal into mic line.
>
> Yes F= 1/T so 1/.11 x 10-6 = 9.09 Mhz. Close but not precise. Best to use Freq Counter to measure Carrier Osc frequency. My new scope measures and displays frequency on the screen and is pretty close, but I still use my HP counter to measure and set Oscillator trimmers.
>
> Terry
> K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "hfdxer@" <hfdxer@> wrote:
> >
> >
> >
> > Hi Terry,
> >
> > Thanks for the replies and effort :-)
> > I also mis-spoke concerning the conversion P-P -> RMS, I should
> > have added the factor '2', thus RMS = P-P/2.8. Anyway ... ;-)
> >
> > The scope I use is a Hitachi V-1565 100 MHz scope,
> > thus for 8.83 MHz I do not suspect the readings.
> > Please refer to http://i.imgur.com/0rBKQtk.jpg @TP5 IF-unit.

> > (P10x = 2V, thus 1:1 probe = 0.2V/div -> 4.5 * 0.2 = 900 mVpp,
> > T-base = 50 ns/div, thus 2.2 * 50E-9 = 0.11 µs = 9 MHz)
> >
> > About how I got 'on' the wiper: I used a cut off lead from a
> > resistor, halfway bent in 90 degrees, clamped it in the probe and
> > pressed it 'under' VR5, after pushing away C83 and L15 a bit.
> >
> > Concerning the 0.88V I referred to, please look at
> > http://i.imgur.com/OlTtvk8.jpg (which is p55 b.t.w.) down left corner.
> > On page 42 I see 0.88V, but it looks like that is on the wiper,
> > (and measured with a VTVM? thus on the scope it should read 2.8 * 0.88 = 1.76 Vpp).
> >
> > I do not have a real VTVM. I tried to use my digital multi meter,
> > but its band width is too low.
> >
> > Concerning the 2.8 Vpp @TP2, I think I expressed myself wrong:
> > I do not need 2.8 Vpp audio to drive the rig to full output.
> > I noticed that, while the clipper output
> > seems limited to ~600 mVpp (and at this level the rig delivers
> > full output easily), when switching to PROC OFF I can increase the
> > amplitude of the audio at the MIC input (on the front) to 2.8 Vpp @TP2
> > before I measure clipping @TP2. MIC GAIN knob on the front is @12 hrs.
> >
> > Grmpff, I get confused with all the readings and values ;-)
> >
> > What I will do is re-re-measure the situation again and describe it
> > as unambiguous as possible.
> >
> > Concerning the RF-clipper: yes, that's really an asset. Imho the only
> > way to give a linear modulated TX the proper punch.
> >
> > Remco PA3FYM
> >
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > >
> > > Remco:
> > >
> > > Sorry I mis-spoke. I took another look at your readings. No need to take 50 ohm readings.
> > >
> > > 1. 900mv P-P at TP-5/CA-2 = 900/2.828 = 318mv rms = Perfect Carrier Osc level from Car Osc board.
> > >
> > > 2. 2 volts P-P at VR-5 wiper = 2.0/2.828= 707mv rms = a little low but not sure how you got on the wiper. What is the bandwidth of the scope you are using? A 20mhz BW scope measuring a 9mhz signal will read approx 6.5% low. Doesnt look like this is reason for 707mv at wiper.
> > >
> > > 3. Only reading then that is really suspect is the 2.8v P-P at TP-2. 2.8/2.828 = 990mv rms. This should not be

possible with 5mv rms input at mic line. Need to make sure you are using 5mv input level signal.
> > >
> > > 4. With 5mv @ 1Khz injected into the mic jack with Mic gain at 1200 you should see something close to 145mv rms or 145 x 2.828 = 410mv P-P
> > >
> > > 5. 700mv rms LO signal and 145mv rms audio input to Balanced Mod will work. 140mv/700mv = 20% or 14dB. Ratio is Ok.
> > >
> > > Sorry about false alarm. I need to look closer at your readings.
> > >
> > > Regarding your comment about getting good reports. It is not uncommon to get get audio reports if the processor is aligned properly and not pushed too hard. In theory it was the best processor that Kenwood put in the hybrids.
> > >
> > > Terry K9TW
> >
>

43087. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 11:49:53 UTC
From: Don
Topic: 43023 Message: 43087

Thanks for the reply Mike
Were should i start,as per no audio out on sideband

73
Don/Ve2ud

On 25/06/2013 10:20 PM, w5rkl wrote:
>
>
> The 800Hz change in CW is normal.
>
> 73
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Don D" <ve2ud@...> wrote:
> >
> >
> > Well my last step was to put a microphone on the ebay special and
> try it out.
> > Output is fine on all bands on cw
> > When i transmitted on either side band all i got was garble.
> > I could see output on my power meter,but no audio was heard,just
> weird sounds.
> > I can hear myself fine on the monitor position.
> > The microphone i used was a old tuner mic with a preamp
> > I had to crank up the preamp high to get output
> > My mc50 would not work at all.
> >
> > On cw it is fine except jumps up in frequency by 800 Hz on transmit.
> >
> > Don/Ve2ud
> >
>
>

[Non-text portions of this message have been removed]

43088. RE: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 12:18:19 UTC
From: fpath fpath
Topic: 42877 Message: 43088

Terry,

Sorry for the delay, have been down for four days with migraine.

OK following all your steps
1. Antenna on dummy load
> 2. RFG at "5" (need to get a no audio voltage level)
> 3. AFG at "2"
> 4. Mode LSB or USB
> 5. Vox Gain off fully off
> 6. Anti-Vox at Full CW fully CW
> 7. VFO 200, Drive control 1200 OK
> 8. Marker OFF OK
> 9. Measure DC voltage at TP-2 with DMM. Need to wait until voltage decays completely off. Should see +0.001 to -0.001 dcv bouncing back and forth. So essentially zero DC offset voltage at TP-2 with no signal conditions. +0.002 to -0.002
> 10. Now turn on Marker and tune VFO for approx 800hz note and peak Drive control. Watch the DMM and tune the VFO for maximum DC voltage. Should see something like + 0.0305 vdc. Just tune VFO and Drive control for maximum voltage 0.028vdc stable

Let me know what else I can do or what else needs to be checked

73's

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: wagstw46@...
Date: Sat, 22 Jun 2013 01:45:22 +0000
Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

Dave: Need to turn Anti vox pot full CW so Marker does not trip vox and see what the maximum dc voltage is at TP-2. No rush. Thanks

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
> Terry,
>
>
>
> Have just tested both 530s. They are identical in all respects to this test procedure
>
>
> TP2 0.005v at resting voltage
>

>
>
> with marker on and tripping vox
>
>
>
> TP2 0.0027 - 0.0031v
>
>
>
> Previously used analogue micro volt MM, hence why it didn't respond to rapidly changing voltage.
>
>
>
> Let me know anything else you need checked, heading to work in an hour and will be available tonight upon return
>
>
>
> 73's
>
> Dave
>
> VK5PDL
>
>
>
> To: TS-520_820_530_830@yahoogroups.com
> From: wagstw46@...
> Date: Sat, 22 Jun 2013 00:08:53 +0000
> Subject: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?
>
>
>
>
>
>
> Dave:
>
> Thanks for attempting to measure voltages at TP-2 for Craig. I did not explain myself very well. What I was trying to confirm on a TS-530 that has a functioning VOX what the normal Anti-Vox DC "bias" or threshold voltage is.
>
> I know what it is for a TS-830, but not for a 530 but suspect very close to same as circuits are essentially identical. The reason wanted to get this for Craig was so he could tell if his Anti-VOX circuit is working. Is it producing a DC threshold voltage when there is strong audio signal from Q6 Audio Power Amplifier being coupled to the speaker line ?
>
> At TP-2 there can be two signals. Amplified Mic Audio (ac signal)either from the speaker or your voice and DC "bias" from the Anti-Vox circuit. The Anti-vox essentially establishes

a DC threshold that the mic audio has to overcome in order to key the emitter coupled Schmitt trigger and key the relay. It does this by sampling the output of Q6 speaker line and full wave rectifying it.
>
> Anti-vox circuit samples the Audio Power Amp Q6 output on the Speaker line and is coupled thru the wiper of the Anti-vox pot. It is amplified and then full wave rectified by Q7 and D6/D7. The output from the speaker is rectified and used as a kind of varying "bias" voltage for Anti-vox function based on level of output from Q6.
>
> So the signal I wanted someone to measure was the DC voltage at TP-2 produced when there was no audio from Q6 and when there was a strong audio output tone from Q6 being coupled to the speaker line. I did not state that very well.
>
> One way to do this is to use the Marker signal.
>
> Here is how I measured this DC level at TP-2 in a TS-830:
> 1. Antenna on dummy load
> 2. RFG at "5" (need to get a no audio voltage level)
> 3. AFG at "2"
> 4. Mode LSB or USB
> 5. Vox Gain off
> 6. Anti-Vox at Full CW
> 7. VFO 200, Drive control 1200
> 8. Marker OFF
> 9. Measure DC voltage at TP-2 with DMM. Need to wait until voltage decays completely off. Should see +0.001 to -0.001 dcv bouncing back and forth. So essentially zero DC offset voltage at TP-2 with no signal conditions.
> 10. Now turn on Marker and tune VFO for approx 800hz note and peak Drive control. Watch the DMM and tune the VFO for maximum DC voltage. Should see something like + 0.0305 vdc. Just tune VFO and Drive control for maximum voltage.
>
> When you turn off the Marker you will have to wait awhile for voltage to decay to lowest no audio signal level.
>
> If Craigs Anti-VOX is not producing this 0.0305 vdc bias voltage then speaker sounds will produce sufficient signals to key the rig thru the mic. Cleaning and exercising the Anti-vox pot as suggested my Mike W5RKL would be first thing to try. If there is no power amp audio coming from the wiper of this pot then the Anti-vox circuit cannot produce the necessary bias or offset voltage. If cleaning pot doesnt produce 0.030 vdc at TP-2 then have to trouble shoot the Anti-vox circuit.
>
> Another way to get a test tone out of Q6 Audio Amp would be to inject modulated RF into SO-239 from RF signal generator that has internal or external modulation capability, but suspect Marker test is as good as any.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@> wrote:
> >
> > Terry and Craig,
> >

> >
> >
> > Have measure or should I say attempted to measure voltage on TP2 on audio board. No voltage being recorded at this time, however it switches the microphone on without throwing the relay. Using two tone with the MM probe on TP2 I get 125mV, but with no two tone, no voltage appears
> >
> >
>
>
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>
> [Non-text portions of this message have been removed]
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43089. RE: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 12:24:55 UTC
From: fpath fpath
Topic: 43023 Message: 43089

Don,

Check the Audio board connector 7 pin 3 and 5 should have voltage on both, Also check PLL board connector 8 pin 1, should have 9V, if no 9v then your not getting 8.830Mhz on IF board. How is your receive over all?

73's

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: ve2ud@...
Date: Wed, 26 Jun 2013 07:49:53 -0400
Subject: Re: [TS-520_820_530_830] Re: Early TS830's

Thanks for the reply Mike
Were should i start,as per no audio out on sideband

73
Don/Ve2ud

On 25/06/2013 10:20 PM, w5rkl wrote:
>
>
> The 800Hz change in CW is normal.
>
> 73
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Don D" <ve2ud@...> wrote:
> >
> >
> > Well my last step was to put a microphone on the ebay special and
> try it out.
> > Output is fine on all bands on cw
> > When i transmitted on either side band all i got was garble.
> > I could see output on my power meter,but no audio was heard,just
> weird sounds.
> > I can hear myself fine on the monitor position.
> > The microphone i used was a old tuner mic with a preamp
> > I had to crank up the preamp high to get output
> > My mc50 would not work at all.
> >

> > On cw it is fine except jumps up in frequency by 800 Hz on transmit.
> >
> > Don/Ve2ud
> >
>
>

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43090. RE: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 12:34:27 UTC
From: fpath fpath
Topic: 43023 Message: 43090

Don,

When your in SSB does your display change when moving from SSB to CW it should by 800Hz,
What happens to frequency when you change from SSB to tune?

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: ve2ud@...
Date: Wed, 26 Jun 2013 07:49:53 -0400
Subject: Re: [TS-520_820_530_830] Re: Early TS830's

Thanks for the reply Mike
Were should i start,as per no audio out on sideband

73
Don/Ve2ud

On 25/06/2013 10:20 PM, w5rkl wrote:
>
>
> The 800Hz change in CW is normal.
>
> 73
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Don D" <ve2ud@...> wrote:
> >
> >
> > Well my last step was to put a microphone on the ebay special and
> try it out.
> > Output is fine on all bands on cw
> > When i transmitted on either side band all i got was garble.
> > I could see output on my power meter,but no audio was heard,just
> weird sounds.
> > I can hear myself fine on the monitor position.
> > The microphone i used was a old tuner mic with a preamp
> > I had to crank up the preamp high to get output
> > My mc50 would not work at all.
> >
> > On cw it is fine except jumps up in frequency by 800 Hz on transmit.
> >
> > Don/Ve2ud

> >
>
>

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43091. Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 12:42:08 UTC
From: Terry Wagoner
Topic: 42877 Message: 43091

Dave:

Sorry to hear you have been under the weather. Sure hope you already had covers off a 530 you are restoring to get these readings. I am sure Craig appreciates your help.

Just wanted to give him some idea of dc voltage he should expect to see from Anti-vox circuit with strong signal audio on speaker line from the audio amp output. This DC voltage keeps Q4 turned off until signal from the mic can overide it and turn Q4 on and key the relay.

If he has this voltage he knows the Antivox pot is seeing the audio, the pot is good, and the Anti-vox circuit is working. My guess is that he will not see this dc voltage at TP-2 as Antivox pot seems to have no effect in preventing audio from the speaker being "heard" by the mic and tripping the relay.

Thanks Again for your help
Terry

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
> Terry,
>
>
>
> Sorry for the delay, have been down for four days with migraine.
>
>
>
> OK following all your steps
> 1. Antenna on dummy load
> > 2. RFG at "5" (need to get a no audio voltage level)
> > 3. AFG at "2"
> > 4. Mode LSB or USB
> > 5. Vox Gain off fully off
> > 6. Anti-Vox at Full CW fully CW
> > 7. VFO 200, Drive control 1200 OK
> > 8. Marker OFF OK
> > 9. Measure DC voltage at TP-2 with DMM. Need to wait until voltage decays completely off.

Should see +0.001 to -0.001 dcv bouncing back and forth.

So essentially zero DC offset voltage at TP-2 with no signal conditions.

+0.002 to -0.002

> > 10. Now turn on Marker and tune VFO for approx 800hz note and peak Drive control. Watch the DMM and tune the VFO for maximum DC voltage.

Should see something like + 0.0305 vdc. Just tune VFO and Drive control for maximum voltage

0.028vdc stable
>
>
>
>

43092. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 12:48:37 UTC
From: Don
Topic: 43023 Message: 43092

Hi Dave
Thank you for your reply
The receive is good on all bands
I will check that out plus maybe pull the PLL board again as i might
have missed,bad solder joints
I should have checked it better when i had it off before as i think the
vco pin is lose now.
It's not a big job to remove the boards,it's removing and reinstalling
those connectors that can leed to more problems.

cheers

Don/Ve2ud

On 26/06/2013 8:24 AM, fpath fpath wrote:
> Don,
>
>
>
> Check the Audio board connector 7 pin 3 and 5 should have voltage on both, Also check PLL board connector 8 pin 1, should have 9V, if no 9v then your not getting 8.830Mhz on IF board. How is your receive over all?
>
>
>
> 73's
>
> Dave
>
> VK5PDL
>
>
>
>
> To: TS-520_820_530_830@yahoogroups.com
> From: ve2ud@...
> Date: Wed, 26 Jun 2013 07:49:53 -0400
> Subject: Re: [TS-520_820_530_830] Re: Early TS830's
>
>
>
>
>
>
>
> Thanks for the reply Mike
> Were should i start,as per no audio out on sideband

>
> 73
> Don/Ve2ud
>
> On 25/06/2013 10:20 PM, w5rkl wrote:
>
>>
>> The 800Hz change in CW is normal.
>>
>> 73
>> Mike
>> W5RKL
>>
>> --- In TS-520_820_530_830@yahoogroups.com
>> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Don D"<ve2ud@...> wrote:
>>
>>>
>>> Well my last step was to put a microphone on the ebay special and
>>>
>> try it out.
>>
>>> Output is fine on all bands on cw
>>> When i transmitted on either side band all i got was garble.
>>> I could see output on my power meter,but no audio was heard,just
>>>
>> weird sounds.
>>
>>> I can hear myself fine on the monitor position.
>>> The microphone i used was a old tuner mic with a preamp
>>> I had to crank up the preamp high to get output
>>> My mc50 would not work at all.
>>>
>>> On cw it is fine except jumps up in frequency by 800 Hz on transmit.
>>>
>>> Don/Ve2ud
>>>
>>>
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43093. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 12:59:00 UTC
From: Don
Topic: 43023 Message: 43093

Dave

tune 7.050
cw 7.049.2
usb&lsb both 7.049.2
Don/Ve2ud

On 26/06/2013 8:34 AM, fpath fpath wrote:
> Don,
>
>
>
> When your in SSB does your display change when moving from SSB to CW it should by 800Hz, What happens to frequency when you change from SSB to tune?
>
>
>
> Dave
>
> VK5PDL
>
>
>
>
> To: TS-520_820_530_830@yahoogroups.com
> From: ve2ud@...
> Date: Wed, 26 Jun 2013 07:49:53 -0400
> Subject: Re: [TS-520_820_530_830] Re: Early TS830's
>
>
>
>
>
>
>
> Thanks for the reply Mike
> Were should i start,as per no audio out on sideband
>
> 73
> Don/Ve2ud
>
> On 25/06/2013 10:20 PM, w5rkl wrote:
>
>>
>> The 800Hz change in CW is normal.
>>

>> 73
>> Mike
>> W5RKL
>>
>> --- In TS-520_820_530_830@yahoogroups.com
>> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Don D"<ve2ud@...> wrote:
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>>>
>>> Well my last step was to put a microphone on the ebay special and
>>>
>> try it out.
>>
>>> Output is fine on all bands on cw
>>> When i transmitted on either side band all i got was garble.
>>> I could see output on my power meter,but no audio was heard,just
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>> weird sounds.
>>
>>> I can hear myself fine on the monitor position.
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>>> My mc50 would not work at all.
>>>
>>> On cw it is fine except jumps up in frequency by 800 Hz on transmit.
>>>
>>> Don/Ve2ud
>>>
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43094. 830S display problem solved(?)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 13:33:47 UTC
From: Craig Roberts
Topic: 43023 Message: 43094

Last night I decided to tackle my TS-830S freq-ish display problem
(that's a joke, son).

The leading digit had been screwy; intermittently flashing "0" instead
of blanking on the 1.5, 3.5, and 7.0 MHz bands and incorrectly blanking
or displaying a "0" intermittently on the 14 and 18 MHz bands.
So, I pulled the Counter Board (very easy to do), cleaned all connector
pins and did a bit of Soder-Wick-ing and re-soldered on several
"iffy"looking joints on the board.

Upon reassembly, I powered up the radio on 40 meters. The normally
blanked first digit flashed "0" momentarily, then corrected itself. All
band displays have been acting normally since, even after repeated
on/off cycles.

We shall see. I am not convinced that the problem will not return, but
hopeful anyway.

Tonight I'll replace R15 and R16 on the Rectifier Board in hopes of
correcting the low power output (1-2 watts) in the TUNE position. I will
hold Terry personally responsible if this does not correct the anomaly :-) .

73,

Craig
W3CRR

43095. RE: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 13:52:20 UTC
From: fpath fpath
Topic: 43023 Message: 43095

Don,

I just went through this same problem a month or so ago, and both Terry and myself got fooled a little when I swapped the IF board out and the fault went away. But the original board when re-installed gave the same fault. The problem wasn't the IF board as the second IF board installed was a later board and had some extra tracks for the 9v. If this fails then we need to look at TIF and work back. If I'm on the wrong track I know Terry and Mike will intervene. Let us know how you go and we can work you through this.

73's

Dave

VK5PDL

To: TS-520_820_530_830@...m
From: ve2ud@...
Date: Wed, 26 Jun 2013 08:48:37 -0400
Subject: Re: [TS-520_820_530_830] Re: Early TS830's

Hi Dave
Thank you for your reply
The receive is good on all bands
I will check that out plus maybe pull the PLL board again as i might
have missed,bad solder joints
I should have checked it better when i had it off before as i think the
vco pin is lose now.
It's not a big job to remove the boards,it's removing and reinstalling
those connectors that can leed to more problems.

cheers

Don/Ve2ud

On 26/06/2013 8:24 AM, fpath fpath wrote:
> Don,
>
>
>
> Check the Audio board connector 7 pin 3 and 5 should have voltage on both, Also check PLL board connector 8 pin 1, should have 9V, if no 9v then your not getting 8.830Mhz on IF board. How is your receive over all?
>
>
>
> 73's
>

> Dave
>
> VK5PDL
>
>
>
>
> To: TS-520_820_530_830@yahoogroups.com
> From: ve2ud@travel-net.com
> Date: Wed, 26 Jun 2013 07:49:53 -0400
> Subject: Re: [TS-520_820_530_830] Re: Early TS830's
>
>
>
>
>
>
>
> Thanks for the reply Mike
> Were should i start,as per no audio out on sideband
>
> 73
> Don/Ve2ud
>
> On 25/06/2013 10:20 PM, w5rkl wrote:
>
>>
>> The 800Hz change in CW is normal.
>>
>> 73
>> Mike
>> W5RKL
>>
>> --- In TS-520_820_530_830@yahoogroups.com
>> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Don D"<ve2ud@...> wrote:
>>
>>>
>>> Well my last step was to put a microphone on the ebay special and
>>>
>> try it out.
>>
>>> Output is fine on all bands on cw
>>> When i transmitted on either side band all i got was garble.
>>> I could see output on my power meter,but no audio was heard,just
>>>
>> weird sounds.
>>
>>> I can hear myself fine on the monitor position.
>>> The microphone i used was a old tuner mic with a preamp
>>> I had to crank up the preamp high to get output
>>> My mc50 would not work at all.

>>>
>>> On cw it is fine except jumps up in frequency by 800 Hz on transmit.
>>>
>>> Don/Ve2ud
>>>
>>>
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> Yahoo! Groups Links
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43096. RE: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 13:55:58 UTC
From: fpath fpath
Topic: 43023 Message: 43096

Thanks Don, have a look at those voltages\connectors on those pins, will need to check the voltages on relay as well. I'm off to bed as have a 0530 start in the morning and now 2330hrs. Will respond tomorrow and look at fault as we go through

73s

Dave

To: TS-520_820_530_830@yahoogroups.com
From: ve2ud@...
Date: Wed, 26 Jun 2013 08:59:00 -0400
Subject: Re: [TS-520_820_530_830] Re: Early TS830's

Dave

tune 7.050
cw 7.049.2
usb&lsb both 7.049.2
Don/Ve2ud

On 26/06/2013 8:34 AM, fpath fpath wrote:
> Don,
>
>
>
> When your in SSB does your display change when moving from SSB to CW it should by 800Hz, What happens to frequency when you change from SSB to tune?
>
>
>
> Dave
>
> VK5PDL
>
>
>
>
> To: TS-520_820_530_830@yahoogroups.com
> From: ve2ud@...
> Date: Wed, 26 Jun 2013 07:49:53 -0400
> Subject: Re: [TS-520_820_530_830] Re: Early TS830's
>
>
>
>
>

>
> Thanks for the reply Mike
> Were should i start,as per no audio out on sideband
>
> 73
> Don/Ve2ud
>
> On 25/06/2013 10:20 PM, w5rkl wrote:
>
>>
>> The 800Hz change in CW is normal.
>>
>> 73
>> Mike
>> W5RKL
>>
>> --- In TS-520_820_530_830@yahoogroups.com
>> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Don D"<ve2ud@...> wrote:
>>
>>>
>>> Well my last step was to put a microphone on the ebay special and
>>>
>> try it out.
>>
>>> Output is fine on all bands on cw
>>> When i transmitted on either side band all i got was garble.
>>> I could see output on my power meter,but no audio was heard,just
>>>
>> weird sounds.
>>
>>> I can hear myself fine on the monitor position.
>>> The microphone i used was a old tuner mic with a preamp
>>> I had to crank up the preamp high to get output
>>> My mc50 would not work at all.
>>>
>>> On cw it is fine except jumps up in frequency by 800 Hz on transmit.
>>>
>>> Don/Ve2ud
>>>
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> [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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43097. For Terry: audio level measurements on TP2

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 13:58:11 UTC
From: hfdxer@ymail.com
Topic: 43097 Message: 43097

Hi Terry,

In order to discard the previous thread I started this topic especially for you ;-)

I did some measurements today and the results are reported
in this document: https://infotomb.com/3wtoj.pdf

In order to visualise it more, see this link http://i.imgur.com/SJjEbbP.jpg

Remco PA3FYM

43098. RE: [TS-520_820_530_830] Re: Any TS-530S disassembly tips?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 13:58:59 UTC
From: fpath fpath
Topic: 42877 Message: 43098

Terry,

Thanks haven't had one for a while so body was just resetting itself. Have the covers permanetly of the 530 and one of the 830s so it is easier to check things as faults pop up. I learnt that from a wise man on this group. forgot it was you who told me thats what you do

Trust your improving and not over doing things?

73s

Dave

VK5PDL

[Non-text portions of this message have been removed]

43099. Re: TS-820S RF-clipper vs normal mode TP2 IF-unit

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 14:00:10 UTC
From: hfdxer@ymail.com
Topic: 43017 Message: 43099

Of course I have a counter, it's even an HP :-)

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:

> Yes F= 1/T so 1/.11 x 10-6 = 9.09 Mhz. Close but not precise. Best to use Freq Counter to measure Carrier Osc frequency. My new scope measures and displays frequency on the screen and is pretty close, but I still use my HP counter to measure and set Oscillator trimmers.

43100. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 14:21:29 UTC
From: W5RKL
Topic: 43023 Message: 43100

Don,

You said output is fine on all bands in CW. That tells me the PLL system in CW is working.

You also said you can hear yourself fine with MONI turned ON. That also indicates the speech amp on the AF board is working. If you were to hear garble with MONI turned ON then there would be a problem either in the microphone or the AF board's speech amp but that doesn't appear to be the case.

Is the display showing the transmit and receive frequency in USB and LSB during transmit? If it is then the PLL system appears to be working in both USB and LSB modes.

You said you hear "garble" in USB and LSB. How are you determining this, by using a separate receiver? If so have you disconnected the antenna cable at the separate receiver? If not then do that then test again.

Has this been an on going problem or did it occur when you changed microphones? Do you have another microphone? If so try it with the 830. The 830 has a wide microphone impedance range, 500 ohms to 50K ohms so you can use different microphones.

Have you checked the MC-50 for a broken wire or bad switch?

These are all priliminary test so do the simple stuff first.

73
Mike W5RKL

On 6/26/2013 6:49 AM, Don wrote:
>
>
> Thanks for the reply Mike
> Were should i start,as per no audio out on sideband
>
> 73
> Don/Ve2ud
>
> On 25/06/2013 10:20 PM, w5rkl wrote:
> >
> >
> > The 800Hz change in CW is normal.
> >
> > 73
> > Mike

> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Don D" <ve2ud@...>
> wrote:
> > >
> > >
> > > Well my last step was to put a microphone on the ebay special and
> > try it out.
> > > Output is fine on all bands on cw
> > > When i transmitted on either side band all i got was garble.
> > > I could see output on my power meter,but no audio was heard,just
> > weird sounds.
> > > I can hear myself fine on the monitor position.
> > > The microphone i used was a old tuner mic with a preamp
> > > I had to crank up the preamp high to get output
> > > My mc50 would not work at all.
> > >
> > > On cw it is fine except jumps up in frequency by 800 Hz on transmit.
> > >
> > > Don/Ve2ud
> > >
> >
> >
>
> [Non-text portions of this message have been removed]
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43101. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 14:54:15 UTC
From: Don
Topic: 43023 Message: 43101

Mike
I will try to explain it as i am not the best at putting words on paper
I went on to a local net and he told me he could not hear me,just that
there was something there but not readable.
I also tried talking into it and listing on my other rigs and just some
god awful noise.
My MC50 mic is fine,but no go on the test rig.
The turner mike will show output[watt's] if i turn the preamp up
full,but no audibly speech.
This is the first time i have tried this on sideband as i just got the
output to work because of bad solder joints on the PLL board.

73's
Don/Ve2ud

On 26/06/2013 10:21 AM, W5RKL wrote:
>
> Don,
>
> You said output is fine on all bands in CW. That tells me the PLL system
> in CW is working.
>
> You also said you can hear yourself fine with MONI turned ON. That also
> indicates the speech amp on the AF board is working. If you were to hear
> garble with MONI turned ON then there would be a problem either in the
> microphone or the AF board's speech amp but that doesn't appear to be
> the case.
>
> Is the display showing the transmit and receive frequency in USB and LSB
> during transmit? If it is then the PLL system appears to be working in
> both USB and LSB modes.
>
> You said you hear "garble" in USB and LSB. How are you determining this,
> by using a separate receiver? If so have you disconnected the antenna
> cable at the separate receiver? If not then do that then test again.
>
> Has this been an on going problem or did it occur when you changed
> microphones? Do you have another microphone? If so try it with the 830.
> The 830 has a wide microphone impedance range, 500 ohms to 50K ohms so
> you can use different microphones.
>
> Have you checked the MC-50 for a broken wire or bad switch?
>
> These are all priliminary test so do the simple stuff first.
>

> 73
> Mike W5RKL
>
> On 6/26/2013 6:49 AM, Don wrote:
> >
> >
> > Thanks for the reply Mike
> > Were should i start,as per no audio out on sideband
> >
> > 73
> > Don/Ve2ud
> >
> > On 25/06/2013 10:20 PM, w5rkl wrote:
> > >
> > >
> > > The 800Hz change in CW is normal.
> > >
> > > 73
> > > Mike
> > > W5RKL
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Don D" <ve2ud@...>
> > wrote:
> > > >
> > > >
> > > > Well my last step was to put a microphone on the ebay special and
> > > try it out.
> > > > Output is fine on all bands on cw
> > > > When i transmitted on either side band all i got was garble.
> > > > I could see output on my power meter,but no audio was heard,just
> > > weird sounds.
> > > > I can hear myself fine on the monitor position.
> > > > The microphone i used was a old tuner mic with a preamp
> > > > I had to crank up the preamp high to get output
> > > > My mc50 would not work at all.
> > > >
> > > > On cw it is fine except jumps up in frequency by 800 Hz on transmit.
> > > >
> > > > Don/Ve2ud
> > > >
> > >
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> > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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43102. SSB audio/tone generator for adjustments

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 14:58:47 UTC
From: hfdxer@ymail.com
Topic: 43102 Message: 43102

A follower of the 'TP2-topic' between Terry and me mailed
for the circuit diagram of the tone generator.

I wanted to make something simple and quick that produces a good
sine wave, and remembered the super simple CW side tone generator
circuit from Icom's IC-202S.

All the info is here: http://i.imgur.com/bcptvkp.jpg

Remco PA3FYM

43103. Re: 830S display problem solved(?)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 15:02:32 UTC
From: Terry Wagoner
Topic: 43023 Message: 43103

If you replace them without measuring SG voltage at the tube socket in Tune and doing a visual on the resistors for signs of overheating and measure their resistance values before replacing them --I Will Disown You!

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Craig Roberts <crgrbrts@...> wrote:
>
> Last night I decided to tackle my TS-830S freq-ish display problem
> (that's a joke, son).
>
> The leading digit had been screwy; intermittently flashing "0" instead
> of blanking on the 1.5, 3.5, and 7.0 MHz bands and incorrectly blanking
> or displaying a "0" intermittently on the 14 and 18 MHz bands.
> So, I pulled the Counter Board (very easy to do), cleaned all connector
> pins and did a bit of Soder-Wick-ing and re-soldered on several
> "iffy"looking joints on the board.
>
> Upon reassembly, I powered up the radio on 40 meters. The normally
> blanked first digit flashed "0" momentarily, then corrected itself. All
> band displays have been acting normally since, even after repeated
> on/off cycles.
>
> We shall see. I am not convinced that the problem will not return, but
> hopeful anyway.
>
> Tonight I'll replace R15 and R16 on the Rectifier Board in hopes of
> correcting the low power output (1-2 watts) in the TUNE position. I will
> hold Terry personally responsible if this does not correct the anomaly :-) .
>
> 73,
>
> Craig
> W3CRR
>

43104. TS-520 Low Power

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 15:11:57 UTC
From: geagent21
Topic: 43104 Message: 43104

I just got my 10 meter antenna in the air and tuned. Tried out my TS-520 tonight. Receives very well. Did the tune up in prep to transmit. Checked power output and external meter shows 70 watts on CW but on USB it bounces up to 10 watts and drops back to 0. If I hold the mic key down it will cycle up and down but no higher than 10 watts.
Any ideas?

I also pulled the cover off the other day to see what filters were installed. It has both the SW and the SSB filters but I see no way to switch off and on. What should I be looking for?
73
Greg
KC9VVU

43105. Re: SSB audio/tone generator for adjustments

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 15:14:05 UTC
From: Terry Wagoner
Topic: 43102 Message: 43105

Nice work. I can see you are a homebrewer. Makes me smile.

This is a phase shift RC oscillator. It should look pretty familiar. Take a look at your CW side tone oscillator circuit for any of your Hybrids. On the 830 it is Q1 on the AF board.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "hfdxer@..." <hfdxer@...> wrote:
>
> A follower of the 'TP2-topic' between Terry and me mailed
> for the circuit diagram of the tone generator.
>
> I wanted to make something simple and quick that produces a good
> sine wave, and remembered the super simple CW side tone generator
> circuit from Icom's IC-202S.
>
> All the info is here: http://i.imgur.com/bcptvkp.jpg
>
> Remco PA3FYM
>

43106. Re: [TS-520_820_530_830] TS-520 Low Power

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 15:17:44 UTC
From: Dale Parfitt
Topic: 43104 Message: 43106

Do you have a peak reading wattmeter? Is your mic gain set properly?
You do realize that SSB is Suppressed Carrier? There is no power out unless you are speaking.

Dale W4OP

----- Original Message -----
From: geagent21
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, June 26, 2013 11:11 AM
Subject: [TS-520_820_530_830] TS-520 Low Power

I just got my 10 meter antenna in the air and tuned. Tried out my TS-520 tonight. Receives very well. Did the tune up in prep to transmit. Checked power output and external meter shows 70 watts on CW but on USB it bounces up to 10 watts and drops back to 0. If I hold the mic key down it will cycle up and down but no higher than 10 watts.
Any ideas?

I also pulled the cover off the other day to see what filters were installed. It has both the SW and the SSB filters but I see no way to switch off and on. What should I be looking for?
73
Greg
KC9VVU

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.2904 / Virus Database: 3199/6404 - Release Date: 06/12/13
Internal Virus Database is out of date.

[Non-text portions of this message have been removed]

43107. Re: [TS-520_820_530_830] Re: 830S display problem solved(?)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 15:19:17 UTC
From: Craig Roberts
Topic: 43023 Message: 43107

But, of course, Master. I will obey humbly in the name of due diligence.

43108. Re: [TS-520_820_530_830] TS-520 Low Power

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 15:21:09 UTC
From: John Davidson
Topic: 43104 Message: 43108

70W on 10M CW is about what I would expect.
Were you saying "Ahhhhhhh" into the mic when you were measuring SSB output?
Keying with no voice input on SSB = Zero Watts ! A long "Ahhhhh" will show about 1/4 the Carrier wattage you get on CW. Maybe 20 W at BEST on an average meter.

The 520 is designed to select the CW filter when rthwe mode switch is on CW and the SSB filter on USB or LSB modes. The mode switch has the wiring to do this automaticly.

From: geagent21 <GEAgent21@aol.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, June 26, 2013 11:11 AM
Subject: [TS-520_820_530_830] TS-520 Low Power

. Tried out my TS-520

tonight. Receives very well. Did the tune up in prep to transmit. Checked
power output and external meter shows 70 watts on CW but on USB it bounces up to
10 watts and drops back to 0. If I hold the mic key down it will cycle up and
down but no higher than 10 watts.
Any ideas?

I also pulled the cover off the other day to see what filters were installed. It
has both the SW and the SSB filters but I see no way to switch off and on. What
should I be looking for?
73
Greg
KC9VVU

[Non-text portions of this message have been removed]

43109. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 15:49:45 UTC
From: W5RKL
Topic: 43023 Message: 43109

Don,

Opps, I misspoke! The 830's speech amp is on the IF board, not the AF board. Duh....I was thinking receive amp, sorry for that mistake.

If the MC-50 produces the same good sounding audio heard in the speaker with MONI turned ON as the other microphone does then I don't believe the problem is the microphones or the speech amp on the IF board.

What alignment steps have you use to check and, if necessary, make adjustments to? I don't have the receive and transmit signal path levels but I think Terry, K9TW, may have them.

I apologize for delay in responses, I'm also working on a home brew power supply project for my Heathkit HG-10B VFO for use with my Heathkit DX-40 and Kenwood R599 rcvr setup (see pictures in the group's Photo section under W5RKL).

73
Mike W5RKL

On 6/26/2013 9:54 AM, Don wrote:
>
> Mike
> I will try to explain it as i am not the best at putting words on paper
> I went on to a local net and he told me he could not hear me,just that
> there was something there but not readable.
> I also tried talking into it and listing on my other rigs and just some
> god awful noise.
> My MC50 mic is fine,but no go on the test rig.
> The turner mike will show output[watt's] if i turn the preamp up
> full,but no audibly speech.
> This is the first time i have tried this on sideband as i just got the
> output to work because of bad solder joints on the PLL board.
>
> 73's
> Don/Ve2ud
>

[Non-text portions of this message have been removed]

43110. Re: [TS-520_820_530_830] TS-520 Low Power

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 15:52:46 UTC
From: GEAgent21@...
Topic: 43104 Message: 43110

Thanks for the quick response. I got these readings on an external watt meter. Does that make any difference?
The reason I asked about the filters is there are wires that have been spliced to the filters. So I guess the filters were installed after manufacture. This had me concerned as I have purchased four 2 meter radios in the 1 1/2 years that I have had my license. None of them worked as advertised.
I thought here we go again on HF.

73
Greg
KC9VVU

In a message dated 6/26/2013 11:21:14 A.M. Eastern Daylight Time, k8jd@... writes:

70W on 10M CW is about what I would expect.
Were you saying "Ahhhhhhh" into the mic when you were measuring SSB output?
Keying with no voice input on SSB = Zero Watts ! A long "Ahhhhh" will show about 1/4 the Carrier wattage you get on CW. Maybe 20 W at BEST on an average meter.

The 520 is designed to select the CW filter when rthwe mode switch is on CW and the SSB filter on USB or LSB modes. The mode switch has the wiring to do this automaticly.

From: geagent21 <_GEAgent21@..._ (mailto:GEAgent21@...) >
To: _TS-520_820_530_830@yahoogroups.com_ (mailto:TS-520_820_530_830@yahoogroups.com)
Sent: Wednesday, June 26, 2013 11:11 AM
Subject: [TS-520_820_530_830] TS-520 Low Power

. Tried out my TS-520

tonight. Receives very well. Did the tune up in prep to transmit. Checked power output and external meter shows 70 watts on CW but on USB it bounces up to
10 watts and drops back to 0. If I hold the mic key down it will cycle up and
down but no higher than 10 watts.
Any ideas?

I also pulled the cover off the other day to see what filters were installed. It
has both the SW and the SSB filters but I see no way to switch off and on. What
should I be looking for?

73
Greg
KC9VVU

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[Non-text portions of this message have been removed]

43111. Re: TS-520 Low Power

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 16:03:19 UTC
From: scott10k
Topic: 43104 Message: 43111

I concur with John and Dale. Make sure your mic gain is adjusted properly and speak into the mic. You should see the meter move up and back down to near zero. Set the meter switch for ALC and when speaking into the mic adjust the mic gain control but do not exceed the max line on ALC on your voice peaks. Do you have a dummy load? If not you should get one, as you can then check it out and not worry about your antenna set-up. As others said 70 watts CW on 10 meters is about right.

Scott, N6CIC

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
>
>
> 70W on 10M CW is about what I would expect.
> Were you saying "Ahhhhhhh" into the mic when you were measuring SSB output?
> Keying with no voice input on SSB = Zero Watts ! Â A long "Ahhhhh" will show about 1/4 the Carrier wattage you get on CW. Maybe 20 W at BEST on an average meter.
>
> The 520 is designed to select the CW filter when rthwe mode switch is on CW and the SSB filter on USB or LSB modes. The mode switch has the wiring to do this automaticly.
>
> _____
> From: geagent21 <GEAgent21@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, June 26, 2013 11:11 AM
> Subject: [TS-520_820_530_830] TS-520 Low Power
>
> . Tried out my TS-520
>
> tonight. Receives very well. Did the tune up in prep to transmit. Checked
> power output and external meter shows 70 watts on CW but on USB it bounces up to
> 10 watts and drops back to 0. If I hold the mic key down it will cycle up and
> down but no higher than 10 watts.
> Any ideas?
>
> I also pulled the cover off the other day to see what filters were installed. It
> has both the SW and the SSB filters but I see no way to switch off and on. What
> should I be looking for?
> 73
> Greg
> KC9VVU
>
>
>
>

> [Non-text portions of this message have been removed]
>

43112. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 16:04:55 UTC
From: Don
Topic: 43023 Message: 43112

No problem Mike
Off to watch the baseball game with the Blue Jays

73
Don/Ve2ud

On 26/06/2013 11:49 AM, W5RKL wrote:
>
> Don,
>
> Opps, I misspoke! The 830's speech amp is on the IF board, not the AF
> board. Duh....I was thinking receive amp, sorry for that mistake.
>
> If the MC-50 produces the same good sounding audio heard in the speaker
> with MONI turned ON as the other microphone does then I don't believe
> the problem is the microphones or the speech amp on the IF board.
>
> What alignment steps have you use to check and, if necessary, make
> adjustments to? I don't have the receive and transmit signal path levels
> but I think Terry, K9TW, may have them.
>
> I apologize for delay in responses, I'm also working on a home brew
> power supply project for my Heathkit HG-10B VFO for use with my Heathkit
> DX-40 and Kenwood R599 rcvr setup (see pictures in the group's Photo
> section under W5RKL).
>
> 73
> Mike W5RKL
>
> On 6/26/2013 9:54 AM, Don wrote:
> >
> > Mike
> > I will try to explain it as i am not the best at putting words on paper
> > I went on to a local net and he told me he could not hear me,just that
> > there was something there but not readable.
> > I also tried talking into it and listing on my other rigs and just some
> > god awful noise.
> > My MC50 mic is fine,but no go on the test rig.
> > The turner mike will show output[watt's] if i turn the preamp up
> > full,but no audibly speech.
> > This is the first time i have tried this on sideband as i just got the
> > output to work because of bad solder joints on the PLL board.
> >
> > 73's
> > Don/Ve2ud

> >
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

43113. TS-830 Rectifier Unit board

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 16:14:59 UTC
From: W5RKL
Topic: 43113 Message: 43113

If anyone has any old non-working Rectifier Unit boards from a 520, 530, 820 and/or 830 hybrid they don't want, I'm looking for them. I'm going to try and design replacement boards so I need the actual boards, the xray pictures in the manuals won't do.

It would be nice if the components, good or bad, along with the board edge connection pins are still on the board. I don't care if the boards work or not as I have no intention on using the boards for anything other than as a guide during the replacement board design process.

I have no intention of spending a lot of money on any board used as a guide.

If you have any of these boards you no longer need then contact me off list.

73
Mike W5RKL

[Non-text portions of this message have been removed]

43114. QRO mod, whaddup wid dat?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 16:42:18 UTC
From: Craig Roberts
Topic: 43023 Message: 43114

I'm generally of the "leave well enough alone" and "if it ain't broke, don't fix it"school of thought, so -- NO -- I don't wish to install a QRO mod in my TS-830S. I want to know how to detect one that's been done and how to reverse it.

My radio's been messed with obviously (I found a brass wood screw used for board mounting in one instance) but I don't know to what extent. What components were changed in the infamous QRO mod?

I have rarely seen a "performance enhancing" modification that a) actually works, or b) doesn't degrade performance in another area, or c) is ultimately destructive. I don't mind installing mods that help protect circuitry (like crowbar circuits in power supplies) but, for the most part, I figure the design engineers probably knew what they were doing given their marketing orders and budget constraints.

Oh, the reason I ask is because my 830 wants to load up (yes, into a dummy load) at 300mA or more. On a couple of bands, it won't dip below about 260 mA. I like it down at 220 or less.

Only two more problems to solve and I'll be out of questions!

Craig
W3CRR

>

[Non-text portions of this message have been removed]

43115. Re: [TS-520_820_530_830] TS-520 Low Power

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 16:48:35 UTC
From: Dale Parfitt
Topic: 43104 Message: 43115

An external wattmeter is fine, but we still need the original questions answered.

1. Is the meter a peak or average reading meter?
2. Do you have your mic gain set so that the ALC meter is proper?
3. Are you speaking into the microphone when measuring power?

Dale W4OP
----- Original Message -----
From: GEAgent21@...
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, June 26, 2013 11:52 AM
Subject: Re: [TS-520_820_530_830] TS-520 Low Power

Thanks for the quick response. I got these readings on an external watt
meter. Does that make any difference?
The reason I asked about the filters is there are wires that have been
spliced to the filters. So I guess the filters were installed after
manufacture. This had me concerned as I have purchased four 2 meter radios in the 1
1/2 years that I have had my license. None of them worked as advertised.
I thought here we go again on HF.

73
Greg
KC9VVU

In a message dated 6/26/2013 11:21:14 A.M. Eastern Daylight Time,
k8jd@... writes:

70W on 10M CW is about what I would expect.
Were you saying "Ahhhhhhh" into the mic when you were measuring SSB output?
Keying with no voice input on SSB = Zero Watts ! A long "Ahhhhh" will
show about 1/4 the Carrier wattage you get on CW. Maybe 20 W at BEST on an
average meter.

The 520 is designed to select the CW filter when rthwe mode switch is on
CW and the SSB filter on USB or LSB modes. The mode switch has the wiring to
do this automaticly.

From: geagent21 <_GEAgent21@..._ (mailto:GEAgent21@...) >
To: _TS-520_820_530_830@yahoogroups.com_
(mailto:TS-520_820_530_830@yahoogroups.com)
Sent: Wednesday, June 26, 2013 11:11 AM
Subject: [TS-520_820_530_830] TS-520 Low Power

. Tried out my TS-520

tonight. Receives very well. Did the tune up in prep to transmit. Checked power output and external meter shows 70 watts on CW but on USB it bounces up to
10 watts and drops back to 0. If I hold the mic key down it will cycle up and
down but no higher than 10 watts.
Any ideas?

I also pulled the cover off the other day to see what filters were installed. It
has both the SW and the SSB filters but I see no way to switch off and on. What
should I be looking for?
73
Greg
KC9VVU

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.2904 / Virus Database: 3199/6404 - Release Date: 06/12/13
Internal Virus Database is out of date.

[Non-text portions of this message have been removed]

43116. Re: 830S display problem solved(?)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 18:17:08 UTC
From: wallydoc
Topic: 43023 Message: 43116

Craig:
I spent months with goofy readouts on a TS 820. They kept changing and coming and going. Terry told me that the counter boards have bad connections, I don't remember if he was referring to the thru hole or the traces, I think both.
I resoldered everything. It still had intermittent problems.Then I did it again and used better wire on the thru hole connections. That finally did it. It works fine for now.
I did find a trace with a hairline crack earlier (I actually used a dissecting microscope to find it) and fixing that helped too.
Terry was correct about the iffy board.
Wally
KC9INK

--- In TS-520_820_530_830@yahoogroups.com, Craig Roberts <crgrbrts@...> wrote:
>
> Last night I decided to tackle my TS-830S freq-ish display problem
> (that's a joke, son).
>
> The leading digit had been screwy; intermittently flashing "0" instead
> of blanking on the 1.5, 3.5, and 7.0 MHz bands and incorrectly blanking
> or displaying a "0" intermittently on the 14 and 18 MHz bands.
> So, I pulled the Counter Board (very easy to do), cleaned all connector
> pins and did a bit of Soder-Wick-ing and re-soldered on several
> "iffy"looking joints on the board.
>
> Upon reassembly, I powered up the radio on 40 meters. The normally
> blanked first digit flashed "0" momentarily, then corrected itself. All
> band displays have been acting normally since, even after repeated
> on/off cycles.
>
> We shall see. I am not convinced that the problem will not return, but
> hopeful anyway.
>
> Tonight I'll replace R15 and R16 on the Rectifier Board in hopes of
> correcting the low power output (1-2 watts) in the TUNE position. I will
> hold Terry personally responsible if this does not correct the anomaly :-) .
>
> 73,
>
> Craig
> W3CRR
>

43117. Re: For Terry: audio level measurements on TP2

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 18:18:23 UTC
From: Terry Wagoner
Topic: 43097 Message: 43117

Remco:

Will try to respond in installments. Have some questions. I need to look at readings in RMS as this is how Kenwood lists them and how I take them with Boonton 92e RF millivolt meter.

1.TP-5 900mv is to spec. 900/2.828 = 318mv rms No further discussion.

2.VR-5 wiper 1900mv/2.828 = 672mv rms is low in my experience. Design is approx 880mv rms. Perhaps right angle probe is contacting end of trim pot and not wiper? Not sure would make this much difference? Suggest you take dc CBE voltages at Q17. I will make right angle probe and try to duplicate your reading.

3.QUESTION: I see 0 to 2600mv P-P at TP-2. How are you getting this? Is this done with the Mic gain at 1200 and you vary the output of your test audio oscillator being injected into the mic line? If so, why would you ever inject a audio signal level into the Mic line that would result in 2600mv P-P/2.828 = 919mv rms = nearly 1v rms audio signal at TP-2? In practice with normal operation of the microphone you would never see any signal level remotely close to this high a level. Not sure what you are trying to accomplish with this high a TP-2 level?

4.As we discussed for proper operation of the Balanced Modulator you want the LO to be the higher level signal. You never want the Audio level to be able to control the conduction state of the ring diodes. Rule of thumb for ring diode mixer input signals generally see the LO at approx 1 volt rms and the maximum Audio level at approx 20% of the LO level. I have also seen 20dB as the maximum Audio level. Using 20% rule of thumb 880mv x .20 = 176mv max audio level at TP-2.

5.The highest level of audio test signal that is ever used in aligning a hybrid ranges from 5mv to 10mv. 10mv is used to set the ALC indication to the maximum end of the black ALC box range on the panel meter. Here are my O-scope measurements for TP-2 with these levels of audio injected into the mic line at 1Kz.

5mv = 272mv P-P or 92mv rms
7mv = 365mv P-P or 123mv rms
10mv = 472mv P-P or 163mv rms

Note: With 10mv rms injected into the mic line resulting in approx 163mv rms at TP-2 the ALC indication would be a max of its range and not a recommended place to routinely operate. So not sure why would ever want to see more than approx 163mv at TP-2. Certainly never more than 200mv rms or 566mv P-P. About 25% of what I think you are injecting.

6.With normal speech modulation into the Microphone (five--five ☐five) I would expect to see no more than approx 50mv to 75mv rms at TP-2 (not a sustained whistle).

7.You state that you ended up setting the LO to 451.9khz. I am curious why you did this. The center frequency of the ceramic filter is approx 455khz. If the filters have -6dB bandwidth of 2.7 khz then this would be plus and minus 1.35khz. 455khz minus 1.35khz =

453.65khz. This is why the procedure in the service manual does not work. You cant get any signal into the 455khz filter passband if LO is set to 451.9khz. I have never seen the ceramic filter specs, but suspect very close to the 455khz IF filter specs. Maybe a member has the specs. I have never swept them and should do that one of these days.

That is enough for this installment. We can try to take this in more bite size pieces and perhaps take off the list so we don't bore the non-820 owners?

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "hfdxer@..." <hfdxer@...> wrote:
>
> Hi Terry,
>
> In order to discard the previous thread I started this topic especially for you ;-)
>
> I did some measurements today and the results are reported
> in this document: https://infotomb.com/3wtoj.pdf
>
> In order to visualise it more, see this link http://i.imgur.com/SJjEbbP.jpg
>
> Remco PA3FYM
>

43118. Re: QRO mod, whaddup wid dat?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 18:31:52 UTC
From: Terry Wagoner
Topic: 43023 Message: 43118

Craig:

Rather than spend time to describe in detail all the QRO mods that can be done on a TS-830 easiest to just measure 6146 SG voltage. (300 to 210, resistor changes on RF board for driver screen grid voltage, resistor changes on HV rectifier board, ALC time constant changes etc)

Are you comfortable measuring the SG voltage at the tube socket pins of the 6146 finals in RX and TX mode? If so, it will tell you if rig has been QROd. Most common mod is to switch 300 to 210 on the HV rectifier board to increase SG voltage. SG voltage has the most control over IP in a beam tetrode.

I would also measure your 5 ohm cathode meter shunt resistors on the Final board. If they drift high enough the meter will read false high, but typically not this high. Make sure rig is unplugged and HV filter caps discharged. Also allow time for the 300vdc supply filter caps to discharge as there will be voltage on the Final board that can bite you.

If cathode meter shunt resistors are high (I have seen them as high as 7 ohms) replace all four with 20 ohm metal film resistors.

Lastly, does your Plate Tune and Plate Load capacitors behave normally. At or near normal front panel scribed marks?

--- In TS-520_820_530_830@yahoogroups.com, Craig Roberts <crgrbrts@...> wrote:
>
> I'm generally of the "leave well enough alone" and "if it ain't broke,
> don't fix it"school of thought, so -- NO -- I don't wish to install a
> QRO mod in my TS-830S. I want to know how to detect one that's been done
> and how to reverse it.
>
> My radio's been messed with obviously (I found a brass wood screw used
> for board mounting in one instance) but I don't know to what extent.
> What components were changed in the infamous QRO mod?
>
> I have rarely seen a "performance enhancing" modification that a)
> actually works, or b) doesn't degrade performance in another area, or c)
> is ultimately destructive. I don't mind installing mods that help
> protect circuitry (like crowbar circuits in power supplies) but, for the
> most part, I figure the design engineers probably knew what they were
> doing given their marketing orders and budget constraints.
>
> Oh, the reason I ask is because my 830 wants to load up (yes, into a
> dummy load) at 300mA or more. On a couple of bands, it won't dip below
> about 260 mA. I like it down at 220 or less.
>
> Only two more problems to solve and I'll be out of questions!

>
> Craig
> W3CRR
>
>
> >
>
>
>
>
> [Non-text portions of this message have been removed]
>

43119. Re: TS-520 Low Power

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 18:38:14 UTC
From: roberteleazer@rocketmail.com
Topic: 43104 Message: 43119

Gregg:

You might take a look at the INRAD filter alignment procedure that is in the group files section.

The normal procedure for testing power output in SSB is to inject a tone from a audio signal generator at the mike jack and at a certain signal level - usually at 1000 HZ with the mike gain set at a certain level. Then you observe the RF power output and then adjust the signal gnerator frequency above and below 1000 HZ to check the bandpass of the filter and adjust the carrier frequency accordingly.

Good Luck!

Robert

--- In TS-520_820_530_830@yahoogroups.com, GEAgent21@... wrote:
>
> Thanks for the quick response. I got these readings on an external watt
> meter. Does that make any difference?
> The reason I asked about the filters is there are wires that have been
> spliced to the filters. So I guess the filters were installed after
> manufacture. This had me concerned as I have purchased four 2 meter radios in the 1
> 1/2 years that I have had my license. None of them worked as advertised.
> I thought here we go again on HF.
>
> 73
> Greg
> KC9VVU
>
>
> In a message dated 6/26/2013 11:21:14 A.M. Eastern Daylight Time,
> k8jd@... writes:
>
>
>
>
>
>
>
> 70W on 10M CW is about what I would expect.
> Were you saying "Ahhhhhhh" into the mic when you were measuring SSB output?
> Keying with no voice input on SSB = Zero Watts ! A long "Ahhhhh" will
> show about 1/4 the Carrier wattage you get on CW. Maybe 20 W at BEST on an
> average meter.
>
> The 520 is designed to select the CW filter when rthwe mode switch is on
> CW and the SSB filter on USB or LSB modes. The mode switch has the wiring to

> do this automaticly.
>
> _____
> From: geagent21 <_GEAgent21@..._ (mailto:GEAgent21@...) >
> To: _TS-520_820_530_830@yahoogroups.com_
> (mailto:TS-520_820_530_830@yahoogroups.com)
> Sent: Wednesday, June 26, 2013 11:11 AM
> Subject: [TS-520_820_530_830] TS-520 Low Power
>
> . Tried out my TS-520
>
> tonight. Receives very well. Did the tune up in prep to transmit. Checked
> power output and external meter shows 70 watts on CW but on USB it bounces
> up to
> 10 watts and drops back to 0. If I hold the mic key down it will cycle up
> and
> down but no higher than 10 watts.
> Any ideas?
>
> I also pulled the cover off the other day to see what filters were
> installed. It
> has both the SW and the SSB filters but I see no way to switch off and on.
> What
> should I be looking for?
> 73
> Greg
> KC9VVU
>
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43120. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 20:40:13 UTC
From: Don
Topic: 43023 Message: 43120

Mike
I disconnected the other receiver from the antenna line and i could hear
myself ok
I did the test that Dave said to do and it all checks out ok
I have the Mc50 mic on it and there is no output at all with the mic
gain up full on my power meter.
Seems like there is no mic gain at all???

73
Don/Ve2ud

Check the Audio board connector 7 pin 3 and 5 should have voltage on both, Also check PLL board connector 8 pin 1, should have 9V, if no 9v then your not getting 8.830Mhz on IF board. How is your receive over all?

73's

Dave

VK5PDL

On 26/06/2013 10:21 AM, W5RKL wrote:
>
> Don,
>
> You said output is fine on all bands in CW. That tells me the PLL system
> in CW is working.
>
> You also said you can hear yourself fine with MONI turned ON. That also
> indicates the speech amp on the AF board is working. If you were to hear
> garble with MONI turned ON then there would be a problem either in the
> microphone or the AF board's speech amp but that doesn't appear to be
> the case.
>
> Is the display showing the transmit and receive frequency in USB and LSB
> during transmit? If it is then the PLL system appears to be working in
> both USB and LSB modes.
>
> You said you hear "garble" in USB and LSB. How are you determining this,
> by using a separate receiver? If so have you disconnected the antenna
> cable at the separate receiver? If not then do that then test again.
>
> Has this been an on going problem or did it occur when you changed
> microphones? Do you have another microphone? If so try it with the 830.
> The 830 has a wide microphone impedance range, 500 ohms to 50K ohms so
> you can use different microphones.

>
> Have you checked the MC-50 for a broken wire or bad switch?
>
> These are all priliminary test so do the simple stuff first.
>
> 73
> Mike W5RKL
>
> On 6/26/2013 6:49 AM, Don wrote:
> >
> >
> > Thanks for the reply Mike
> > Were should i start,as per no audio out on sideband
> >
> > 73
> > Don/Ve2ud
> >
> > On 25/06/2013 10:20 PM, w5rkl wrote:
> > >
> > >
> > > The 800Hz change in CW is normal.
> > >
> > > 73
> > > Mike
> > > W5RKL
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Don D" <ve2ud@...>
> > wrote:
> > > >
> > > >
> > > > Well my last step was to put a microphone on the ebay special and
> > > try it out.
> > > > Output is fine on all bands on cw
> > > > When i transmitted on either side band all i got was garble.
> > > > I could see output on my power meter,but no audio was heard,just
> > > weird sounds.
> > > > I can hear myself fine on the monitor position.
> > > > The microphone i used was a old tuner mic with a preamp
> > > > I had to crank up the preamp high to get output
> > > > My mc50 would not work at all.
> > > >
> > > > On cw it is fine except jumps up in frequency by 800 Hz on transmit.
> > > >
> > > > Don/Ve2ud
> > > >
> > >
> > >

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43121. Re: For Terry: audio level measurements on TP2

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 20:40:18 UTC
From: Terry Wagoner
Topic: 43097 Message: 43121

Remc:

I forgot to ask what you mean about "clipping or compression" with the Processor off. There is no AF or RF clipping or compression with the Processor off other than the ALC action and the ALC time constant in SSB mode. ALC does serves as a rudimentary form of compression, but not its primary purpose. That is why Kenwood included a true RF processor in the rig.

Are you loading the rig in CW mode normally into a dummy load then switching to SSB mode and injecting audio into the mic line from your test oscillator and watching the RF power output on your wattmeter and slowly increasing the gain of the test oscillator until you see no more increase in RF output and calling that point clipping or compression? At the same time you are measuring TP-2 and trying to get that signal level to use to match with the Processor on?

If so, what is the ALC meter doing when you do this procedure? How far do you increase the mic gain and to what ALC meter indication when you see no more RF output on the wattmeter?

If this is what you are doing of course would never run the rig like this.

The way ALC works to prevent overdrive and splatter is as follows:
1. The minute the positive going peak of the RF drive envelope exceeds the negative dc operating bias level on the 6146 control grids grid current starts to flow in the FG lead back to the -C supply return. In SSB this grid current is at an audio rate.

2. At the moment that grid current flows the AGC amp turns on and pulls the ALC bus voltage down reducing the dc control voltage to the TIF amplifier mosfet on the IF board. When the TIF amplifier output is reduced the RF drive to the Driver tube is reduced and the RF drive to the 6146 finals is reduced. The maximum grid current that can flow is limited to approx 40 ua.

3. With the ALC level at approx 1/2 of the black box you will have something on the order of 30 ua grid current and when it reads at far right end of ALC black box range approx 42ua grid current. Any further ALC indication and will be no increase in grid current.

So in theory if you do not talk the rig up beyond the end of the ALC range black box you can not overdrive the rig. You would need a spectrum analyzer to confirm that. I never talk rig up to that point. On the TS-830 you have a separate ALC meter circuit that can be calibrated using 10 mv audio input for the max ALC indication. I talk my 830s and 820s up so I can see some ALC action and nothing more on the Mic gain pot. As I said my guess is that is going to result in something on the order of approx 50mv to 75mv rms audio signal at TP-2.

I am assuming some things about your test procedure and not sure what you are trying to measure and I guess match with the Processor on.

If I am off base I am sure you can correct me.

Terry K9TW

-

43122. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 21:05:11 UTC
From: Terry Wagoner
Topic: 43023 Message: 43122

Hi Don:

Mike is pretty busy and I am drowning! Real quickly are you saying you have good Rf output in CW mode, but no output in SSB mode? Also do you have good audio with the Moni function using the MC-50 mic? In both LSB and USB?

If good Moni audio then you have modulated output at the output of the Q29 TIF amp. It means the mic pre-amp and mic amp circuit is working, the balanced modulator is working. What you do not know is if the TIF signal is leaving the IF board and arriving at the TX mixer on RF board. It should if it does it in CW mode. Should not be a molex connector problem.

Need an O-scope to measure TIF signal at the RF board Conn 7. It is low level. In CW mode approx 35mv to 40 mv P-P. I would probably take a quick look there. If you have TIF signal and no RF output need to see if you have output from TX Mixer and so on until you find where losing RF drive at. In other words need to run TX Level Diagram from TIF to 6146 control grid.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Mike
> I disconnected the other receiver from the antenna line and i could hear
> myself ok
> I did the test that Dave said to do and it all checks out ok
> I have the Mc50 mic on it and there is no output at all with the mic
> gain up full on my power meter.
> Seems like there is no mic gain at all???
>
> 73
> Don/Ve2ud
>
>
> Check the Audio board connector 7 pin 3 and 5 should have voltage on both, Also check PLL board connector 8 pin 1, should have 9V, if no 9v then your not getting 8.830Mhz on IF board. How is your receive over all?
>
>
>
> 73's
>
> Dave
>
> VK5PDL
>

>
>
>
> On 26/06/2013 10:21 AM, W5RKL wrote:
> >
> > Don,
> >
> > You said output is fine on all bands in CW. That tells me the PLL system
> > in CW is working.
> >
> > You also said you can hear yourself fine with MONI turned ON. That also
> > indicates the speech amp on the AF board is working. If you were to hear
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> > the case.
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> > Is the display showing the transmit and receive frequency in USB and LSB
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> > The 830 has a wide microphone impedance range, 500 ohms to 50K ohms so
> > you can use different microphones.
> >
> > Have you checked the MC-50 for a broken wire or bad switch?
> >
> > These are all priliminary test so do the simple stuff first.
> >
> > 73
> > Mike W5RKL
> >
> > On 6/26/2013 6:49 AM, Don wrote:
> > >
> > >
> > > Thanks for the reply Mike
> > > Were should i start,as per no audio out on sideband
> > >
> > > 73
> > > Don/Ve2ud
> > >
> > > On 25/06/2013 10:20 PM, w5rkl wrote:
> > > >
> > > >
> > > > The 800Hz change in CW is normal.
> > > >

> > > > 73
> > > > Mike
> > > > W5RKL
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
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43123. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 21:12:00 UTC
From: Don
Topic: 43023 Message: 43123

Terry
Yes i see you are very busy
Thanks,i will print this out and see if i can get sum measurements

Don/Ve2ud

On 26/06/2013 5:05 PM, Terry Wagoner wrote:
>
> Hi Don:
>
> Mike is pretty busy and I am drowning! Real quickly are you saying you
> have good Rf output in CW mode, but no output in SSB mode? Also do you
> have good audio with the Moni function using the MC-50 mic? In both
> LSB and USB? Yes
>
> If good Moni audio then you have modulated output at the output of the
> Q29 TIF amp. It means the mic pre-amp and mic amp circuit is working,
> the balanced modulator is working. What you do not know is if the TIF
> signal is leaving the IF board and arriving at the TX mixer on RF
> board. It should if it does it in CW mode. Should not be a molex
> connector problem.
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> Need an O-scope to measure TIF signal at the RF board Conn 7. It is
> low level. In CW mode approx 35mv to 40 mv P-P. I would probably take
> a quick look there. If you have TIF signal and no RF output need to
> see if you have output from TX Mixer and so on until you find where
> losing RF drive at. In other words need to run TX Level Diagram from
> TIF to 6146 control grid.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> > Mike
> > I disconnected the other receiver from the antenna line and i could
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> > I did the test that Dave said to do and it all checks out ok
> > I have the Mc50 mic on it and there is no output at all with the mic
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> > 73
> > Don/Ve2ud

> >
> >
> > Check the Audio board connector 7 pin 3 and 5 should have voltage on
> both, Also check PLL board connector 8 pin 1, should have 9V, if no 9v
> then your not getting 8.830Mhz on IF board. How is your receive over all?
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> >
> >
> > 73's
> >
> > Dave
> >
> > VK5PDL
> >
> >
> >
> >
> > On 26/06/2013 10:21 AM, W5RKL wrote:
> > >
> > > Don,
> > >
> > > You said output is fine on all bands in CW. That tells me the PLL
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43124. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 22:11:28 UTC
From: Terry Wagoner
Topic: 43023 Message: 43124

OK

I will think about it some more. Good output in CW mode, good MONI in LSB/USB, but no RF output in LSB/USB.

Tired now and my rigs are all bluring together.

Did you check the mercury vapor rectifiers!

I know that isnt funny. If I think of something will get back to you.

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Terry
> Yes i see you are very busy
> Thanks,i will print this out and see if i can get sum measurements
>
> Don/Ve2ud
>
>
>
>
> On 26/06/2013 5:05 PM, Terry Wagoner wrote:
> >
> > Hi Don:
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> > Mike is pretty busy and I am drowning! Real quickly are you saying you
> > have good Rf output in CW mode, but no output in SSB mode? Also do you
> > have good audio with the Moni function using the MC-50 mic? In both
> > LSB and USB? Yes
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> > If good Moni audio then you have modulated output at the output of the
> > Q29 TIF amp. It means the mic pre-amp and mic amp circuit is working,
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> > signal is leaving the IF board and arriving at the TX mixer on RF
> > board. It should if it does it in CW mode. Should not be a molex
> > connector problem.
> >
> > Need an O-scope to measure TIF signal at the RF board Conn 7. It is
> > low level. In CW mode approx 35mv to 40 mv P-P. I would probably take
> > a quick look there. If you have TIF signal and no RF output need to
> > see if you have output from TX Mixer and so on until you find where
> > losing RF drive at. In other words need to run TX Level Diagram from
> > TIF to 6146 control grid.
> >
> > Terry K9TW

> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > >
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> > > I disconnected the other receiver from the antenna line and i could
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> > > I have the Mc50 mic on it and there is no output at all with the mic
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> > > Seems like there is no mic gain at all???
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> > > 73
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> > > On 26/06/2013 10:21 AM, W5RKL wrote:
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> > > > Don,
> > > >
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43125. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 22:29:13 UTC
From: Don
Topic: 43023 Message: 43125

mercury vapor rectifiers,check them did not never know it had them lol
Hope you are not pulling my chain hi hi
Don

On 26/06/2013 6:11 PM, Terry Wagoner wrote:
>
> OK
>
> I will think about it some more. Good output in CW mode, good MONI in
> LSB/USB, but no RF output in LSB/USB.
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> Tired now and my rigs are all bluring together.
>
> Did you check the mercury vapor rectifiers!
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> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
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> > > --- In TS-520_820_530_830@yahoogroups.com
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43127. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 22:50:55 UTC
From: Don
Topic: 43023 Message: 43127

Terry
Nice to see you have a sense of humor too

I did put in the 1.8 ssb filter,but that should not bother it.
The tubes are not matched,but that should not bother it.
Maybe i have inhaled too much lead from soldering?

Don

On 26/06/2013 6:29 PM, Don wrote:
>
> mercury vapor rectifiers,check them did not never know it had them lol
> Hope you are not pulling my chain hi hi
> Don
>
> On 26/06/2013 6:11 PM, Terry Wagoner wrote:
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> >
> > I will think about it some more. Good output in CW mode, good MONI in
> > LSB/USB, but no RF output in LSB/USB.
> >
> > Tired now and my rigs are all bluring together.
> >
> > Did you check the mercury vapor rectifiers!
> >
> > I know that isnt funny. If I think of something will get back to you.
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> > >
> > > Terry
> > > Yes i see you are very busy
> > > Thanks,i will print this out and see if i can get sum measurements
> > >
> > > Don/Ve2ud
> > >
> > >
> > >
> > >
> > > On 26/06/2013 5:05 PM, Terry Wagoner wrote:
> > > >
> > > > Hi Don:
> > > >
> > > > Mike is pretty busy and I am drowning! Real quickly are you saying

> > you
> > > > have good Rf output in CW mode, but no output in SSB mode? Also do
> > you
> > > > have good audio with the Moni function using the MC-50 mic? In both
> > > > LSB and USB? Yes
> > > >
> > > > If good Moni audio then you have modulated output at the output of
> > the
> > > > Q29 TIF amp. It means the mic pre-amp and mic amp circuit is
> working,
> > > > the balanced modulator is working. What you do not know is if
> the TIF
> > > > signal is leaving the IF board and arriving at the TX mixer on RF
> > > > board. It should if it does it in CW mode. Should not be a molex
> > > > connector problem.
> > > >
> > > > Need an O-scope to measure TIF signal at the RF board Conn 7. It is
> > > > low level. In CW mode approx 35mv to 40 mv P-P. I would probably
> take
> > > > a quick look there. If you have TIF signal and no RF output need to
> > > > see if you have output from TX Mixer and so on until you find where
> > > > losing RF drive at. In other words need to run TX Level Diagram from
> > > > TIF to 6146 control grid.
> > > >
> > > > Terry K9TW
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > > > >
> > > > > Mike
> > > > > I disconnected the other receiver from the antenna line and i
> could
> > > > hear
> > > > > myself ok
> > > > > I did the test that Dave said to do and it all checks out ok
> > > > > I have the Mc50 mic on it and there is no output at all with
> the mic
> > > > > gain up full on my power meter.
> > > > > Seems like there is no mic gain at all???
> > > > >
> > > > > 73
> > > > > Don/Ve2ud
> > > > >
> > > > >
> > > > > Check the Audio board connector 7 pin 3 and 5 should have
> > voltage on
> > > > both, Also check PLL board connector 8 pin 1, should have 9V, if
> > no 9v

> > > > then your not getting 8.830Mhz on IF board. How is your receive
> > over all?
> > > > > >
> > > > > >
> > > > > >
> > > > > > 73's
> > > > > >
> > > > > > Dave
> > > > > >
> > > > > > VK5PDL
> > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > > On 26/06/2013 10:21 AM, W5RKL wrote:
> > > > > > >
> > > > > > > Don,
> > > > > > >
> > > > > > > You said output is fine on all bands in CW. That tells me
> the PLL
> > > > system
> > > > > > > in CW is working.
> > > > > > >
> > > > > > > You also said you can hear yourself fine with MONI turned ON.
> > That
> > > > also
> > > > > > > indicates the speech amp on the AF board is working. If you were
> > > > to hear
> > > > > > > garble with MONI turned ON then there would be a problem
> > either in the
> > > > > > > microphone or the AF board's speech amp but that doesn't
> > appear to be
> > > > > > > the case.
> > > > > > >
> > > > > > > Is the display showing the transmit and receive frequency in USB
> > > > and LSB
> > > > > > > during transmit? If it is then the PLL system appears to be
> > working in
> > > > > > > both USB and LSB modes.
> > > > > > >
> > > > > > > You said you hear "garble" in USB and LSB. How are you
> > determining
> > > > this,
> > > > > > > by using a separate receiver? If so have you disconnected the
> > antenna
> > > > > > > cable at the separate receiver? If not then do that then test
> > again.
> > > > > > >
> > > > > > > Has this been an on going problem or did it occur when you
> changed

> > > > > > microphones? Do you have another microphone? If so try it with
> > the
> > > > > 830.
> > > > > > > The 830 has a wide microphone impedance range, 500 ohms to 50K
> > ohms so
> > > > > > > you can use different microphones.
> > > > > > >
> > > > > > > Have you checked the MC-50 for a broken wire or bad switch?
> > > > > > >
> > > > > > > These are all priliminary test so do the simple stuff first.
> > > > > > >
> > > > > > > 73
> > > > > > > Mike W5RKL
> > > > > > >
> > > > > > > On 6/26/2013 6:49 AM, Don wrote:
> > > > > > > >
> > > > > > > >
> > > > > > > > Thanks for the reply Mike
> > > > > > > > Were should i start,as per no audio out on sideband
> > > > > > > >
> > > > > > > > 73
> > > > > > > > Don/Ve2ud
> > > > > > > >
> > > > > > > > On 25/06/2013 10:20 PM, w5rkl wrote:
> > > > > > > > >
> > > > > > > > >
> > > > > > > > The 800Hz change in CW is normal.
> > > > > > > > >
> > > > > > > > 73
> > > > > > > > Mike
> > > > > > > > W5RKL
> > > > > > > > >
> > > > > > > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Don D"
> > > <ve2ud@>
> > > > > > > wrote:
> > > > > > > >
> > > > > > > >
> > > > > > > > Well my last step was to put a microphone on the ebay
> > > > special and
> > > > > > > > try it out.
> > > > > > > > Output is fine on all bands on cw
> > > > > > > > When i transmitted on either side band all i got was
> > garble.
> > > > > > > > I could see output on my power meter,but no audio was

> > heard,just
> > > > > > > > > weird sounds.
> > > > > > > > > > I can hear myself fine on the monitor position.
> > > > > > > > > > The microphone i used was a old tuner mic with a preamp
> > > > > > > > > > I had to crank up the preamp high to get output
> > > > > > > > > > My mc50 would not work at all.
> > > > > > > > > >
> > > > > > > > > > On cw it is fine except jumps up in frequency by 800 Hz on
> > > > transmit.
> > > > > > > > > > >
> > > > > > > > > > Don/Ve2ud
> > > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
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> > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > [Non-text portions of this message have been removed]
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> > > [Non-text portions of this message have been removed]
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43128. Re: [TS-520_820_530_830] Unsubscribe

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 22:56:05 UTC
From: David King
Topic: 43126 Message: 43128

You have to do it for yourself.

Go to the very bottom of any email from the group and you'll see a link
to "unsubscribe"

WY7DK

On 6/26/2013 3:53 PM, Howard wrote:
>
> Please remove me from this mailing. Thank you. W6AIL
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

43129. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-26 23:13:37 UTC
From: Don
Topic: 43023 Message: 43129

Update
I just checked into a net and they heard me,but i had to put the
processor on full to be heard.
turning the processor down or off they could not hear me at all

73
Don/Ve2ud

On 26/06/2013 6:50 PM, Don wrote:
>
> Terry
> Nice to see you have a sense of humor too
>
> I did put in the 1.8 ssb filter,but that should not bother it.
> The tubes are not matched,but that should not bother it.
> Maybe i have inhaled too much lead from soldering?
>
> Don
>
> On 26/06/2013 6:29 PM, Don wrote:
> >
> > mercury vapor rectifiers,check them did not never know it had them lol
> > Hope you are not pulling my chain hi hi
> > Don
> >
> > On 26/06/2013 6:11 PM, Terry Wagoner wrote:
> > >
> > > OK
> > >
> > > I will think about it some more. Good output in CW mode, good MONI in
> > > LSB/USB, but no RF output in LSB/USB.
> > >
> > > Tired now and my rigs are all bluring together.
> > >
> > > Did you check the mercury vapor rectifiers!
> > >
> > > I know that isnt funny. If I think of something will get back to you.
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> > > >
> > > > Terry
> > > > Yes i see you are very busy

> > > > Thanks,i will print this out and see if i can get sum measurements
> > > >
> > > > Don/Ve2ud
> > > >
> > > >
> > > >
> > > >
> > > > On 26/06/2013 5:05 PM, Terry Wagoner wrote:
> > > > >
> > > > > Hi Don:
> > > > >
> > > > > Mike is pretty busy and I am drowning! Real quickly are you saying
> > > you
> > > > > have good Rf output in CW mode, but no output in SSB mode? Also do
> > > you
> > > > > have good audio with the Moni function using the MC-50 mic? In
> both
> > > > > LSB and USB? Yes
> > > > >
> > > > > If good Moni audio then you have modulated output at the output of
> > > the
> > > > > Q29 TIF amp. It means the mic pre-amp and mic amp circuit is
> > working,
> > > > > the balanced modulator is working. What you do not know is if
> > the TIF
> > > > > signal is leaving the IF board and arriving at the TX mixer on RF
> > > > > board. It should if it does it in CW mode. Should not be a molex
> > > > > connector problem.
> > > > >
> > > > > Need an O-scope to measure TIF signal at the RF board Conn 7.
> It is
> > > > > low level. In CW mode approx 35mv to 40 mv P-P. I would probably
> > take
> > > > > a quick look there. If you have TIF signal and no RF output
> need to
> > > > > see if you have output from TX Mixer and so on until you find
> where
> > > > > losing RF drive at. In other words need to run TX Level
> Diagram from
> > > > > TIF to 6146 control grid.
> > > > >
> > > > > Terry K9TW
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > > > >
> > > > > Mike

> > > > > > I disconnected the other receiver from the antenna line and i
> > could
> > > > > > hear
> > > > > > > myself ok
> > > > > > > I did the test that Dave said to do and it all checks out ok
> > > > > > > I have the Mc50 mic on it and there is no output at all with
> > the mic
> > > > > > > gain up full on my power meter.
> > > > > > > Seems like there is no mic gain at all???
> > > > > > >
> > > > > > > 73
> > > > > > > Don/Ve2ud
> > > > > > >
> > > > > > >
> > > > > > > Check the Audio board connector 7 pin 3 and 5 should have
> > > voltage on
> > > > > > > both, Also check PLL board connector 8 pin 1, should have 9V, if
> > > no 9v
> > > > > > > then your not getting 8.830Mhz on IF board. How is your receive
> > > over all?
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > > 73's
> > > > > > >
> > > > > > > Dave
> > > > > > >
> > > > > > > VK5PDL
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > > On 26/06/2013 10:21 AM, W5RKL wrote:
> > > > > > >
> > > > > > > Don,
> > > > > > >
> > > > > > > You said output is fine on all bands in CW. That tells me
> > the PLL
> > > > > > system
> > > > > > > > in CW is working.
> > > > > > >
> > > > > > > You also said you can hear yourself fine with MONI turned ON.
> > > That
> > > > > > also
> > > > > > > > indicates the speech amp on the AF board is working. If
> you were
> > > > > > to hear
> > > > > > > > garble with MONI turned ON then there would be a problem
> > > either in the
> > > > > > > > microphone or the AF board's speech amp but that doesn't

> > > appear to be
> > > > > > > the case.
> > > > > > > >
> > > > > > > > Is the display showing the transmit and receive frequency
> in USB
> > > > > and LSB
> > > > > > > during transmit? If it is then the PLL system appears to be
> > > working in
> > > > > > > both USB and LSB modes.
> > > > > > > >
> > > > > > > You said you hear "garble" in USB and LSB. How are you
> > > determining
> > > > > this,
> > > > > > > by using a separate receiver? If so have you disconnected the
> > > antenna
> > > > > > > cable at the separate receiver? If not then do that then test
> > > again.
> > > > > > > >
> > > > > > > Has this been an on going problem or did it occur when you
> > changed
> > > > > > > microphones? Do you have another microphone? If so try it with
> > > the
> > > > > > 830.
> > > > > > > The 830 has a wide microphone impedance range, 500 ohms to 50K
> > > ohms so
> > > > > > > you can use different microphones.
> > > > > > > >
> > > > > > > Have you checked the MC-50 for a broken wire or bad switch?
> > > > > > > >
> > > > > > > These are all priliminary test so do the simple stuff first.
> > > > > > > >
> > > > > > > 73
> > > > > > > Mike W5RKL
> > > > > > > >
> > > > > > > On 6/26/2013 6:49 AM, Don wrote:
> > > > > > > > >
> > > > > > > > >
> > > > > > > Thanks for the reply Mike
> > > > > > > Were should i start,as per no audio out on sideband
> > > > > > > > >
> > > > > > > 73
> > > > > > > Don/Ve2ud
> > > > > > > > >
> > > > > > > On 25/06/2013 10:20 PM, w5rkl wrote:
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > The 800Hz change in CW is normal.
> > > > > > > > > >
> > > > > > > 73
> > > > > > > Mike

> > > > > > > > > W5RKL
> > > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Don D"
> > > <ve2ud@>
> > > > > > > > wrote:
> > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > > Well my last step was to put a microphone on the ebay
> > > > > special and
> > > > > > > > > > > > try it out.
> > > > > > > > > > > > > Output is fine on all bands on cw
> > > > > > > > > > > > > When i transmitted on either side band all i got was
> > garble.
> > > > > > > > > > > > > I could see output on my power meter,but no audio was
> > > heard,just
> > > > > > > > > > > weird sounds.
> > > > > > > > > > > > > I can hear myself fine on the monitor position.
> > > > > > > > > > > > > The microphone i used was a old tuner mic with a preamp
> > > > > > > > > > > > > I had to crank up the preamp high to get output
> > > > > > > > > > > > > My mc50 would not work at all.
> > > > > > > > > > > > >
> > > > > > > > > > > > > On cw it is fine except jumps up in frequency by 800
> Hz on
> > > > > > transmit.
> > > > > > > > > > > > >
> > > > > > > > > > > > > Don/Ve2ud
> > > > > > > > > > > > >
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43130. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-27 00:08:23 UTC
From: Jim S
Topic: 43023 Message: 43130

No, too much mercury, from mercury vapor rectifiers. Nasty things ! ! !

Jim AG3Y

On 6/26/2013 6:50 PM, Don wrote:
>
> Terry
> Nice to see you have a sense of humor too
>
> I did put in the 1.8 ssb filter,but that should not bother it.
> The tubes are not matched,but that should not bother it.
> Maybe i have inhaled too much lead from soldering?
>
> Don
>
> On 26/06/2013 6:29 PM, Don wrote:
> >
> > mercury vapor rectifiers,check them did not never know it had them lol
> > Hope you are not pulling my chain hi hi
> > Don
> >
> >
>

[Non-text portions of this message have been removed]

43131. Success!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-27 00:46:30 UTC
From: Craig Roberts
Topic: 43023 Message: 43131

I tacked the 830S's rectifier board for a few minutes this evening with regard to my low, essentially non-existent power output in the TUNE position. Terry nailed it. R15 was open. So, I changed it and R16 while cleaning up a couple of cracked solder joints and desoldering and resoldering the relay, which had not been seated properly.

Bottom line : TUNE now works just as it should with an indicated 15-20 watts out and enough meter deflection to facilitate tuning.

Thanks, Terry.

The only real glitch left is the lack of output on 160 meters. Of course I have never been on 160 meters in my entire ham career, so it's of no real consequence, but it would still be nice to fix the problem.

73,
Craig
W3CRR

43132. Re: [TS-520_820_530_830] Re: TS-520 Low Power

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-27 01:04:51 UTC
From: GEAgent21@...
Topic: 43104 Message: 43132

Robert, John, Dale & Scott
Thanks for the replies. I have a Watt meter. multimeter, frequency counter and dummy load. The real problem is I forgot that SSB has a suppressed carrier. DUH. I am also a little gun shy after buying so many inoperative radios.
Thanks again

73
Greg
KC9VVU

In a message dated 6/26/2013 12:03:23 P.M. Eastern Daylight Time, scottandalene@... writes:

I concur with John and Dale. Make sure your mic gain is adjusted properly and speak into the mic. You should see the meter move up and back down to near zero. Set the meter switch for ALC and when speaking into the mic adjust the mic gain control but do not exceed the max line on ALC on your voice peaks. Do you have a dummy load? If not you should get one, as you can then check it out and not worry about your antenna set-up. As others said 70 watts CW on 10 meters is about right.

Scott, N6CIC

--- In _TS-520_820_530_830@yahoogroups.com_ (mailto:TS-520_820_530_830@yahoogroups.com) , John Davidson <k8jd@...> wrote:
>
>
>
> 70W on 10M CW is about what I would expect.
> Were you saying "Ahhhhhhh" into the mic when you were measuring SSB output?
> Keying with no voice input on SSB = Zero Watts ! Â A long "Ahhhhh" will show about 1/4 the Carrier wattage you get on CW. Maybe 20 W at BEST on an average meter.
>
> The 520 is designed to select the CW filter when rthwe mode switch is on CW and the SSB filter on USB or LSB modes. The mode switch has the wiring to do this automaticly.
>
> _____
> From: geagent21 <GEAgent21@...>
> To: _TS-520_820_530_830@yahoogroups.com_ (mailto:TS-520_820_530_830@yahoogroups.com)
> Sent: Wednesday, June 26, 2013 11:11 AM
> Subject: [TS-520_820_530_830] TS-520 Low Power

>
> . Tried out my TS-520
>
> tonight. Receives very well. Did the tune up in prep to transmit. Checked
> power output and external meter shows 70 watts on CW but on USB it
bounces up to
> 10 watts and drops back to 0. If I hold the mic key down it will cycle
up and
> down but no higher than 10 watts.
> Any ideas?
>
> I also pulled the cover off the other day to see what filters were
installed. It
> has both the SW and the SSB filters but I see no way to switch off and
on. What
> should I be looking for?
> 73
> Greg
> KC9VVU
>
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

43133. World's least alluring eBay hybrid ad

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-27 08:20:01 UTC
From: adrian.langford@ymail.com
Topic: 43133 Message: 43133

Well at least the guy is honest!

Kenwood TS830S For Spares, or Repair.YK-88S1 SSB Filter.tubes ok,Service,Instruction Manual`s.Faults..Band Switch goes around and around.No sound,pointer dail broke in half from plate load.no light,two side screws missing.comes with mic,jones power lead.this is a lovely rig when working..better than my Yaesu FT-990.Needs new feet.apart from that just need loads of TLC.PS Collection Only..Sorry.ONLY the Meter light has gone.PS if you live local and can help me with with a repair for this i would be most greatful....PS The Vfo sticks sometimes..

43134. Re: For Terry: audio level measurements on TP2

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-27 09:09:37 UTC
From: hfdxer@ymail.com
Topic: 43097 Message: 43134

Hi Terry,

OK

Remco

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:

< snip >

>
> That is enough for this installment. We can try to take this in more bite size pieces and perhaps take off the list so we don't bore the non-820 owners?
>
> Terry K9TW

43135. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-27 13:47:38 UTC
From: Terry Wagoner
Topic: 43023 Message: 43135

Don:

Did rig have good LSB/USB output before changing to the narrow filter?

Did you install it in the original XF-1 position?

Terry K9TW

43136. Re: Success!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-27 14:00:17 UTC
From: Terry Wagoner
Topic: 43023 Message: 43136

Craig:

Unusual for the 160 meter bandswitch position to be bad as you note less commonly used by most owners.

Did you try adjusting L13 and L23? Someone may have cranked them to extreme ends of travel.

Also did you check VCO signal level at TP-3 on 160? Need about 1v rms. If missing check TP-1 on PLL board and adjust T2 for 4.0vdc. See service manual Step 9.

Terry
K9TW

--- In TS-520_820_530_830@yahoogroups.com, Craig Roberts <crgrbrts@...> wrote:
>
> I tacked the 830S's rectifier board for a few minutes this evening with
> regard to my low, essentially non-existent power output in the TUNE
> position. Terry nailed it. R15 was open. So, I changed it and R16
> while cleaning up a couple of cracked solder joints and desoldering and
> resoldering the relay, which had not been seated properly.
>
> Bottom line : TUNE now works just as it should with an indicated 15-20
> watts out and enough meter deflection to facilitate tuning.
>
> Thanks, Terry.
>
> The only real glitch left is the lack of output on 160 meters. Of
> course I have never been on 160 meters in my entire ham career, so it's
> of no real consequence, but it would still be nice to fix the problem.
>
> 73,
> Craig
> W3CRR
>

43137. Re: TS-520 Low Power

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-27 11:00:30 UTC
From: Terry Wagoner
Topic: 43104 Message: 43137

Greg:

I appreciate your concern and buying hybrids off ebay or hamfest is a crap shoot. Even buying from local buyer where you can see it demonstrated is no guarantee especially if you have no experience operating a hybrid.

I note with interest that you posted on another forum the same question. I submit that the answers you got there are worthless.

1."70 watts is normal"--NO IT IS NOT. It isnt horrible but not normal. Could be weak driver tube and/or weak finals. Could be rig just needs good alignment. With more experience you can read the Sect 6 alignment section of your Operating manual and do a good coil pack and IFT alignment and improve both the TX and RX performance. No reason you cannot get approx 80 to 85 watts output from a TS-520 with good tubes.

2."You should get same power out on SSB as you do CW. I own 4 other rigs including 3 Heathkits and they all do" (or some such nonsense)----This is why our ham bands sound like they do as you tune across the SSB portion of the bands and listen to the splatter. Sad.

3."You need new capacitors. Your plate voltage should be around 600 volts"---WRONG. Plate voltage is 800vdc plus keydown. It is common to loose one of the two filter caps which would then result in 1/2 plate voltage or approx 400vdc at tube anode and approx 1/2 RF power output.
You can check this with the HV position of your panel meter. It is not what you are seeing with your TS-520.

4."You need to open up the rig and adjust the ALC"--WRONG. There is no ALC adjustment beyond setting the normal reference level (RF-1) for the ALC bus voltage.

I understand why you would make multiple post regards this problem and you are certainly free to do so to get as much info on your problem as you can, but there is a reason why this forum was created. The challenge is like all Google research you have to be able to sort the good from the just blame bum dope info.

Would you take your Cadillac to the Ford dealership for repair? You could but I would prefer factory trained mechanics, factory service bulletins, and model specific experience.

In summary, if you are loading your rig into 50 ohm dummy load to approx 200ma Ip (plate current) you will be at the 160 watt dc input power rating. At that level you should see approx 90 watts to 95 watts output on all bands with exception of 10 meters where 80 to 85 watts is possible with a well tuned TS520 with good tubes. At this point 70 watts output on 10 meters is nothing to worry about. Getting rig in good state of tune is something you can address with more experience. Just read the circuit descriptions and study block diagram and when you are ready to perform Sect 6 alignments come back if you get stuck. You will also want to do a good internal inspection and we can help you with what to look for and how to do it safely.

As you have been told here in SSB mode you should speak normally into the mic and bring your mic gain up until you see the ALC meter begin to kick up. Your manual tells you to increase mic gain until your ALC peaks are at the max of the rectangular black box. They do this to get little bit of compression. OK to run there, but I would back it down to stay in the middle of the box for less chance of distortion.

At this level of Mic gain your average reading wattmeter will then see peaks from 25% to 33% of your keydown CW power level. So 20 watts to 30 watt max peaks in SSB mode is normal. Your Ip meter will show similar low level Ma peaks.

Again not scolding because you made multiple post on other sites. Just be very careful with the answers you get from these folks. When someone on one of these other sites tells you " I dont own a Kenwood, but my Yaesu XYZ acts like this" or "I owned a TS520 30 years ago and it acted like this" I hate these kind of responses and I suggest you hit the delete key.

I hope with time you will come to realize what a great resource you have on this site and you will come to trust the counsel you get here.
I make mistakes and give wrong info here, but there is a pretty high probability that another member will catch me and correct it. I am member of other sites and I feel strongly this is one of the better radio specific groups there is.

Terry K9TW

43138. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-27 14:49:30 UTC
From: Terry Wagoner
Topic: 43023 Message: 43138

What Dave is talking about is a very low probability fault, but probably merits sharing with all.

Dave experienced only momentary pulse of RF output power due to intermittent pulses of TIF output from the IF board.

We verified that he had signal up to the Xtal filter switching diodes.

We measured the diode switching matrix and verified we had the 8.4vdc to 9vdc voltage present to forward bias the diodes when the Aux relay was keyed. (first thought was bad aux relay contact)

We took a .01 cap and bridged the filter and had TIF output and RF output. Not pretty due to no filter but output none the less.

So our conclusion was we had one or more of the following:
1. Bad Xtal filter or bad solder connections at the filter pins
2. Bad input and/or output filter switching diodes
3. Bad solder connections at the filter switching diodes

What Dave discovered is that he had a very high resistance path in the 9vdc filter switching diode supply. This voltage was there at the filter diodes, but had no current carrying capacity not even 10ma diode forward current capability. We were measuring the voltage with a high Z meter and the meter did not load the 9vdc supply as you would not want it to do for accurate measurement. Here is a case where a old $9.95 analog VOM might have revealed the problem?

The lesson learned is we should have applied 9vdc from a bench supply or 9vdc transistor radio battery in parallel with the rig supply at the filter diode matrix. This would have turned the diodes on and passed signal thru the filter on to the TIF output.

I simply never thought to suggest Dave substitute the 9vdc filter switching supply voltage. Should I ever experience a similar fault condition before I pull the IF board and replace diodes and/or Xtal filters I will remember this radio. You never forget the ones that fool you.

Kudos to Dave for finding the 9vdc fault.

Terry
K9TW

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
> Don,
>
>
>
> I just went through this same problem a month or so ago, and both Terry and myself got

fooled a little when I swapped the IF board out and the fault went away. But the original board when re-installed gave the same fault. The problem wasn't the IF board as the second IF board installed was a later board and had some extra tracks for the 9v. If this fails then we need to look at TIF and work back. If I'm on the wrong track I know Terry and Mike will intervene. Let us know how you go and we can work you through this.
>
>
>
> 73's
>
> Dave
>
> VK5PDL
>
>
>
>
> To: TS-520_820_530_830@yahoogroups.com
> From: ve2ud@...
> Date: Wed, 26 Jun 2013 08:48:37 -0400
> Subject: Re: [TS-520_820_530_830] Re: Early TS830's
>
>
>
>
>
> Hi Dave
> Thank you for your reply
> The receive is good on all bands
> I will check that out plus maybe pull the PLL board again as i might
> have missed,bad solder joints
> I should have checked it better when i had it off before as i think the
> vco pin is lose now.
> It's not a big job to remove the boards,it's removing and reinstalling
> those connectors that can leed to more problems.
>
> cheers
>
> Don/Ve2ud
>
> On 26/06/2013 8:24 AM, fpath fpath wrote:
> > Don,
> >
> >
> >
> > Check the Audio board connector 7 pin 3 and 5 should have voltage on both, Also check PLL board connector 8 pin 1, should have 9V, if no 9v then your not getting 8.830Mhz on IF board. How is your receive over all?
> >
> >
> >

> > 73's
> >
> > Dave
> >
> > VK5PDL
> >
> >
> >
> >
> > To: TS-520_820_530_830@yahoogroups.com
> > From: ve2ud@...
> > Date: Wed, 26 Jun 2013 07:49:53 -0400
> > Subject: Re: [TS-520_820_530_830] Re: Early TS830's
> >
> >
> >
> >
> >
> >
> > Thanks for the reply Mike
> > Were should i start,as per no audio out on sideband
> >
> > 73
> > Don/Ve2ud
> >
> > On 25/06/2013 10:20 PM, w5rkl wrote:
> >
> >>
> >> The 800Hz change in CW is normal.
> >>
> >> 73
> >> Mike
> >> W5RKL
> >>
> >> --- In TS-520_820_530_830@yahoogroups.com
> >> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Don D"<ve2ud@> wrote:
> >>
> >>>
> >>> Well my last step was to put a microphone on the ebay special and
> >>>
> >> try it out.
> >>
> >>> Output is fine on all bands on cw
> >>> When i transmitted on either side band all i got was garble.
> >>> I could see output on my power meter,but no audio was heard,just
> >>>
> >> weird sounds.
> >>
> >>> I can hear myself fine on the monitor position.
> >>> The microphone i used was a old tuner mic with a preamp

> >>> I had to crank up the preamp high to get output
> >>> My mc50 would not work at all.
> >>>
> >>> On cw it is fine except jumps up in frequency by 800 Hz on transmit.
> >>>
> >>> Don/Ve2ud
> >>>
> >>>
> >>
> >>
> > [Non-text portions of this message have been removed]
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43139. Re: [TS-520_820_530_830] Re: Success!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-27 14:09:22 UTC
From: Craig Roberts
Topic: 43023 Message: 43139

I will tackle the 160 meter output question this weekend when taking other measurements to detect whether or not the radio has been modified.

I am still baffled by the fact that I need to back off LOAD(ing) significantly to hold the power output at 100 Watts/220 mA or so. This is in contrast to my TS-530S.

The 830 is perfectly functional as is and performs very well, indeed. It now looks "mint", so I'd like to act like new, as well.

Thanks for all your help, Terry.

73,

Craig

43140. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-27 16:32:06 UTC
From: Don
Topic: 43023 Message: 43140

I changed the filter back to the original one and i now get output very nicely on USB only
The LSB has no output at all
I checked it out on other bands and got the same result
All the ground connections were a bit black i guess from those brass spacers,so took some emery cloth to them.

73
Don/Ve2ud

On 27/06/2013 9:47 AM, Terry Wagoner wrote:
>
> Don:
>
> Did rig have good LSB/USB output before changing to the narrow filter?
>
> Did you install it in the original XF-1 position?
>
> Terry K9TW
>
>

[Non-text portions of this message have been removed]

43141. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-27 16:56:36 UTC
From: Terry Wagoner
Topic: 43023 Message: 43141

What is this telling you?

Is the LSB carrier oscillator running?

Have you tried Step 3 of the Service Manual?

TP-3 on IF board provides place to measure LSB Carrier Osc level and frequency. Need 300mv rms level and 8828.50 mhz adjusted by TC-2.

Realize setting TC2 and TC-3 to the frequencies listed in Step 3 is just a starting point. Whereever they are set in RX is how you will sound in TX and vice versa.

Three ways to fine tune TC-2/TC-3:
1. Use the Marker and S-meter as described by Richard Measures in the 830 Survival guide. This works pretty well. Make sure AGC is in Fast and you have delicate touch on VFO to see the meter zero beat quiver. Takes a little practice.
2. Use audio generator and perform Step 30 of the Service manual. This is referred to as setting the Carrier Point. Some say only way to do it correctly. I dont agree with any "only" methods. Some better than others.
3. Use audio spectrum analyzer soft ware and a noise bridge. Spectrogram works great for this. Fun to see your actual passband response and get them matched up.

Adjustment of LSB/USB trimmer caps is little bit personal preference. Have to make sure not set for too much bass as not conducive to good copy in less than ideal conditions and not set for too much treble as audio will sound too thin.

After adjusting suggest you listen to yourself on the Moni.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
>
> I changed the filter back to the original one and i now get output very
> nicely on USB only
> The LSB has no output at all
> I checked it out on other bands and got the same result
> All the ground connections were a bit black i guess from those brass
> spacers,so took some emery cloth to them.
>
> 73
> Don/Ve2ud
>
>
>
>
>

> On 27/06/2013 9:47 AM, Terry Wagoner wrote:
> >
> > Don:
> >
> > Did rig have good LSB/USB output before changing to the narrow filter?
> >
> > Did you install it in the original XF-1 position?
> >
> > Terry K9TW
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

43142. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-27 17:03:43 UTC
From: Don
Topic: 43023 Message: 43142

Thanks Terry
Will print this out and have a go at it

73
Don

On 27/06/2013 12:56 PM, Terry Wagoner wrote:
>
> What is this telling you?
>
> Is the LSB carrier oscillator running?
>
> Have you tried Step 3 of the Service Manual?
>
> TP-3 on IF board provides place to measure LSB Carrier Osc level and
> frequency. Need 300mv rms level and 8828.50 mhz adjusted by TC-2.
>
> Realize setting TC2 and TC-3 to the frequencies listed in Step 3 is
> just a starting point. Whereever they are set in RX is how you will
> sound in TX and vice versa.
>
> Three ways to fine tune TC-2/TC-3:
> 1. Use the Marker and S-meter as described by Richard Measures in the
> 830 Survival guide. This works pretty well. Make sure AGC is in Fast
> and you have delicate touch on VFO to see the meter zero beat quiver.
> Takes a little practice.
> 2. Use audio generator and perform Step 30 of the Service manual. This
> is referred to as setting the Carrier Point. Some say only way to do
> it correctly. I dont agree with any "only" methods. Some better than
> others.
> 3. Use audio spectrum analyzer soft ware and a noise bridge.
> Spectrogram works great for this. Fun to see your actual passband
> response and get them matched up.
>
> Adjustment of LSB/USB trimmer caps is little bit personal preference.
> Have to make sure not set for too much bass as not conducive to good
> copy in less than ideal conditions and not set for too much treble as
> audio will sound too thin.
>
> After adjusting suggest you listen to yourself on the Moni.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:

> >
> >
> > I changed the filter back to the original one and i now get output very
> > nicely on USB only
> > The LSB has no output at all
> > I checked it out on other bands and got the same result
> > All the ground connections were a bit black i guess from those brass
> > spacers,so took some emery cloth to them.
> >
> > 73
> > Don/Ve2ud
> >
> >
> >
> >
> >
> > On 27/06/2013 9:47 AM, Terry Wagoner wrote:
> > >
> > > Don:
> > >
> > > Did rig have good LSB/USB output before changing to the narrow filter?
> > >
> > > Did you install it in the original XF-1 position?
> > >
> > > Terry K9TW
> > >
> > >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
>

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43143. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-27 14:55:41 UTC
From: Don
Topic: 43023 Message: 43143

Terry
I did not try it before the change,as the rig was not putting out,until
i found the solder joint problem.
I am going to put back the original filter and see what happens.

Tks
Don/Ve2ud

On 27/06/2013 9:47 AM, Terry Wagoner wrote:
>
> Don:
>
> Did rig have good LSB/USB output before changing to the narrow filter?
>
> Did you install it in the original XF-1 position?
>
> Terry K9TW
>
>

[Non-text portions of this message have been removed]

43144. Dormant 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-28 15:37:26 UTC
From: skcfuller@att.net
Topic: 43144 Message: 43144

TS820 worked great when stored 15-18 years ago. Set it up recently at new QTH, various malfunctions when powered on. Cleaned switches, plugs and jacks, relays, etc with contact cleaner. Looked for unsoldered joints etc on swithces.

Now:

cw/usb good on rx and tx all bands.
tune position of mode switch works all bands.
lsb and fsk no audio with rf and af max (faint background hum). If IF shift is rotated ccw 90deg, lsb audio present, but unable to tune for signal that is cipherable.
dig display also goes off in lsb/fsk, returns when IF shift rotated.
Tried adj CAR 1 vr-1, tc-1, and tc-2. No effect.

S meter works great during tuneup on tx,
very very low signal response in rx. Adj vr1-vr2 on IF for zero and max sig with marker, zeroing with vr1 works but unable to obtain s reading with vr2, either on marker or strong revd signal. decreasing RF gain causes meter to move as expected.

Simple problem, simple mind, need help.
Thanks, Jack

43145. Re: Dormant 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-28 19:30:49 UTC
From: Terry Wagoner
Topic: 43144 Message: 43145

Jack:

I think you are on the right track about missing or mis-tuned LSB carrier oscillator. Are you sure you adjusted CAR-1 TC-1 ceramic trimmer? The drawing in the Service Manual is wrong.

If you have a freq counter connect it to TP-5 on the IF board back under the side rail sheet metal at corner of the board. TC-1 LSB ceramic trimmer cap is set kind of deep and not easy to see to get on it. You may want to remove the 2 small screws that hold the cover plate on and then you can see the trimmers labeled as LSB and USB. Also these are pretty touchy if you use a small metal screw driver to adjust. I have a tool with very small thin flat blade set into plastic handle that does not affect the capacitance. So if using a screw driver you most likely will have to make several small attempts to adjust.

I would probably exercise both LSB (TC-1) and USB (TC-2) trimmers several times given how long they have set idle. Then I would adjust them to the IF frequencies listed in the table in the Service manual.

Setting them to these frequencies will get you close, but you will have to do some tweaking and couple of methods to do that I can suggest next.

Ideally you should also measure the rf voltage level at TP-5 and it should be 300mv. If you have a RF probe and VTVM can measure this level or can use an O-scope. If it was set to 300mv when you stored it not likely it has fallen off very much. T1 transformer not as likely to be affected by long idle time like a ceramic trimmer cap would.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "skcfuller@..." <skcfuller@...> wrote:
>
> TS820 worked great when stored 15-18 years ago. Set it up recently at new QTH, various malfunctions when powered on. Cleaned switches, plugs and jacks, relays, etc with contact cleaner. Looked for unsoldered joints etc on swithces.
>
> Now:
>
> cw/usb good on rx and tx all bands.
> tune position of mode switch works all bands.
> lsb and fsk no audio with rf and af max (faint background hum). If IF shift is rotated ccw 90deg, lsb audio present, but unable to tune for signal that is cipherable.
> dig display also goes off in lsb/fsk, returns when IF shift rotated.
> Tried adj CAR 1 vr-1, tc-1, and tc-2. No effect.
>
> S meter works great during tuneup on tx,
> very very low signal response in rx. Adj vr1-vr2 on IF for zero and max sig with marker, zeroing with vr1 works but unable to obtain s reading with vr2, either on marker or strong revd signal. decreasing RF gain causes meter to move as expected.

>
> Simple problem, simple mind, need help.
> Thanks, Jack
>

43146. Re: Dormant 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-29 11:49:27 UTC
From: Terry Wagoner
Topic: 43144 Message: 43146

Jack:

I forgot to mention make sure you set the Carrier Osc with IF Shift centered and if you tweaked Car 1 VR-1 trim pot you will need to adjust it. You do this in LSB and monitor the frequency with your counter on TP-5 and adjust VR-1 so you get same frequency in RX and TX.

Terry

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Jack:
>
> I think you are on the right track about missing or mis-tuned LSB carrier oscillator. Are you sure you adjusted CAR-1 TC-1 ceramic trimmer? The drawing in the Service Manual is wrong.
>
>

43147. KENWOOD HYBRID USER NET (June 31st, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-30 18:43:32 UTC
From: mvgilger
Topic: 43147 Message: 43147

The Saturday's net on 40 meter had 11 stations checking in with poor band conditions. We had 5 new check-in's, N9WQ, N2NTC, KF4EQH, W9PP, and KK4QYS.

Out of all stations checking in, there was:

2 running TS-520(x)
1 running TS-530(x)
1 running TS-820(x)
1 running TS-830S
1 running TS-900S

I was running my TS-940s. The rest were running non hybrids of one model or another.

The Sunday's net on 20 meter we had 7 stations checking in under very poor band conditions. We had 2 new check-in, W9JW and KB7BRW.

Out of those, there was:

1 running TS-520(x)
1 running TS-530(x)
1 running TS-820(x)
0 running TS-830S

I was running my TS-940s. The rest were running non hybrids of one model or another.

We have been having several people checking in regularly with their TS-430, TS-440, and TS-940's, which of course is not a hybrid, although over 30+ years old. Everyone is welcome as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a net control station, please send me an email. Currently it's just myself, WB2KNR and WB0SGA. I would like to get several more. If we do, we can alternate so everyone might be on a 3-4 week rotation. It's a lot of fun and a good way to make sure you station is optimized.

For anyone that has not heard, we have a new web site that WB4HFN is hosting. He currently has a very nice site for Drake, Collins and Heathkit and now Kenwood Hybrids. Good quality manuals plus sale flyers and brochures will be found here, along with user supplied information for all Hybrids.

His URL is:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754 check-ins, Sunday total 563 check-ins

November 2012, Saturday's, net total = 47, Sundays total = 20
December 2012, Saturday's, net total = 74, Sunday's total = 70

January 2013, Saturday's, net total = 93, Sunday's total = 87
February 2013, Saturday's net total = 103, Sundays total = 87
March 2013, Saturday's, net total = 112, Sunday's total =39
April 2013, Saturday's net total = 52, Sunday's total = 29
May 2013, Saturday's net total = 45, Sunday's total = 50
June 2013, Saturday's net total = 30, Sunday's total = 27 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

43148. Need some quick advice on a totally comatose TS-830S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-30 21:44:57 UTC
From: synovial_98
Topic: 43148 Message: 43148

Hi,

I am the winning bidder on a (known) dead TS-830S. Allegedly there's no blown fuse or anything burnt. The seller suspects a bad PS. Nothing works, display does not illuminate. Rig was allegedly active until recently.

Here's the obvious things that come to mind:
Open primary winding on the PS xfmr (could be secondary too)
The fuse really is blown - perhaps wasn't verified via VOM.
Verify integrity of the line cord.

Naturally, I'll poke around with the VOM once I get it.

Is there anything else from anyone's experience that I should check?

Thanks in advance for your help.

Regards,
Ken
WB4EJZ

43149. For Remco and Other TS-820 Owners

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-30 21:58:43 UTC
From: Terry Wagoner
Topic: 43149 Message: 43149

Remco:

Got some time this weekend so re-aligned my TS-820 speech processor. Wanted to sweep the 455khz ceramic filters, but my sweep gen only goes down to 1 mhz so I did a rudimentary sweep by peaking the output level at TP-2 and recording that voltage and then moving LO trimmer capacitor TC-4 up and down frequency to the 6db bandwidth points(1/2 voltage level) and recording the frequency of the oscillator at those two points. Here are my results:

Note: I tried alignment with 1000hz, 1200hz, and 1500hz audio injected in the mic line. I ended up using 1200hz for the final setting.

1. TP-2 = 636mv P-P (100mhz scope with 10/1 probe) at 453.3khz with .3mv 1200hz sine wave signal into mic line. (I use a HP3400A true rms AF VTVM to measure output from my function generator)

2. TP-2 = 318mv P-P at 451.9khz and at 454.7khz. This means at the 6dB bandwidth the filters are +/- 1.4khz or approx 2.8khz wide. Using 1200hz audio test signal my low frequency 6dB roll off point was close to 350hz as opposed to 300hz.

3. TC-4 as left setting = 453.3khz (anywhere from about 453.1 to 453.5 seemed to produce about same results)

I listened to my voice using an MC-60 mic and the MONI. I set Comp gain pot for 10dB of compression and 20dB of compression on voice peaks and audio sounded good to my ear at both levels. However, I think I liked the audio closer to 10dB than 20dB. When band conditions improve I will make some contacts on 20 meters and get some reports at various comp gain pot settings.

Perhaps members Robert and Joe both experienced TS820 owners can share their speech processor alignment experiences with you and share where they have TC-4 set.

Clearly the 451.4khz TC-4 LO frequency setting called for in the service manual is wrong. Would result in very low level audio at TP-2.

Terry K9TW

43150. TS-830S dirty relay??

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-30 22:10:58 UTC
From: Craig Roberts
Topic: 43148 Message: 43150

One LAST TS-830S glitch (160 meter low output is cured):

symptom: choppy and noisy receiver recovery after transmit

suspect: RL1 on AF Board

Is this likely? Can the relay be cleaned? Replacement looks fiddly but certainly do-able.

Thanks,

Craig
W3CRR
>

[Non-text portions of this message have been removed]

43151. Re: Need some quick advice on a totally comatose TS-830S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-06-30 22:16:31 UTC
From: Terry Wagoner
Topic: 43148 Message: 43151

Hi Ken:

Make sure they have not installed an auto fuse.

Download copy of operating manual and service manual.

Ohm meter across line cord and from each leg of line cord to chassis ground = infinity

Ohm meter across line cord with power switch turned on = approx 2.23 ohms.

A good visual is in order. Look at HV filter caps from the bottom. Look at the rupture discs to see if they are bulged or leaky. Can have white crystalline powder at the vent or a brown/black sticky liquid leakage.

Look at HV rectifier board and see if HV diodes appear to be blown or cracked.

Remove PA cage cover and look at large plate choke between the two final tubes for signs of overheating.

Measure the Cathode Meter Shunt resistors on the Final board. Should read close to 5 ohms. There are four 20 ohm resistors in parallel. Sometimes they will physically fracture if finals arc over.

Might want to remove the two 6146 finals and gently shake. Should hear no rattling inside the glass envelopes.

I like to bring up a rig like this on Dim bulb tester to limit fault current and protect your transformer. Can make a very simple one with a line cord and a 120vac lamp socket with pigtail leads. Place the socket in series with the hot leg. Start with a 40 to 60 watt lamp. If it glows brite and does not dim down then have a bolted fault. See internet for plans.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "synovial_98" <synovial_98@...> wrote:
>
> Hi,
>
> I am the winning bidder on a (known) dead TS-830S. Allegedly there's no blown fuse or anything burnt. The seller suspects a bad PS. Nothing works, display does not illuminate. Rig was allegedly active until recently.
>
> Here's the obvious things that come to mind:
> Open primary winding on the PS xfmr (could be secondary too)
> The fuse really is blown - perhaps wasn't verified via VOM.
> Verify integrity of the line cord.
>
> Naturally, I'll poke around with the VOM once I get it.

>
> Is there anything else from anyone's experience that I should check?
>
> Thanks in advance for your help.
>
> Regards,
> Ken
> WB4EJZ
>

43152. Selling my TS-520

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-01 02:26:39 UTC
From: brett_knudson
Topic: 43152 Message: 43152

Moving and will have an antenna restriction. I need the money to setup an HF mobile. Thanks for your consideration.

http://www.ebay.com/itm/Kenwood-TS-520-Radio-Transceiver-DG-5-Digital-Display-MC-50-mic-SP-520-Spkr-/151073718971?pt=US_Ham_Radio_Transceivers&hash=item232cb202bb

43153. TS-830S,need help

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-01 05:20:34 UTC
From: Ravi
Topic: 43153 Message: 43153

Hello Friends,

Am working on my friend's (4s7WN)TS-830S. The rig has not been used for quite some time. When switched on, I`ve noticed that:

No band noise in RX in any band.
No S-meter indication In RX with antenna
HV position shows 850 Vdc
No ALC. Can not load in any band
Marker signal is very week other than on 40 meters but S-meter is not kicking to marker signal

I cleaned switches, relays,(relay in the audio board sprayed with contact cleaner)pots and band switch twice with `Servisol' and also removed & fixed molex connectors. I've checked the rectifier board and found some resistors were out of tolerance, so replaced R1-R4 and R15 & R16.Thereafter, checked the voltages in all boards. They are with in specs. I removed the VFO, sprayed the rear wiper with contact cleaner and lubed the front bearing with drop of sewing machine oil. I wanted to first try and fix the RX side so removed all valves and powered on.
Now:-
Can hear band noise on 40 meters but on other bands it is very low even if I peak with DRIVE
Can hear the marker signal on all bands but no S-meter response
I can hear broadcasting stations on 40 meters, again no s-meter response.

I injected a signal to antenna connector and also to TP1 terminal on RF broad using my Trio signal generator, S-meter kicks on all bands showing S9 to S9+ level.

I believe band switch is the culprit for low RX. Grateful for any help.

I have a VTVM with a single diode RF probe, Frequency counter,RF signal generator and couple of DMM's and of course schematic & service manual for 830

Thanks
Ravi - 4S6RAV

43154. Re: TS-830S,need help

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-01 10:28:29 UTC
From: Terry Wagoner
Topic: 43153 Message: 43154

Hi Ravi:

When you injected RF into antenna connector and TP-1 you say that the S-meter "kicked" to S9 on all bands. Does that mean it spiked or kicked up to S9 momentarily and then fell back to zero or did it go to S9 and stay there as long as you had sig gen connected?

Do you know what level you are injecting from the signal generator? If Marker signal is still very low on all bands it sounds like you have a very high level from your rf sig gen unless Marker is bad which is unlikely. Some of the sig gens are capable of 1.0 volt or greater. You need approx 50uv or -73dBm level for an S9 indication.

If it stays there what does the audio tone from the speaker sound like? Is it normal volume level? Is it distorted?

Do you have another rig that you can inject the sig gen into? If so, do that and set the Sig Gen rf output level for an S9 indication on the good rig and do not move that output level setting. That setting will be close to approx 50uv. Now reinject into the bad rig and see if there is now no S meter indication. If so, then inject at Gate 1 of RF amp Q1. If you now get good audio and S9 indication it is telling you that L41 is bad.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Ravi" <mindover2003@...> wrote:
>
> Hello Friends,
>
> Am working on my friend's (4s7WN)TS-830S. The rig has not been used for quite some time. When switched on, I`ve noticed that:
>
> No band noise in RX in any band.
> No S-meter indication In RX with antenna
> HV position shows 850 Vdc
> No ALC. Can not load in any band
> Marker signal is very week other than on 40 meters but S-meter is not kicking to marker signal
>
> I cleaned switches, relays,(relay in the audio board sprayed with contact cleaner)pots and band switch twice with `Servisol' and also removed & fixed molex connectors. I've checked the rectifier board and found some resistors were out of tolerance, so replaced R1-R4 and R15 & R16.Thereafter, checked the voltages in all boards. They are with in specs. I removed the VFO, sprayed the rear wiper with contact cleaner and lubed the front bearing with drop of sewing machine oil. I wanted to first try and fix the RX side so removed all valves and powered on.
> Now:-
> Can hear band noise on 40 meters but on other bands it is very low even if I peak with DRIVE

> Can hear the marker signal on all bands but no S-meter response
> I can hear broadcasting stations on 40 meters, again no s-meter response.
>
> I injected a signal to antenna connector and also to TP1 terminal on RF broad using my Trio signal generator, S-meter kicks on all bands showing S9 to S9+ level.
>
> I believe band switch is the culprit for low RX. Grateful for any help.
>
> I have a VTVM with a single diode RF probe, Frequency counter,RF signal generator and couple of DMM's and of course schematic & service manual for 830
>
> Thanks
> Ravi - 4S6RAV
>

43155. Need the main tuning knob for a TS-830S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-01 11:25:54 UTC
From: synovial_98
Topic: 43155 Message: 43155

Hi,

Does anyone have a spare main tuning knob for a TS-830S?
The plain ol' stock unit would be fine.

Thanks and 73,
Ken/WB4EJZ

43156. RE: [TS-520_820_530_830] Re: Need some quick advice on a totally comatose TS-830S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-01 06:30:37 UTC
From: Chuck Noe
Topic: 43148 Message: 43156

FOLKS,

Chuck has had major surgery. If possible please avoid all the ham radio talk for at least 3 weeks. It is clogging up email . He can't answer or respond. As hiss wife I'm trying to defer. He's surgery had a set back . He is doing ok but please stop the e-mails for now.

Thanks

Betty on behalf of my hub Chuck

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
Sent: Sunday, June 30, 2013 3:17 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Need some quick advice on a totally comatose TS-830S

Hi Ken:

Make sure they have not installed an auto fuse.

Download copy of operating manual and service manual.

Ohm meter across line cord and from each leg of line cord to chassis ground = infinity

Ohm meter across line cord with power switch turned on = approx 2.23 ohms.

A good visual is in order. Look at HV filter caps from the bottom. Look at the rupture discs to see if they are bulged or leaky. Can have white crystalline powder at the vent or a brown/black sticky liquid leakage.

Look at HV rectifier board and see if HV diodes appear to be blown or cracked.

Remove PA cage cover and look at large plate choke between the two final tubes for signs of overheating.

Measure the Cathode Meter Shunt resistors on the Final board. Should read close to 5 ohms. There are four 20 ohm resistors in parallel. Sometimes they will physically fracture if finals arc over.

Might want to remove the two 6146 finals and gently shake. Should hear no rattling inside the glass envelopes.

I like to bring up a rig like this on Dim bulb tester to limit fault current and protect your transformer. Can make a very simple one with a line cord and a 120vac lamp socket with pigtail leads. Place the socket in series with the hot leg. Start with a 40 to 60 watt lamp. If it glows brite and does not dim down then have a bolted fault. See internet for plans.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> , "synovial_98" <synovial_98@...> wrote:
>
> Hi,
>
> I am the winning bidder on a (known) dead TS-830S. Allegedly there's no blown fuse or anything burnt. The seller suspects a bad PS. Nothing works, display does not illuminate. Rig was allegedly active until recently.
>
> Here's the obvious things that come to mind:
> Open primary winding on the PS xfmr (could be secondary too)
> The fuse really is blown - perhaps wasn't verified via VOM.
> Verify integrity of the line cord.
>
> Naturally, I'll poke around with the VOM once I get it.
>
> Is there anything else from anyone's experience that I should check?
>
> Thanks in advance for your help.
>
> Regards,
> Ken
> WB4EJZ
>

[Non-text portions of this message have been removed]

43157. Re: Need some quick advice on a totally comatose TS-830S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-01 12:53:55 UTC
From: w5rkl
Topic: 43148 Message: 43157

All taken care of. No further action required.

Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Chuck Noe" <wolfsyswest@...> wrote:
>
> FOLKS,
>
> Chuck has had major surgery. If possible please avoid all the ham radio talk
> for at least 3 weeks. It is clogging up email . He can't answer or respond.
> As hiss wife I'm trying to defer. He's surgery had a set back . He is doing
> ok but please stop the e-mails for now.
>
> Thanks
>
> Betty on behalf of my hub Chuck
>
>
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
> Sent: Sunday, June 30, 2013 3:17 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: Need some quick advice on a totally
> comatose TS-830S
>
>
>
>
>
>
> Hi Ken:
>
> Make sure they have not installed an auto fuse.
>
> Download copy of operating manual and service manual.
>
> Ohm meter across line cord and from each leg of line cord to chassis ground
> = infinity
>
> Ohm meter across line cord with power switch turned on = approx 2.23 ohms.
>
> A good visual is in order. Look at HV filter caps from the bottom. Look at
> the rupture discs to see if they are bulged or leaky. Can have white
> crystalline powder at the vent or a brown/black sticky liquid leakage.

>
> Look at HV rectifier board and see if HV diodes appear to be blown or
> cracked.
>
> Remove PA cage cover and look at large plate choke between the two final
> tubes for signs of overheating.
>
> Measure the Cathode Meter Shunt resistors on the Final board. Should read
> close to 5 ohms. There are four 20 ohm resistors in parallel. Sometimes they
> will physically fracture if finals arc over.
>
> Might want to remove the two 6146 finals and gently shake. Should hear no
> rattling inside the glass envelopes.
>
> I like to bring up a rig like this on Dim bulb tester to limit fault current
> and protect your transformer. Can make a very simple one with a line cord
> and a 120vac lamp socket with pigtail leads. Place the socket in series with
> the hot leg. Start with a 40 to 60 watt lamp. If it glows brite and does not
> dim down then have a bolted fault. See internet for plans.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com> , "synovial_98"
> <synovial_98@> wrote:
> >
> > Hi,
> >
> > I am the winning bidder on a (known) dead TS-830S. Allegedly there's no
> blown fuse or anything burnt. The seller suspects a bad PS. Nothing works,
> display does not illuminate. Rig was allegedly active until recently.
> >
> > Here's the obvious things that come to mind:
> > Open primary winding on the PS xfmr (could be secondary too)
> > The fuse really is blown - perhaps wasn't verified via VOM.
> > Verify integrity of the line cord.
> >
> > Naturally, I'll poke around with the VOM once I get it.
> >
> > Is there anything else from anyone's experience that I should check?
> >
> > Thanks in advance for your help.
> >
> > Regards,
> > Ken
> > WB4EJZ
> >
>
>
>

>
>
> [Non-text portions of this message have been removed]
>

43158. Re: [TS-520_820_530_830] Re: TS-830S,need help

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-01 14:42:46 UTC
From: ravi sumith
Topic: 43153 Message: 43158

Hi Terry,

Thanks for the reply.

S-meter shows a strength of S9 on all bands and stay there as long as I keep sig.gen connected.Audio tone from the speaker is normal
My sig.genny is Trio SG 402 I guess it is putting out a high level signal.
I have a working 520S.I will inject a signal to it and use the same position of the genny to 830. Will come back.
If antenna transformer is bad,I know there is no replacement but to re-wind it.Am bit nervous of doing any tinny work as my eye sight is not that great due to my age.(54+ now)

73's
Ravi-4s6rav

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, 1 July 2013 3:58 PM
Subject: [TS-520_820_530_830] Re: TS-830S,need help

Hi Ravi:

When you injected RF into antenna connector and TP-1 you say that the S-meter "kicked" to S9 on all bands. Does that mean it spiked or kicked up to S9 momentarily and then fell back to zero or did it go to S9 and stay there as long as you had sig gen connected?

Do you know what level you are injecting from the signal generator? If Marker signal is still very low on all bands it sounds like you have a very high level from your rf sig gen unless Marker is bad which is unlikely. Some of the sig gens are capable of 1.0 volt or greater. You need approx 50uv or -73dBm level for an S9 indication.

If it stays there what does the audio tone from the speaker sound like? Is it normal volume level? Is it distorted?

Do you have another rig that you can inject the sig gen into? If so, do that and set the Sig Gen rf output level for an S9 indication on the good rig and do not move that output level setting. That setting will be close to approx 50uv. Now reinject into the bad rig and see if there is now no S meter indication. If so, then inject at Gate 1 of RF amp Q1. If you now get good audio and S9 indication it is telling you that L41 is bad.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Ravi" <mindover2003@...> wrote:
>
> Hello Friends,
>
> Am working on my friend's (4s7WN)TS-830S. The rig has not been used for quite some time. When switched on, I`ve noticed that:

>
> No band noise in RX in any band.
> No S-meter indication In RX with antenna
> HV position shows 850 Vdc
> No ALC. Can not load in any band
> Marker signal is very week other than on 40 meters but S-meter is not kicking to marker signal
>
> I cleaned switches, relays,(relay in the audio board sprayed with contact cleaner)pots and band switch twice with `Servisol' and also removed & fixed molex connectors. I've checked the rectifier board and found some resistors were out of tolerance, so replaced R1-R4 and R15 & R16.Thereafter, checked the voltages in all boards. They are with in specs. I removed the VFO, sprayed the rear wiper with contact cleaner and lubed the front bearing with drop of sewing machine oil. I wanted to first try and fix the RX side so removed all valves and powered on.
> Now:-
> Can hear band noise on 40 meters but on other bands it is very low even if I peak with DRIVE
> Can hear the marker signal on all bands but no S-meter response
> I can hear broadcasting stations on 40 meters, again no s-meter response.
>
> I injected a signal to antenna connector and also to TP1 terminal on RF broad using my Trio signal generator, S-meter kicks on all bands showing S9 to S9+ level.
>
> I believe band switch is the culprit for low RX. Grateful for any help.
>
> I have a VTVM with a single diode RF probe, Frequency counter,RF signal generator and couple of DMM's and of course schematic & service manual for 830
>
> Thanks
> Ravi - 4S6RAV
>

[Non-text portions of this message have been removed]

43159. Re: [TS-520_820_530_830] Re: TS-830S,need help

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-01 15:51:34 UTC
From: ravi sumith
Topic: 43153 Message: 43159

Terry: Sorry to worry you again.But thought I'll do the test you said.
I connected sig.genny to my 520se,Here are the results.This is at lowest out put level of the genny.

On 7.200 Mhz and on 3.600 Mhz - S-meter indicating S9+15db- Audio is normal
On 14.175 Mhz - it is full scale (S9+40db) and audio slightly distorted.

I kept the controls of the sig.genny as it is and then connected 830. No indication on S-meter on any band,even the AGC switch set to off,slow or fast.

It is 9 pm here now.So thought to postponed it for tomorrow. If time permits,what I will do is:-
Inject a signal at 8.830mhz with the same signal level to TP-2 on RF board.
Inject a 14.200mhz signal at same level (of course with a DC blocking cap) to TP-4 on the RF board
Will test the Q1 by injecting the same signal at Connection 8 Pin 2
Will measure the Q1 bias voltage at RB1 terminal.

Will come back & share the results.

Thanks
Ravi-4s6rav

From: ravi sumith <mindover2003@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, 1 July 2013 8:12 PM
Subject: Re: [TS-520_820_530_830] Re: TS-830S,need help

Hi Terry,

Thanks for the reply.

S-meter shows a strength of S9 on all bands and stay there as long as I keep sig.gen connected.Audio tone from the speaker is normal
My sig.genny is Trio SG 402 I guess it is putting out a high level signal.
I have a working 520S.I will inject a signal to it and use the same position of the genny to 830. Will come back.
If antenna transformer is bad,I know there is no replacement but to re-wind it.Am bit nervous of doing any tinny work as my eye sight is not that great due to my age.(54+ now)

73's
Ravi-4s6rav

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, 1 July 2013 3:58 PM
Subject: [TS-520_820_530_830] Re: TS-830S,need help

Hi Ravi:

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Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Ravi" <mindover2003@...> wrote:
>
> Hello Friends,
>
> Am working on my friend's (4s7WN)TS-830S. The rig has not been used for quite some time. When switched on, I`ve noticed that:
>
> No band noise in RX in any band.
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> Marker signal is very week other than on 40 meters but S-meter is not kicking to marker signal
>
> I cleaned switches, relays,(relay in the audio board sprayed with contact cleaner)pots and band switch twice with `Servisol' and also removed & fixed molex connectors. I've checked the rectifier board and found some resistors were out of tolerance, so replaced R1-R4 and R15 & R16.Thereafter, checked the voltages in all boards. They are with in specs. I removed the VFO, sprayed the rear wiper with contact cleaner and lubed the front bearing with drop of sewing machine oil. I wanted to first try and fix the RX side so removed all valves and powered on.
> Now:-
> Can hear band noise on 40 meters but on other bands it is very low even if I peak with DRIVE
> Can hear the marker signal on all bands but no S-meter response
> I can hear broadcasting stations on 40 meters, again no s-meter response.
>
> I injected a signal to antenna connector and also to TP1 terminal on RF broad using my Trio signal generator, S-meter kicks on all bands showing S9 to S9+ level.
>
> I believe band switch is the culprit for low RX. Grateful for any help.

>
> I have a VTVM with a single diode RF probe, Frequency counter,RF signal generator and couple of DMM's and of course schematic & service manual for 830
>
> Thanks
> Ravi - 4S6RAV
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

43160. TS-830S RL1 or RL1 (or RL1)?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-01 15:51:38 UTC
From: Craig Roberts
Topic: 43153 Message: 43160

Is crackling and intermittently weakened signals on reception immediately after T/R changeover most likely caused by a burned relay on the AF Board or a dirty T/R relay next the finals?

Oh -- and what's with that relay on the Rectifier Board? A photo on Charles Socci's site shows the relay absent.

Please pardon my continued ignorance. I will soon know all there is to know about these hybrids. (Yeah, right!) :-)

73,

Craig
W3CRR

43161. TS-820 testing - not transmitting because of a mod?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-01 14:22:20 UTC
From: Barry
Topic: 43161 Message: 43161

I took the 820 to a new ham friend that volunteered to open it up and look to see why it's not transmitting. His tube tester verified this morning that the tubes are fine - and they look to be the original tubes, but he was extremely impressed with how clean and "low mileage," as he put it, this 820 is.

He looked around further and wondered what this mod might be:

http://www.digcservices.com/ham/TS-820-Mod-070113.jpg

He's wondering if this white wire is the culprit now for not being able to transmit. Any ideas on what this mod might be?

Thankfully he did verify that nobody did a CB mod, so that's great. So far things are looking pretty good - with my extremely limited knowledge I'm obviously relying on others that know the 820 for more help, so thanks in advance for any insight.

Barry
KK4RXN
Jeremiah 29:11 - 13 / John 3:16

43162. Re: [TS-520_820_530_830] TS-820 testing - not transmitting because of a mod?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-01 18:07:48 UTC
From: Joseph Stiles
Topic: 43161 Message: 43162

Barry,

  It would be nice to know from "where to where" that the wire is connected.

73 Joe
WB7UQU

From: Barry <bonnevilleblb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, July 1, 2013 7:22 AM
Subject: [TS-520_820_530_830] TS-820 testing - not transmitting because of a mod?

I took the 820 to a new ham friend that volunteered to open it up and look to see why it's not transmitting. His tube tester verified this morning that the tubes are fine - and they look to be the original tubes, but he was extremely impressed with how clean and "low mileage," as he put it, this 820 is.

He looked around further and wondered what this mod might be:

http://www.digcservices.com/ham/TS-820-Mod-070113.jpg

He's wondering if this white wire is the culprit now for not being able to transmit. Any ideas on what this mod might be?

Thankfully he did verify that nobody did a CB mod, so that's great. So far things are looking pretty good - with my extremely limited knowledge I'm obviously relying on others that know the 820 for more help, so thanks in advance for any insight.

Barry
KK4RXN
Jeremiah 29:11 - 13 / John 3:16

[Non-text portions of this message have been removed]

43163. Re: TS-820 testing - not transmitting because of a mod?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-01 19:22:51 UTC
From: Barry
Topic: 43161 Message: 43163

I'll need to get back into it. I just wondered if anybody recognized what that wire could be doing there.

Barry
KK4RXN
Jeremiah 29:11 - 13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Barry,
>
> Â It would be nice to know from "where to where" that the wire is connected.
>
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: Barry <bonnevilleblb@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, July 1, 2013 7:22 AM
> Subject: [TS-520_820_530_830] TS-820 testing - not transmitting because of a mod?
>
>
>
> Â
> I took the 820 to a new ham friend that volunteered to open it up and look to see why it's not transmitting. His tube tester verified this morning that the tubes are fine - and they look to be the original tubes, but he was extremely impressed with how clean and "low mileage," as he put it, this 820 is.
>
> He looked around further and wondered what this mod might be:
>
> http://www.digcservices.com/ham/TS-820-Mod-070113.jpg
>
> He's wondering if this white wire is the culprit now for not being able to transmit. Any ideas on what this mod might be?
>
> Thankfully he did verify that nobody did a CB mod, so that's great. So far things are looking pretty good - with my extremely limited knowledge I'm obviously relying on others that know the 820 for more help, so thanks in advance for any insight.

>
> Barry
> KK4RXN
> Jeremiah 29:11 - 13 / John 3:16
>
>
>
>
> [Non-text portions of this message have been removed]
>

43164. Re: TS-830S,need help

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-01 23:57:32 UTC
From: Terry Wagoner
Topic: 43153 Message: 43164

Ravi:

Is the generator a SG-402? Are you saying level being injected is with switch to Low position and the Gain pot full CCW? Do you have the manual for this generator? What does is say about the output level? I have never owned or operated this model. This style generator often has very high leakage and what you may be seeing is signal not coming down the test lead, but being radiated and picked up by your TS520SE.

In any event you know that with your TS520SE you get speaker audio and high S-meter indication with the generator set to its lowest level and get nothing out of the 830 with this same level injected.

Yes make sure to use DC blocking/coupling cap. Keep us posted of your progress. Should be pretty easy to isolate the problem with signal injection. I hope it is not L41. Need good eyes and steady hands otherwise end up breaking lots of hair fine wire!

Here is reminder about levels you will need injecting at Conn 8 Pin 2 vs directly at Gate 1 of Q1. These are from my TS830 notes with 14.200 mhz signal and Drive control peaked at 1200 and RF gain pot full CW and VFO tuned for max S-meter indication on USB.

1. Inject 50uv or -73dBM at SO-239 = S9
2. Inject 50uv at Conn 8 Pin 2 = S0. It will take approx 5mv or -33dBm signal level at Conn 8 Pin 2 to get S9 indication.
3. Inject 50uv directly at Gate 1 of Q1 = S7. It will take approx 500uv or -53dBm signal level injected directly at Gate 1 of Q1 for S9 indication.

You are no bother. Keep us posted.

73s
Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, ravi sumith <mindover2003@...> wrote:
>
> Terry: Sorry to worry you again.But thought I'll do the test you said.
> I connected sig.genny to my 520se,Here are the results.This is at lowest out put level of the genny.
>
> On 7.200 MhzÂ and on 3.600 Mhz - S-meter indicating S9+15db- Audio is normal
> On 14.175 Mhz - it is full scale (S9+40db) and audio slightly distorted.
>
> I kept the controls of the sig.genny as it is and then connected 830. No indication on S-meter on any band,even the AGC switch set to off,slow or fast.
>
> It is 9 pm here now.So thought to postponed it for tomorrow. If time permits,what I will do is:-
> Inject a signal at 8.830mhz with the same signal level to TP-2 on RF board.
> Inject a 14.200mhz signal at same level (of course with a DC blocking cap) to TP-4 on the

RF board
> Will test the Q1 by injecting the same signal at Connection 8 Pin 2
> Will measure the Q1 bias voltage at RB1 terminal.
>
> Will come back & share the results.
>
> Thanks
> Ravi-4s6rav
>
>
>
>
> _____
> From: ravi sumith <mindover2003@...>
> To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
> Sent: Monday, 1 July 2013 8:12 PM
> Subject: Re: [TS-520_820_530_830] Re: TS-830S,need help
>
>
>
> Â
> Hi Terry,
>
> Thanks for the reply.
>
> S-meter shows a strength of S9 on all bands and stay there as long as I keep sig.gen connected.Audio tone from the speaker is normal
> My sig.gennyÂ is Trio SG 402 I guess it is putting out a high level signal.
> I have a working 520S.I will inject a signal to it and use the same position of the genny to 830. Will come back.
> If antenna transformer is bad,I know there is no replacement but to re-wind it.Am bit nervous of doing any tinny work as my eye sight is not that great due to my age.(54+ now)
>
> 73's
> Ravi-4s6rav
>
> From: Terry Wagoner <wagstw46@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, 1 July 2013 3:58 PM
> Subject: [TS-520_820_530_830] Re: TS-830S,need help
>
>
> Â
> Hi Ravi:
>
> When you injected RF into antenna connector and TP-1 you say that the S-meter "kicked" to S9 on all bands. Does that mean it spiked or kicked up to S9 momentarily and then fell back to zero or did it go to S9 and stay there as long as you had sig gen connected?
>
> Do you know what level you are injecting from the signal generator? If Marker signal is still very low on all bands it sounds like you have a very high level from your rf sig gen

unless Marker is bad which is unlikely. Some of the sig gens are capable of 1.0 volt or greater. You need approx 50uv or -73dBm level for an S9 indication.
>
> If it stays there what does the audio tone from the speaker sound like? Is it normal volume level? Is it distorted?
>
> Do you have another rig that you can inject the sig gen into? If so, do that and set the Sig Gen rf output level for an S9 indication on the good rig and do not move that output level setting. That setting will be close to approx 50uv. Now reinject into the bad rig and see if there is now no S meter indication. If so, then inject at Gate 1 of RF amp Q1. If you now get good audio and S9 indication it is telling you that L41 is bad.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "Ravi" <mindover2003@> wrote:
> >
> > Hello Friends,
> >
> > Am working on my friend's (4s7WN)TS-830S. The rig has not been used for quite some time. When switched on, I`ve noticed that:
> >
> > No band noise in RX in any band.
> > No S-meter indication In RX with antenna
> > HV position shows 850 Vdc
> > No ALC. Can not load in any band
> > Marker signal is very week other than on 40 meters but S-meter is not kicking to marker signal
> >
> > I cleaned switches, relays,(relay in the audio board sprayed with contact cleaner)pots and band switch twice with `Servisol' and also removed & fixed molex connectors. I've checked the rectifier board and found some resistors were out of tolerance, so replaced R1-R4 and R15 & R16.Thereafter, checked the voltages in all boards. They are with in specs. I removed the VFO, sprayed the rear wiper with contact cleaner and lubed the front bearing with drop of sewing machine oil. I wanted to first try and fix the RX side so removed all valves and powered on.
> > Now:-
> > Can hear band noise on 40 meters but on other bands it is very low even if I peak with DRIVE
> > Can hear the marker signal on all bands but no S-meter response
> > I can hear broadcasting stations on 40 meters, again no s-meter response.
> >
> > I injected a signal to antenna connector and also to TP1 terminal on RF broad using my Trio signal generator, S-meter kicks on all bands showing S9 to S9+ level.
> >
> > I believe band switch is the culprit for low RX. Grateful for any help.
> >
> > I have a VTVM with a single diode RF probe, Frequency counter,RF signal generator and couple of DMM's and of course schematic & service manual for 830
> >
> > Thanks
> > Ravi - 4S6RAV

> >
>
> [Non-text portions of this message have been removed]
>
>
>
>
> [Non-text portions of this message have been removed]
>

43165. TS-820S meter pegged, no receive.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 00:10:22 UTC
From: sparkyinchicago
Topic: 43165 Message: 43165

Hi all! I am new to the group. I just purchased one of these fine rigs and am trying to troubleshoot the above mentioned problem. Since I went to tech school in the 70's, I am a little out of practice in the troubleshooting of discrete components. Would someone be kind enough to
tell me if this is a common issue with these rigs? I read something on the web that leads me to believe that the AGC may be involved.

Any and all information will be greatly appreciated.

Tom

43166. Re: TS-830S RL1 or RL1 (or RL1)?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 00:24:30 UTC
From: Terry Wagoner
Topic: 43153 Message: 43166

Craig:

1. Ordinarily I would not recommend replacing components that are not broken, but I make exception with RL-1 on the Audio board and the HV filter caps. RL-1 because it is source of many intermittant problems and cleaning contacts is not easy and not a long term fix. Also may come a day when cannot find a replacement. Today you can buy a NOS replacement from Ken K4EAA and from Jim at HybridRestore. I would change it out. With the HV caps when they go they can cause collateral damage (hv rectifier diodes) and can make quite a sticky mess to clean up.

2. I believe Charles Socci is showing a TS-530 and it does not use a relay contact to switch -C voltage to the 6146 finals screen grids when the SG switch is in the OFF position in RX mode. This negative voltage makes sure the finals are cut off. By the way I dont believe this relay is available anymore either. Fortunately contact does not see any current so relay should last long time. Perhaps others know of a source for one? It is an Omron G2e. I have used spares I bought from Bob Mansker.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Craig Roberts <crgrbrts@...> wrote:
>
> Is crackling and intermittently weakened signals on reception
> immediately after T/R changeover most likely caused by a burned relay on
> the AF Board or a dirty T/R relay next the finals?
>
> Oh -- and what's with that relay on the Rectifier Board? A photo on
> Charles Socci's site shows the relay absent.
>
> Please pardon my continued ignorance. I will soon know all there is to
> know about these hybrids. (Yeah, right!) :-)
>
> 73,
>
> Craig
> W3CRR
>

43167. Re: [TS-520_820_530_830] TS-820S meter pegged, no receive.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 01:12:55 UTC
From: Joseph Stiles
Topic: 43165 Message: 43167

Tom,

first...check the "why didn't I think of that?"...make sure that the RF gain control is turned full right, or clockwise...if it's turned full ccw the meter will go full swing and you
won't hear anything. Also, a cause of "deafness"...is a missing "shorting plug" on the rear 9 pin socket...but, that should not make the meter peg out.

  Happy 4th of July....UP with the COLONIES!

73 Joe
WB7UQU

From: sparkyinchicago <kc9jzf@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, July 1, 2013 5:10 PM
Subject: [TS-520_820_530_830] TS-820S meter pegged, no receive.

Hi all! I am new to the group. I just purchased one of these fine rigs and am trying to troubleshoot the above mentioned problem. Since I went to tech school in the 70's, I am a little out of practice in the troubleshooting of discrete components. Would someone be kind enough to
tell me if this is a common issue with these rigs? I read something on the web that leads me to believe that the AGC may be involved.

Any and all information will be greatly appreciated.

Tom

[Non-text portions of this message have been removed]

43168. Re: [TS-520_820_530_830] Re: TS-830S RL1 or RL1 (or RL1)?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 01:43:24 UTC
From: Craig Roberts
Topic: 43153 Message: 43168

Thank you Terry - as always. I did change RL1 on the AF Board tonight (a surprisingly easy job, actually) and cleaned up the T/R relay while I was at it.

ALL IS WELL!

Oh -- I changed the HV caps on the day I received the radio, so that's a done deal.

I think my TS-830S is now 100 percent in all areas. It's working so well, as a matter of fact, that I would be wise to just button it up and enjoy it on the air.

Many thanks for all your help! (Now -- about that pesky VOX problem on the 530...).

VY 73,

Craig
W3CRR
>

[Non-text portions of this message have been removed]

43169. Re: TS-830S RL1 or RL1 (or RL1)?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 02:18:06 UTC
From: Terry Wagoner
Topic: 43153 Message: 43169

Well that is good. Yes probably time to button up and get it on the air. After all we do buy them to drive them.

Someday when you get bored you can pull it down and start on Step 1 of the service manual alignment steps and go thru it. It will be a learning experience for you and typically can find some areas for performance improvement. The steps are pretty good with no gross errors, but some can use some help. I consider a gross error is when wrong test point is called out, wrong adjustment component, and wrong acceptance criteria all in one step. This is a no joke if you ever try to use the 820 service manual.

Enjoy this fine radio. Will always be those who like the 820 better and those who like the 830 better. Best is to own one of each. I lean to the 830 and have two full filtered ones as well as a TS-820.

73s
Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Craig Roberts <crgrbrts@...> wrote:
>
> Thank you Terry - as always. I did change RL1 on the AF Board tonight (a
> surprisingly easy job, actually) and cleaned up the T/R relay while I
> was at it.
>
> ALL IS WELL!
>
> Oh -- I changed the HV caps on the day I received the radio, so that's a
> done deal.
>
> I think my TS-830S is now 100 percent in all areas. It's working so
> well, as a matter of fact, that I would be wise to just button it up and
> enjoy it on the air.
>
> Many thanks for all your help! (Now -- about that pesky VOX problem on
> the 530...).
>
> VY 73,
>
> Craig
> W3CRR
> >
>
>
>
> [Non-text portions of this message have been removed]
>

43170. Re: TS-820S meter pegged, no receive.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 11:37:09 UTC
From: Terry Wagoner
Topic: 43165 Message: 43170

Hi Joe:

A good question that had to be asked. Not many of us who have not had some kind of operator error. OK as long as it does not result in a crash and burn! Couple of more questions for Tom.

First of all welcome to the group.

1. What happens if you turn AGC to OFF?

2. Do you have the service manual and schematic?

3. How familiar and comfortable are you working inside the radio and taking voltage readings? If so, need to measure RF-1 at the IF board. If it is in the 3.3 to 3.5vdc range that is good. If it is very low or missing report back for further direction.

4. You can also try jumpering AGL and AGC terminals at Connector IF-3 at the IF board. If radio comes alive then remove and clean the Aux Relay contacts. Wet copy paper with DeOxit and pull thru the contacts with lite pressure on the armature. Make sure you clean the NC (normally closed) contacts. If this works you may want to consider buying a replacement relay while they are still available.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Tom,
>
> first...check the "why didn't I think of that?"...make sure that the RF gain control is turned full right, or clockwiseÂ ...if it's turned full ccwÂ the meter will go full swing and you
> won't hear anything. Also, a cause of "deafness"...is a missing "shorting plug" on the rear 9 pin socket...but, that should not make the meter peg out.
>
> Â Happy 4th of July....UP with the COLONIES!
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: sparkyinchicago <kc9jzf@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, July 1, 2013 5:10 PM

> Subject: [TS-520_820_530_830] TS-820S meter pegged, no receive.
>
>
>
> Â
> Hi all! I am new to the group. I just purchased one of these fine rigs and am trying to troubleshoot the above mentioned problem. Since I went to tech school in the 70's, I am a little out of practice in the troubleshooting of discrete components. Would someone be kind enough to
> tell me if this is a common issue with these rigs? I read something on the web that leads me to believe that the AGC may be involved.
>
> Any and all information will be greatly appreciated.
>
> Tom
>
>
>
>
> [Non-text portions of this message have been removed]
>

43171. Re: TS-820S meter pegged, no receive.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 11:55:24 UTC
From: Terry Wagoner
Topic: 43165 Message: 43171

Tom:

This may be obvious to you.

I forgot to mention any time you jumper anything in the radio you must be 125% certain you are on the right points. Especially important if doing this with the rig powered on. If any doubt in your mind just go ahead and pull the Aux Relay and clean the contacts. It might not resolve your problem, but wont hurt to clean it and no risk of damage from jumpering wrong terminals.

Terry K9TW

>
> 4. You can also try jumpering AGL and AGC terminals at Connector IF-3 at the IF board.
>
> >
> >

>

43172. RE: [TS-520_820_530_830] Re: TS-820S meter pegged, no receive.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 12:36:37 UTC
From: Tom Bryan
Topic: 43165 Message: 43172

Thank you for all of your replies.

I noticed that the meter switch has no effect on the meter, it remains pegged until I switch the power to OFF.

AGC SLOW FAST OFF has no effect.

I have downloaded the service manual and schematics.

I will remove the covers and make some voltage measurements soon. I have a disability that slows me down a bit.

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
Sent: Tuesday, July 02, 2013 6:37 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS-820S meter pegged, no receive.

Hi Joe:

A good question that had to be asked. Not many of us who have not had some kind of operator error. OK as long as it does not result in a crash and burn! Couple of more questions for Tom.

First of all welcome to the group.

1. What happens if you turn AGC to OFF?

2. Do you have the service manual and schematic?

3. How familiar and comfortable are you working inside the radio and taking voltage readings? If so, need to measure RF-1 at the IF board. If it is in the 3.3 to 3.5vdc range that is good. If it is very low or missing report back for further direction.

4. You can also try jumpering AGL and AGC terminals at Connector IF-3 at the IF board. If radio comes alive then remove and clean the Aux Relay contacts. Wet copy paper with DeOxit and pull thru the contacts with lite pressure on the armature. Make sure you clean the NC (normally closed) contacts. If this works you may want to consider buying a replacement relay while they are still available.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> , Joseph Stiles
<stilesjoseph@...> wrote:
>

> Tom,
>
> first...check the "why didn't I think of that?"...make sure that the RF gain control is turned full right, or clockwise...if it's turned full ccwÂ the meter will go full swing and you
> won't hear anything. Also, a cause of "deafness"...is a missing "shorting plug" on the rear 9 pin socket...but, that should not make the meter peg out.
>
> Â Happy 4th of July....UP with the COLONIES!
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: sparkyinchicago <kc9jzf@...>
> To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Monday, July 1, 2013 5:10 PM
> Subject: [TS-520_820_530_830] TS-820S meter pegged, no receive.
>
>
>
> Â
> Hi all! I am new to the group. I just purchased one of these fine rigs and am trying to troubleshoot the above mentioned problem. Since I went to tech school in the 70's, I am a little out of practice in the troubleshooting of discrete components. Would someone be kind enough to
> tell me if this is a common issue with these rigs? I read something on the web that leads me to believe that the AGC may be involved.
>
> Any and all information will be greatly appreciated.
>
> Tom
>
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

43173. Re: TS-820S meter pegged, no receive.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 13:30:07 UTC
From: Terry Wagoner
Topic: 43165 Message: 43173

Tom:

The panel meter will function as an S-meter in receive mode at all positions of the meter select switch. The other positions only indicate the respective parameter in transmit mode (rig keyed).

OK about no difference with AGC off. Sometimes meter will peg in Fast and Slow and be OK in OFF. There is a reason for that and pretty easy fix but no need to go into detail as not your problem.

Hopefully it will be simple as bad Aux Relay contact.

Be very careful as radio has exposed high voltage points that can hurt and maybe kill you.

I am thinking pulling the Aux Relay and cleaning it with rig off and unplugged is a good first step for you.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Tom Bryan" <kc9jzf@...> wrote:
>
> Thank you for all of your replies.
>
> I noticed that the meter switch has no effect on the meter, it remains
> pegged until I switch the power to OFF.
>
> AGC SLOW FAST OFF has no effect.
>
> I have downloaded the service manual and schematics.
>
> I will remove the covers and make some voltage measurements soon. I have a
> disability that slows me down a bit.
>
>
>
>
>
>
>
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
> Sent: Tuesday, July 02, 2013 6:37 AM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: TS-820S meter pegged, no receive.
>
>
>

>
>
> Hi Joe:
>
> A good question that had to be asked. Not many of us who have not had some
> kind of operator error. OK as long as it does not result in a crash and
> burn! Couple of more questions for Tom.
>
> First of all welcome to the group.
>
> 1. What happens if you turn AGC to OFF?
>
> 2. Do you have the service manual and schematic?
>
> 3. How familiar and comfortable are you working inside the radio and taking
> voltage readings? If so, need to measure RF-1 at the IF board. If it is in
> the 3.3 to 3.5vdc range that is good. If it is very low or missing report
> back for further direction.
>
> 4. You can also try jumpering AGL and AGC terminals at Connector IF-3 at the
> IF board. If radio comes alive then remove and clean the Aux Relay contacts.
> Wet copy paper with DeOxit and pull thru the contacts with lite pressure on
> the armature. Make sure you clean the NC (normally closed) contacts. If this
> works you may want to consider buying a replacement relay while they are
> still available.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com> , Joseph Stiles
> <stilesjoseph@> wrote:
> >
> > Tom,
> >
> > first...check the "why didn't I think of that?"...make sure that the RF
> gain control is turned full right, or clockwise...if it's turned full ccwÂ
> the meter will go full swing and you
> > won't hear anything. Also, a cause of "deafness"...is a missing "shorting
> plug" on the rear 9 pin socket...but, that should not make the meter peg
> out.
> >
> > Â Happy 4th of July....UP with the COLONIES!
> >
> >
> > Â
> > 73Â Joe
> > WB7UQU
> >
> >
> >

> > _____
> > From: sparkyinchicago <kc9jzf@>
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Monday, July 1, 2013 5:10 PM
> > Subject: [TS-520_820_530_830] TS-820S meter pegged, no receive.
> >
> >
> >
> > Â
> > Hi all! I am new to the group. I just purchased one of these fine rigs and
> am trying to troubleshoot the above mentioned problem. Since I went to tech
> school in the 70's, I am a little out of practice in the troubleshooting of
> discrete components. Would someone be kind enough to
> > tell me if this is a common issue with these rigs? I read something on the
> web that leads me to believe that the AGC may be involved.
> >
> > Any and all information will be greatly appreciated.
> >
> > Tom
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

43174. Re: [TS-520_820_530_830] Re: Need some quick advice on a totally comatose TS-830S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 13:18:49 UTC
From: Ken Webb
Topic: 43148 Message: 43174

Terry,

Many thnaks for the troubleshooting advice.

Operating/service manual and the "TS-830 Survival Manual" has been downloaded, VOM warmed up - just need the radio now!

Regards,
Ken

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, June 30, 2013 6:16 PM
Subject: [TS-520_820_530_830] Re: Need some quick advice on a totally comatose TS-830S

Hi Ken:

Make sure they have not installed an auto fuse.

Download copy of operating manual and service manual.

Ohm meter across line cord and from each leg of line cord to chassis ground = infinity

Ohm meter across line cord with power switch turned on = approx 2.23 ohms.

A good visual is in order. Look at HV filter caps from the bottom. Look at the rupture discs to see if they are bulged or leaky. Can have white crystalline powder at the vent or a brown/black sticky liquid leakage.

Look at HV rectifier board and see if HV diodes appear to be blown or cracked.

Remove PA cage cover and look at large plate choke between the two final tubes for signs of overheating.

Measure the Cathode Meter Shunt resistors on the Final board. Should read close to 5 ohms. There are four 20 ohm resistors in parallel. Sometimes they will physically fracture if finals arc over.

Might want to remove the two 6146 finals and gently shake. Should hear no rattling inside the glass envelopes.

I like to bring up a rig like this on Dim bulb tester to limit fault current and protect your transformer. Can make a very simple one with a line cord and a 120vac lamp socket with pigtail leads. Place the socket in series with the hot leg. Start with a 40 to 60 watt lamp. If it glows brite and does not dim down then have a bolted fault. See internet for plans.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "synovial_98" <synovial_98@...> wrote:
>
> Hi,
>
> I am the winning bidder on a (known) dead TS-830S. Allegedly there's no blown fuse or anything burnt. The seller suspects a bad PS. Nothing works, display does not illuminate. Rig was allegedly active until recently.
>
> Here's the obvious things that come to mind:
> Open primary winding on the PS xfmr (could be secondary too)
> The fuse really is blown - perhaps wasn't verified via VOM.
> Verify integrity of the line cord.
>
> Naturally, I'll poke around with the VOM once I get it.
>
> Is there anything else from anyone's experience that I should check?
>
> Thanks in advance for your help.
>
> Regards,
> Ken
> WB4EJZ
>

Yahoo! Groups Links

[Non-text portions of this message have been removed]

43175. Re: Need some quick advice on a totally comatose TS-830S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 15:29:16 UTC
From: Terry Wagoner
Topic: 43148 Message: 43175

Ken:

OK --My radios are all blurring together so if you need any more help please give a short reminder of the symptom along with what you have done so far to resolve the issue. I think talking about the blown fuse rig.

At some point you can read the circuit descriptions (could be developed out more but better than nothing) and follow along on the block diagram to start understanding how the radio works. Troubleshooting will start your familiarity with layout and locations,test points, adjustment points etc.

Suggest you download the Loading instructions from K4EAA site. His instructions amplify on the instructions in the manual.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Ken Webb <synovial_98@...> wrote:
>
> Terry,
>
> Many thnaks for the troubleshooting advice.
>
> Operating/service manual and the "TS-830 Survival Manual" has been downloaded, VOM warmed up - just need the radio now!
>
> Regards,
> Ken
>
>
> _____
> From: Terry Wagoner <wagstw46@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sunday, June 30, 2013 6:16 PM
> Subject: [TS-520_820_530_830] Re: Need some quick advice on a totally comatose TS-830S
>
>
> Hi Ken:
>
> Make sure they have not installed an auto fuse.
>
> Download copy of operating manual and service manual.
>
> Ohm meter across line cord and from each leg of line cord to chassis ground = infinity
>
> Ohm meter across line cord with power switch turned on = approx 2.23 ohms.
>

> A good visual is in order. Look at HV filter caps from the bottom. Look at the rupture discs to see if they are bulged or leaky. Can have white crystalline powder at the vent or a brown/black sticky liquid leakage.
>
> Look at HV rectifier board and see if HV diodes appear to be blown or cracked.
>
> Remove PA cage cover and look at large plate choke between the two final tubes for signs of overheating.
>
> Measure the Cathode Meter Shunt resistors on the Final board. Should read close to 5 ohms. There are four 20 ohm resistors in parallel. Sometimes they will physically fracture if finals arc over.
>
> Might want to remove the two 6146 finals and gently shake. Should hear no rattling inside the glass envelopes.
>
> I like to bring up a rig like this on Dim bulb tester to limit fault current and protect your transformer. Can make a very simple one with a line cord and a 120vac lamp socket with pigtail leads. Place the socket in series with the hot leg. Start with a 40 to 60 watt lamp. If it glows brite and does not dim down then have a bolted fault. See internet for plans.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "synovial_98" <synovial_98@> wrote:
> >
> > Hi,
> >
> > I am the winning bidder on a (known) dead TS-830S. Allegedly there's no blown fuse or anything burnt. The seller suspects a bad PS. Nothing works, display does not illuminate. Rig was allegedly active until recently.
> >
> > Here's the obvious things that come to mind:
> > Open primary winding on the PS xfmr (could be secondary too)
> > The fuse really is blown - perhaps wasn't verified via VOM.
> > Verify integrity of the line cord.
> >
> > Naturally, I'll poke around with the VOM once I get it.
> >
> > Is there anything else from anyone's experience that I should check?
> >
> > Thanks in advance for your help.
> >
> > Regards,
> > Ken
> > WB4EJZ
> >
>
>
>

>
> ------------------------------------
>
> Yahoo! Groups Links
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> [Non-text portions of this message have been removed]
>

43176. Re: [TS-520_820_530_830] Re: TS-820S meter pegged, no receive.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 15:36:02 UTC
From: Dave & Loraine
Topic: 43165 Message: 43176

Hi Tom,
Before you remove the covers, did you follow Joe's advice?
"make sure that the RF gain control is turned full right, or clockwise..."
73 Dave f4eyk

[Non-text portions of this message have been removed]

43177. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 16:25:00 UTC
From: Don D
Topic: 43023 Message: 43177

Hi All
Just a update on my problem with no LSB output
I did the carrier balance adjustment on the if unit as per the
manual.
It said to adjust tc2 and trimpot vr4 alternately.
Adjusting vr4 did nothing,so i tried keying the mike and adjusting vr4
and tc2 and was able to get output.
The alc meter was not kicking as high as USB was,so i just cranked up
the mic more on LSB and i got good signal reports.

I think one of my tubes has gone kaput.
I now have no ip reading and the bias test,will only yield 150 ma's full
I get only 50 watts out,half the power and half bias output

As i have to get some new tubes i will wait until i get them before
doing any more test's with those mixed tubes.
In the meantime i am trying to custom fit a DS1 convertor on it as i
don't have a DS2
Wish me luck as i will need it

73
Don/Ve2ud

43178. Re: [TS-520_820_530_830] Re: TS-830S,need help

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 17:12:22 UTC
From: ravi sumith
Topic: 43153 Message: 43178

Hi Terry,

Thanks for the information from your notes.

Yes, it is a SG-402. I have the manual some where with my other books. If I can remember correct, out put is around 1vdc max. But when I checked with a RF probe & DMM. max it gives is 860 milivolts.

Let me give you the results of my tests to-day.I can not go down to micro volts range in my sig.gen

Connected my freq.counter to the sig,gen and adjusted to 8.83Mhz. Measured it's out put level with RF probe/DMM. The lowest I can go is upto 8 milivolts.Beyond that freq.counter does not read.So with that level of signal:-

1. Injected 8.30Mhz/8milivolts signal to TP-2 - No s-meter indication either on fast or slow But audio was good (AF gain control at 9 o'clock position & RF control fully CW). When I rotate RF control to 12 o'clock position,s-meter goes up and stay & audio is low (which is normal I believe).

2. Then injected 14.200Mhz/8milivolts signal to TP-4 via DC blocking cap - Results are same except audio was very slightly distorted

My thinking on above tests is that IF chain is good,product detector & AF amp are OK but have a question on AGC bus voltage.

3. Injected the same signal as 2 above to RB1 terminal.- Low audio even peak with DRIVE. No indication on S-meter.When I move the RF gain control to 12 o'clock position,no audio at all. (does this means Q1 device is bad?)

In all above tests,I kept the AF gain control at 9 o'clock position,RF control fully CCW and MODE at USB..

4. Then I checked the voltage at RB1 -connection 8 Pin 2 terminal with a DMM and it reads 1.03V and -3.28V when SEND switch flip up.-Does this means RL-1 relay contact is good and dc bias on Q1 is OK?

5. Injected a 8milivlots signal at TP-1 terminal and checked all bands peaking with DRIVE. Audio is good except in 1.5Mhz band where it is low.

Is the problem with L41 or D2 on RF board?

Appreciate your help.

73's de 4s6rav (Ravi)

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com

Sent: Tuesday, 2 July 2013 5:27 AM
Subject: [TS-520_820_530_830] Re: TS-830S,need help

Ravi:

Is the generator a SG-402? Are you saying level being injected is with switch to Low position and the Gain pot full CCW? Do you have the manual for this generator? What does is say about the output level? I have never owned or operated this model. This style generator often has very high leakage and what you may be seeing is signal not coming down the test lead, but being radiated and picked up by your TS520SE.

In any event you know that with your TS520SE you get speaker audio and high S-meter indication with the generator set to its lowest level and get nothing out of the 830 with this same level injected.

Yes make sure to use DC blocking/coupling cap. Keep us posted of your progress. Should be pretty easy to isolate the problem with signal injection. I hope it is not L41. Need good eyes and steady hands otherwise end up breaking lots of hair fine wire!

Here is reminder about levels you will need injecting at Conn 8 Pin 2 vs directly at Gate 1 of Q1. These are from my TS830 notes with 14.200 mhz signal and Drive control peaked at 1200 and RF gain pot full CW and VFO tuned for max S-meter indication on USB.

1. Inject 50uv or -73dBM at SO-239 = S9
2. Inject 50uv at Conn 8 Pin 2 = S0. It will take approx 5mv or -33dBm signal level at Conn 8 Pin 2 to get S9 indication.
3. Inject 50uv directly at Gate 1 of Q1 = S7. It will take approx 500uv or -53dBm signal level injected directly at Gate 1 of Q1 for S9 indication.

You are no bother. Keep us posted.

73s
Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, ravi sumith <mindover2003@...> wrote:
>
> Terry: Sorry to worry you again.But thought I'll do the test you said.
> I connected sig.genny to my 520se,Here are the results.This is at lowest out put level of the genny.
>
> On 7.200 MhzÂ and on 3.600 Mhz - S-meter indicating S9+15db- Audio is normal
> On 14.175 Mhz - it is full scale (S9+40db) and audio slightly distorted.
>
> I kept the controls of the sig.genny as it is and then connected 830. No indication on S-meter on any band,even the AGC switch set to off,slow or fast.
>
> It is 9 pm here now.So thought to postponed it for tomorrow. If time permits,what I will do is:-
> Inject a signal at 8.830mhz with the same signal level to TP-2 on RF board.
> Inject a 14.200mhz signal at same level (of course with a DC blocking cap) to TP-4 on the RF board
> Will test the Q1 by injecting the same signal at Connection 8 Pin 2

> Will measure the Q1 bias voltage at RB1 terminal.
>
> Will come back & share the results.
>
> Thanks
> Ravi-4s6rav
>
>
>
>
> _____
> From: ravi sumith <mindover2003@...>
> To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
> Sent: Monday, 1 July 2013 8:12 PM
> Subject: Re: [TS-520_820_530_830] Re: TS-830S,need help
>
>
>
> Â
> Hi Terry,
>
> Thanks for the reply.
>
> S-meter shows a strength of S9 on all bands and stay there as long as I keep sig.gen connected.Audio tone from the speaker is normal
> My sig.gennyÂ is Trio SG 402 I guess it is putting out a high level signal.
> I have a working 520S.I will inject a signal to it and use the same position of the genny to 830. Will come back.
> If antenna transformer is bad,I know there is no replacement but to re-wind it.Am bit nervous of doing any tinny work as my eye sight is not that great due to my age.(54+ now)
>
> 73's
> Ravi-4s6rav
>
> From: Terry Wagoner <wagstw46@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, 1 July 2013 3:58 PM
> Subject: [TS-520_820_530_830] Re: TS-830S,need help
>
>
> Â
> Hi Ravi:
>
> When you injected RF into antenna connector and TP-1 you say that the S-meter "kicked" to S9 on all bands. Does that mean it spiked or kicked up to S9 momentarily and then fell back to zero or did it go to S9 and stay there as long as you had sig gen connected?
>
> Do you know what level you are injecting from the signal generator? If Marker signal is still very low on all bands it sounds like you have a very high level from your rf sig gen unless Marker is bad which is unlikely. Some of the sig gens are capable of 1.0 volt or

greater. You need approx 50uv or -73dBm level for an S9 indication.
>
> If it stays there what does the audio tone from the speaker sound like? Is it normal volume level? Is it distorted?
>
> Do you have another rig that you can inject the sig gen into? If so, do that and set the Sig Gen rf output level for an S9 indication on the good rig and do not move that output level setting. That setting will be close to approx 50uv. Now reinject into the bad rig and see if there is now no S meter indication. If so, then inject at Gate 1 of RF amp Q1. If you now get good audio and S9 indication it is telling you that L41 is bad.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "Ravi" <mindover2003@> wrote:
> >
> > Hello Friends,
> >
> > Am working on my friend's (4s7WN)TS-830S. The rig has not been used for quite some time. When switched on, I`ve noticed that:
> >
> > No band noise in RX in any band.
> > No S-meter indication In RX with antenna
> > HV position shows 850 Vdc
> > No ALC. Can not load in any band
> > Marker signal is very week other than on 40 meters but S-meter is not kicking to marker signal
> >
> > I cleaned switches, relays,(relay in the audio board sprayed with contact cleaner)pots and band switch twice with `Servisol' and also removed & fixed molex connectors. I've checked the rectifier board and found some resistors were out of tolerance, so replaced R1-R4 and R15 & R16.Thereafter, checked the voltages in all boards. They are with in specs. I removed the VFO, sprayed the rear wiper with contact cleaner and lubed the front bearing with drop of sewing machine oil. I wanted to first try and fix the RX side so removed all valves and powered on.
> > Now:-
> > Can hear band noise on 40 meters but on other bands it is very low even if I peak with DRIVE
> > Can hear the marker signal on all bands but no S-meter response
> > I can hear broadcasting stations on 40 meters, again no s-meter response.
> >
> > I injected a signal to antenna connector and also to TP1 terminal on RF broad using my Trio signal generator, S-meter kicks on all bands showing S9 to S9+ level.
> >
> > I believe band switch is the culprit for low RX. Grateful for any help.
> >
> > I have a VTVM with a single diode RF probe, Frequency counter,RF signal generator and couple of DMM's and of course schematic & service manual for 830
> >
> > Thanks
> > Ravi - 4S6RAV
> >

>
> [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

43179. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 17:21:05 UTC
From: Terry Wagoner
Topic: 43023 Message: 43179

Don:

You should not be adjusting TC-2 and VR-4 for LSB output. Is this a typo? You adjust VR-4 and TC-3 for Balanced Modulator carrier suppression or null.

This is done after completing the SSB Frequency Response adjustment detailed in Step 30. Some call this step the Carrier Set Point adjustment. Here you will be setting both the LSB and USB Carrier Osc trimmers to set the 3dB roll off to the factory recommended low and high audio frequencies.

To do Carrier null I connect a Pl-259 connector with two 100 ohm resistors in parallel across the center to shell to the rig SO-239. You can measure across this small 50 ohm dummy load with your RF probe/VTVM, RF millivolt meter, or O-scope. You alternately adjust VR-4 and TC-3 for lowest RF voltage. You do it in LSB and USB until you get about same low level of rf voltage in each mode. Have to go back and forth multiple times for best balanced null. Not possible to get a complete null. Another way that works pretty well is to set another receiver next to the rig and tune to same frequency and listen to the null. See Step 29.

Regards Step 30 you do this at 50 watts because you will be having longer than normal keydown times to adjust TC-2 LSB and TC-3 USB trimmer caps at 300hz and 2700hz. Limiting the power to 50 watts keydown with 5mv to 7 mv audio injected in to the mic line is easier on the Final tubes. You will adjust the respective trimmer until you see approx 25 watts at each frequency which represents the 3dB roll off points.

Your statement about having no IP makes no sense when you say the bias test only produces 150ma. If you can read 150ma then you have Ip. When you say "bias test" are you saying you are varying the bias voltage pot for maximum plate current and watching IP to see if it holds? If so, have to be very careful doing this test. Have to make sure you have a good clean smooth bias pot and never exceed 300ma for just a couple of seconds. I dont recommend this test for average person.

It is possible you have damaged a final tube. Also, what is your plate voltage doing. If you have lost a HV cap can also have half power output.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@...> wrote:
>
> Hi All
> Just a update on my problem with no LSB output
> I did the carrier balance adjustment on the if unit as per the
> manual.
> It said to adjust tc2 and trimpot vr4 alternately.
> Adjusting vr4 did nothing,so i tried keying the mike and adjusting vr4
> and tc2 and was able to get output.
> The alc meter was not kicking as high as USB was,so i just cranked up

> the mic more on LSB and i got good signal reports.
>
> I think one of my tubes has gone kaput.
> I now have no ip reading and the bias test,will only yield 150 ma's full
> I get only 50 watts out,half the power and half bias output
>
> As i have to get some new tubes i will wait until i get them before
> doing any more test's with those mixed tubes.
> In the meantime i am trying to custom fit a DS1 convertor on it as i
> don't have a DS2
> Wish me luck as i will need it
>
> 73
> Don/Ve2ud
>

43180. TS-820S -- recently repaired, possible alignment necessary?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 16:47:27 UTC
From: w3drk
Topic: 43180 Message: 43180

I recently came into position of a TS-820S with a fried transformer and considerable damage the finals (burned chokes and cathode resistors) and it somehow managed to fry the plate current multiplier resistor (meter still OK) and damage to the BIAS switching on the RF board as well.

The transformer has been replaced, I repaired the finals, new old stock RCA 6146Bs and driver, and after replacing a few fried resistors and an open transistor on the RF board, it seems to receive and transmit well with one exception. The when peaking the receiver with the drive control, its nowhere near peaking the ALC deflection when transmitting. And when transmitting on 20 meters the drive is fully clockwise but hasn't peaked. The behavior is similar with the screen off when neutralizing and watching RF output on a scope...on 20 meters the output from the driver never peaks even with drive fully clockwise.

Am I right to assume it may be necessary for me to walk through Clif's "Simplified and quick alignment" procedure? Before I touched the alignment I figured I'd best check with the Hybrid experts first. Unless someone was tinkering with the cans or swapped the RX board from another radio can't imagine the alignment would be so far out...perhaps there is a damaged component I may have missed that's affecting the alignment?

By the way, 9v from the AF-AVR board is a solid 9v.

Any tips? Safe to proceed with alignment or any other suspect damage I should be looking for first?

Thanks!
Dieter - W3DRK

43181. RE: [TS-520_820_530_830] Re: TS-820S meter pegged, no receive.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 17:00:16 UTC
From: Tom Bryan
Topic: 43165 Message: 43181

Thanks for pointing that out Dave. I did check that setting as I have the same one on my Icom. But, I have been known to forget the simple stuff

so I do appreciate the reminder.

73's

Tom

KC9JZF

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Dave & Loraine
Sent: Tuesday, July 02, 2013 10:36 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: TS-820S meter pegged, no receive.

Hi Tom,
Before you remove the covers, did you follow Joe's advice?
"make sure that the RF gain control is turned full right, or clockwise..."
73 Dave f4eyk

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

43182. Lessons learned

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 17:46:40 UTC
From: Craig Roberts
Topic: 43165 Message: 43182

This is primarily aimed at newbies -- like me -- who have just joined the Kenwood hybrid community.

I am a convert. As proof of my new obsession, I have now purchased three hybrids - two TS-530Ss and a TS-830S. One of the 530s is in the expert hands of Jim Showker. The radio was essentially unused in mint cosmetic condition and still in its original, unmolested boxes when I obtained a month or so ago. And that was the problem. Decades of disuse rendered the radio pretty much inoperative due to tarnish and corrosion on connectors and contacts. Jim and his boys are bringing it back to life now.

Although I have no regrets whatsoever about sending my mint prize to Jim, I now realize that I may very well have been able to resurrect this radio myself (although, admittedly, I don't have the nifty lab gear -- sweep generator and such -- to do the very best post-service alignment possible.

I worked on the other two radios personally with the invaluable aid of friends on this reflector and have both Kenwoods working very nicely now. The quality of their construction makes repairing these wonderful radios a fairly painless task. Here are some lessons learned from my experience:

* Firstly, do NOT be offended by the oft-repeated advice to unplug your radio, let it sit idle for a spell and then discharge the HV components through the top of the plate choke in the finals cage before poking your fingers into or even near the machine's innards. Your friends are not assuming you're an idiot or careless when they pass along this counsel -- they're genuinely concerned about your welfare. It never hurts to be reminded. It does hurt to be bitten by 800 volts (though not necessarily for long).

* It has been recommended that the HV caps should be changed out as a matter of course upon receipt of your new/old hybrid (unless the previous owner has done so). Jim Showker and Ken Kemski both sell HV cap replacement kits that include the attendant resistors and caps. The job is easy and serves as a good introduction to the bowels of the radio.

* As has been mentioned time and time again, MOST problems from stock hybrids (unmodified or otherwise not messed with by previous owners) are due to tarnish and corrosion. The primary suspect is the band switch, the bane of nearly all older rigs, thanks to their vulnerability and mysteriously delicate construction. A gentle, thorough cleaning of all wafers, including those in the finals cage,

cures many ills. DO THIS FIRST (unless your radio's working okay to begin with).

* The same goes for the circuit board plugs and headers (if you think these Kenwoods are bad about this, try working on a Drake TR-7). Unplug them gently, wipe the headers with a contact cleaner moistened Q-Tip and replace the plugs. Some of the plugs are in awkward places for hammy fingers to grab. I use a pair of needle nose pliers with plastic tubing slipped over the tips to extract these plugs. I haven't killed one yet.

* Relays are another vulnerable component. The antenna relay next to the finals on the underside of the radio (hidden by an easily removable metal shield) is subject to corroded or tarnished contacts. This can lead to "iffy" recovery in the transmit/receive cycle. The relay is a plug-in device (hooray!) and can be removed readily. The unsealed plastic cover can be snapped off (gently work the little tabs on either side of the base) and the contacts cleaned with a thin strip of paper moistened with contact cleaner. Don't be tempted to burnish the contacts with an abrasive of any kind - you'll do more harm than good). A replacement relay is available if yours is shot or damaged for some reason (possibly abused by a sandpaper wielding former owner).

* If cleaning the antenna relay doesn't clear up your T/R problems (like receiver noise and slow recovery or intermittent signal attenuation), you may need to replace the pretty much unserviceable RL1 on the AF Board. (Again, replacements are available from Ken Kemski and Jim Showker). This task looks a LOT more daunting than it actually is. Getting to the underside of the AF Board is simply a matter of undoing the screws that hold the frame surrounding the board itself to the chassis and unscrewing a ground lug connection to the chassis at the rear of the board. No unsoldering of wires connected to the board is necessary and you probably don't need to unplug anything (though I did to clean the headers, etc.). You can simply flip the frame and board assembly over and go to work with your desoldering tool or, in my case, 25 watt miniature iron and Soder-Wick. It took less than ten minutes to remove the old relay and install the replacement. The result was dramatic. Not only did my T/R problems disappear, the receiver audio actually sounded considerably better. Who knew?

* One other repair that I performed on my TS-830S was necessitated by a total lack of drive in the TUNE position. Our resident guru, Terry, suggested the problem might lie with R15 and/or R16 -- screen voltage dividers on the Rectifier Board. I tested them and, sure enough, R15 was open. I replaced both -- just 'cuz I was there -- and the TUNE function sprang to life. I am told that this problem is not altogether uncommon. Once again, access to the underside of the affected board was simple and the component replacement task quick and easy.

I will confess that I was shy initially about working on these radios myself. Sure, I have restored to as-new condition such densely packed beasts as the Hallicrafters SX-28 and SX-42 receivers, the Hammarlund SP-600 and the Collins R-388. For whatever reason, though, I thought the Kenwoods -- totally foreign to me (yuk-yuk) -- would be at least as intimidating. I was wrong. The TS-530S and TS-830S (and, I suspect, the 520 and 820) are a joy to work on. Their modular construction and excellent build quality make most service tasks, if not always dead simple, at least doable by the average guy who can harmlessly wield a screwdriver, needle nose pliers and soldering iron.

Best of all, once you're done fiddling you'll end up with a truly wonderful radio.

SINCERE THANKS TO JIM, KEN, TERRY AND ALL OTHERS WHO HAVE ENCOURAGED AND COACHED ME. I'll probably be back with more mysteries and queries before long, but I've learned a lot thus far, thanks to y'all.

VY 73,

Craig
W3CRR

[Non-text portions of this message have been removed]

43183. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 17:58:07 UTC
From: Don
Topic: 43023 Message: 43183

Terry

Yes it is a typo error as i am using the original manual that came with this rig,and i went and got another manual to check against it and sure enough,it said TC-3 and not TC-2.

I went to adjust the drive coils and i think the tube went puff as the fuse blew.
I replaced the fuse and thought all was ok until i tried to load the rig.
I could get my 60ma ok and good ALC reading,but when i went to dip the plate there was no reading at all.
I did the tube test by-----Testing Tubes, a previous post by Bill, K0ZL,and only got 150ma full adjustment and it should read at least 200ma.
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HV test was about 850 watts
Hard to start this tech stuff very late in life.but on the other hand i think i have more fun learning this side of the hobby instead of just being a DX chaser.

Don/ve2ud

On 02/07/2013 1:21 PM, Terry Wagoner wrote:
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> Don:
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> You should not be adjusting TC-2 and VR-4 for LSB output. Is this a
> typo? You adjust VR-4 and TC-3 for Balanced Modulator carrier
> suppression or null.
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> This is done after completing the SSB Frequency Response adjustment
> detailed in Step 30. Some call this step the Carrier Set Point
> adjustment. Here you will be setting both the LSB and USB Carrier Osc
> trimmers to set the 3dB roll off to the factory recommended low and
> high audio frequencies.
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> To do Carrier null I connect a Pl-259 connector with two 100 ohm
> resistors in parallel across the center to shell to the rig SO-239.
> You can measure across this small 50 ohm dummy load with your RF
> probe/VTVM, RF millivolt meter, or O-scope. You alternately adjust
> VR-4 and TC-3 for lowest RF voltage. You do it in LSB and USB until
> you get about same low level of rf voltage in each mode. Have to go
> back and forth multiple times for best balanced null. Not possible to
> get a complete null. Another way that works pretty well is to set
> another receiver next to the rig and tune to same frequency and listen
> to the null. See Step 29.

>
> Regards Step 30 you do this at 50 watts because you will be having
> longer than normal keydown times to adjust TC-2 LSB and TC-3 USB
> trimmer caps at 300hz and 2700hz. Limiting the power to 50 watts
> keydown with 5mv to 7 mv audio injected in to the mic line is easier
> on the Final tubes. You will adjust the respective trimmer until you
> see approx 25 watts at each frequency which represents the 3dB roll
> off points.
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> Your statement about having no IP makes no sense when you say the bias
> test only produces 150ma. If you can read 150ma then you have Ip. When
> you say "bias test" are you saying you are varying the bias voltage
> pot for maximum plate current and watching IP to see if it holds? If
> so, have to be very careful doing this test. Have to make sure you
> have a good clean smooth bias pot and never exceed 300ma for just a
> couple of seconds. I dont recommend this test for average person.
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> It is possible you have damaged a final tube. Also, what is your plate
> voltage doing. If you have lost a HV cap can also have half power output.
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> Terry K9TW
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> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Don D" <ve2ud@...> wrote:
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> > Hi All
> > Just a update on my problem with no LSB output
> > I did the carrier balance adjustment on the if unit as per the
> > manual.
> > It said to adjust tc2 and trimpot vr4 alternately.
> > Adjusting vr4 did nothing,so i tried keying the mike and adjusting vr4
> > and tc2 and was able to get output.
> > The alc meter was not kicking as high as USB was,so i just cranked up
> > the mic more on LSB and i got good signal reports.
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> > I think one of my tubes has gone kaput.
> > I now have no ip reading and the bias test,will only yield 150 ma's full
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> > As i have to get some new tubes i will wait until i get them before
> > doing any more test's with those mixed tubes.
> > In the meantime i am trying to custom fit a DS1 convertor on it as i
> > don't have a DS2
> > Wish me luck as i will need it
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> > 73
> > Don/Ve2ud
> >
>
>

[Non-text portions of this message have been removed]

43184. Re: TS-830S,need help

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 19:04:10 UTC
From: Terry Wagoner
Topic: 43153 Message: 43184

Ravi:

1. Injected 8.30Mhz/8milivolts signal to TP-2 - No s-meter indication either on fast or slow But audio was good (AF gain control at 9 o'clock position & RF control fully CW). When I rotate RF control to 12 o'clock position,s-meter goes up and stay & audio is low (which is normal I believe).

My Response:

Yes rotating RF GAIN pot from full CW to 1200 should produce upscale movement of the S-meter. Should have approx S8 TO S9 indication at 1200 position of RF gain pot.

No reason to test any further back from TP-2 on the RF board. Assuming Conn 5 and its solder connections are good then problem has to be on the IF board. Q1 and L41 have nothing to do with substitute 8mv RIF signal not producing S-meter indication.

Injecting 8mv @ 8.830mhz at TP-2 should produce approx 30 over S-9 S-meter indication.

Do the following:

1. Measure RFG voltage at Conn 6 on IF board. With RF gain pot at full CW position should read approx 3.6vdc.

2. CAUTION: Measure AGC voltage at Conn 15 Pin 3 brown wire. Do not rely on the brown wire. Make sure you are on Pin 3 and not Pin 1 where there is 300vdc present. Depending on input Z of your meter the AGC bus voltage will read low and drive the S-meter up scale. A 11meg VTVM will read approx 3.0vdc and S meter will read S4 to S5.

3. If above tests are all good then inject 8.830 at IF board as follows:

A. At IF board Conn 6 pin 6 inject 8mv @ 8.830mhz and see if S-meter comes alive. If it does, the problem is between Conn 6 on IF board and Conn 5 on RF board. If it does not, then need to move down the IF chain injecting until you find where it is being lost. Problem is there are not many good test points in the path.

B. Go to IF01 on rear panel and inject same 8mv @ 8.830mhz. If comes alive then problem is with Q1 RIF amp. If it does not then move down to the filter switching diodes and inject there. Once you get past Q2/Q3 Mixer will have to change frequency to 455khz.

Lastly, are you certain you have an 8mv signal? Can you inject into a known good rig? Another hybrid would be good. 8mv @ 8.830mhz into the coax connector on rear panel will give approx S4 to S5 indication and using 14.2mhz @ 8mv will give approx 40 over S-9 indication.

Terry K9TW

43185. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 19:18:25 UTC
From: Terry Wagoner
Topic: 43023 Message: 43185

Don:

As I said I do not recommend the K0ZL tube test. I had forgot it was in the files section. If it were up to me it would not be there.

As I mentioned you better have a good clean smooth bias pot. It only takes a moment to have finals glowing red hot and be destroyed as you move this pot for first time perhaps in years into uncharted waters.

What is wrong with setting the resting plate current to 60ma and then loading rig into a dummy load to 100 watts output and then reading plate current? If you can do that at approx 225ma Ip your finals are fine. A much safer and controlled test and not DC static test, but a dynamic test with RF drive as the tubes will see in real operation.

Just my opinion.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
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> [Non-text portions of this message have been removed]
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43186. Re: [TS-520_820_530_830] Lessons learned

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 20:01:19 UTC
From: Joseph Stiles
Topic: 43165 Message: 43186

Craig,

  Your comments are well appreciated. I too, was a "newbie" a few years ago. Several members of this board helped me over come some...ok...a lot of ....."lack of knowledge." I am still no where near as good as Terry(k9tw), Mike(w5rkl), or Gordon(n6wk). I try and help where I can. Glad you got the ol' girl workin'. Hey...I still have a scar on my fore arm where I got "bit" by some RF volts...'cause I was in a hurry...won't do that again. That's why me, and others warn about discharging voltage.

  Happy 4th of July....UP the the COLONIES!

73 Joe
WB7UQU

From: Craig Roberts <crgrbrts@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, July 2, 2013 10:46 AM
Subject: [TS-520_820_530_830] Lessons learned

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components through the top of the plate choke in the finals cage before poking your fingers into or even near the machine's innards. Your friends are not assuming you're an idiot or careless when they pass along this counsel -- they're genuinely concerned about your welfare. It never hurts to be reminded. It does hurt to be bitten by 800 volts (though not necessarily for long).

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43187. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 20:19:56 UTC
From: Don
Topic: 43023 Message: 43187

Terry
That's the problem,as i can not load it up
Here is the step's i take.
First check ip for 60ma, ok
next,meter to ALC,,good peak
next meter to ip,in tune position,flip send and nothing on the
meter,nothing to dip
I then put the meter on RF and peak the plate and load,which will give
me about 50 watts out.
Note,the load control will flicker,when i try to peak the plate and load
in the RF position.

Maybe this would help me

http://www.usnews.com/news/articles/2013/07/01/could-an-italian-scientist-pave-the-way-for
-human-head-
<http://www.usnews.com/news/articles/2013/07/01/could-an-italian-scientist-pave-the-way-fo
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43188. Re: [TS-520_820_530_830] Lessons learned

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 19:49:02 UTC
From: Geoff Hegarty
Topic: 43165 Message: 43188

Dear Craig

Thanks for taking the time to spell all that out. As someone just embarking on restoring an old 530, I found your experience quite inspirational. I feel much more confident about my own project now.

Best regards
Geoff VK2HQA

From: Craig Roberts <crgrbrts@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, 3 July 2013 3:46 AM
Subject: [TS-520_820_530_830] Lessons learned

This is primarily aimed at newbies -- like me -- who have just joined the Kenwood hybrid community.

I am a convert. As proof of my new obsession, I have now purchased three hybrids - two TS-530Ss and a TS-830S. One of the 530s is in the expert hands of Jim Showker. The radio was essentially unused in mint cosmetic condition and still in its original, unmolested boxes when I obtained a month or so ago. And that was the problem. Decades of disuse rendered the radio pretty much inoperative due to tarnish and corrosion on connectors and contacts. Jim and his boys are bringing it back to life now.

Although I have no regrets whatsoever about sending my mint prize to Jim, I now realize that I may very well have been able to resurrect this radio myself (although, admittedly, I don't have the nifty lab gear -- sweep generator and such -- to do the very best post-service alignment possible.

I worked on the other two radios personally with the invaluable aid of friends on this reflector and have both Kenwoods working very nicely now. The quality of their construction makes repairing these wonderful radios a fairly painless task. Here are some lessons learned from my experience:

* Firstly, do NOT be offended by the oft-repeated advice to unplug your radio, let it sit idle for a spell and then discharge the HV components through the top of the plate choke in the finals cage before poking your fingers into or even near the machine's innards. Your friends are not assuming you're an idiot or careless when they pass along this counsel -- they're genuinely concerned about your welfare. It never hurts to be reminded. It does hurt to be bitten by 800 volts (though not necessarily for long).

* It has been recommended that the HV caps should be changed out as a matter of course upon receipt of your new/old hybrid (unless the previous owner has done so). Jim Showker and Ken Kemski both sell HV cap replacement kits that include the attendant resistors and caps. The job is easy and serves as a good introduction to the bowels of the radio.

* As has been mentioned time and time again, MOST problems from stock hybrids (unmodified or otherwise not messed with by previous owners) are due to tarnish and corrosion. The primary suspect is the band switch, the bane of nearly all older rigs, thanks to their vulnerability and mysteriously delicate construction. A gentle, thorough cleaning of all wafers, including those in the finals cage, cures many ills. DO THIS FIRST (unless your radio's working okay to begin with).

* The same goes for the circuit board plugs and headers (if you think these Kenwoods are bad about this, try working on a Drake TR-7). Unplug them gently, wipe the headers with a contact cleaner moistened Q-Tip and replace the plugs. Some of the plugs are in awkward places for hammy fingers to grab. I use a pair of needle nose pliers with plastic tubing slipped over the tips to extract these plugs. I haven't killed one yet.

* Relays are another vulnerable component. The antenna relay next to the finals on the underside of the radio (hidden by an easily removable metal shield) is subject to corroded or tarnished contacts. This can lead to "iffy" recovery in the transmit/receive cycle. The relay is a plug-in device (hooray!) and can be removed readily. The unsealed plastic cover can be snapped off (gently work the little tabs on either side of the base) and the contacts cleaned with a thin strip of paper moistened with contact cleaner. Don't be tempted to burnish the contacts with an abrasive of any kind - you'll do more harm than good). A replacement relay is available if yours is shot or damaged for some reason (possibly abused by a sandpaper wielding former owner).

* If cleaning the antenna relay doesn't clear up your T/R problems (like receiver noise and slow recovery or intermittent signal attenuation), you may need to replace the pretty much unserviceable RL1 on the AF Board. (Again, replacements are available from Ken Kemski and Jim Showker). This task looks a LOT more daunting than it actually is. Getting to the underside of the AF Board is simply a matter of undoing the screws that hold the frame surrounding the board itself to the chassis and unscrewing a ground lug connection to the chassis at the rear of the board. No unsoldering of wires connected to the board is necessary and you probably don't need to unplug anything (though I did to clean the headers, etc.). You can simply flip the frame and board assembly over and go to work with your desoldering tool or, in my case, 25 watt miniature iron and Soder-Wick. It took less than ten minutes to remove the old relay and install the replacement. The result was dramatic. Not only did

my T/R problems disappear, the receiver audio actually sounded considerably better. Who knew?

* One other repair that I performed on my TS-830S was necessitated by a total lack of drive in the TUNE position. Our resident guru, Terry, suggested the problem might lie with R15 and/or R16 -- screen voltage dividers on the Rectifier Board. I tested them and, sure enough, R15 was open. I replaced both -- just 'cuz I was there -- and the TUNE function sprang to life. I am told that this problem is not altogether uncommon. Once again, access to the underside of the affected board was simple and the component replacement task quick and easy.

I will confess that I was shy initially about working on these radios myself. Sure, I have restored to as-new condition such densely packed beasts as the Hallicrafters SX-28 and SX-42 receivers, the Hammarlund SP-600 and the Collins R-388. For whatever reason, though, I thought the Kenwoods -- totally foreign to me (yuk-yuk) -- would be at least as intimidating. I was wrong. The TS-530S and TS-830S (and, I suspect, the 520 and 820) are a joy to work on. Their modular construction and excellent build quality make most service tasks, if not always dead simple, at least doable by the average guy who can harmlessly wield a screwdriver, needle nose pliers and soldering iron.

Best of all, once you're done fiddling you'll end up with a truly wonderful radio.

SINCERE THANKS TO JIM, KEN, TERRY AND ALL OTHERS WHO HAVE ENCOURAGED AND COACHED ME. I'll probably be back with more mysteries and queries before long, but I've learned a lot thus far, thanks to y'all.

VY 73,

Craig
W3CRR

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43189. Re: [TS-520_820_530_830] Lessons learned

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 21:03:40 UTC
From: Craig Roberts
Topic: 43165 Message: 43189

I must emphasize that every bit of the admittedly scant but useful knowledge I have on these hybrids came directly from our online friends here and from Jim and Ken's terrific websites (and links from them).

This is a great online community.

I know you'll enjoy your 530, from start to finish.

73,

Craig
W3CRR
>

[Non-text portions of this message have been removed]

43190. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 21:58:08 UTC
From: Terry Wagoner
Topic: 43023 Message: 43190

Don:

OK first of all no need to check the resting plate current every time you load up your rig. Set it to 60ma and should be good for quite some time. So for the near term dont worry about it.

Try loading in CW mode. Have to do this quickly.

After peaking the Drive in Tune mode then unkey the rig and place in CW mode and place meter selector switch in IP. Get hand on the Plate Capacitor then flip to send and see if you have plate current indication and quickly adjust the Plate capacitor for a dip. It may not dip at the white band reference mark on the arc behind the knob and that is OK for now. If you cannot get a dip anywhere in the travel unkey the rig.

If you get a dip then switch to RF meter position and tune the Plate and Load capacitors for maximum relative power on the meter. When done unkey rig. Switch the meter to IP and key rig again and make sure not exceeding 260ma.

Report back your findings.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
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> Terry
> That's the problem,as i can not load it up
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> next meter to ip,in tune position,flip send and nothing on the
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> Note,the load control will flicker,when i try to peak the plate and load
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43191. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 22:25:07 UTC
From: Don
Topic: 43023 Message: 43191

Terry
Will print this out as usual and have a go at it later tonight.
I did check the voltages out on the tubes and all seemed close to spec's

Many Thanks
Don/Ve2ud

On 02/07/2013 5:58 PM, Terry Wagoner wrote:
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> Don:
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> OK first of all no need to check the resting plate current every time
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> > > bias
> > > > > test only produces 150ma. If you can read 150ma then you have Ip.
> > > When
> > > > > you say "bias test" are you saying you are varying the bias
> voltage
> > > > > pot for maximum plate current and watching IP to see if it
> holds? If
> > > > > so, have to be very careful doing this test. Have to make sure you
> > > > > have a good clean smooth bias pot and never exceed 300ma for
> just a
> > > > > couple of seconds. I dont recommend this test for average person.
> > > > >
> > > > > It is possible you have damaged a final tube. Also, what is your
> > > plate
> > > > > voltage doing. If you have lost a HV cap can also have half power
> > > output.
> > > > >
> > > > > Terry K9TW
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com

> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Don D"
> <ve2ud@> wrote:
> > > > > >
> > > > > > Hi All
> > > > > > Just a update on my problem with no LSB output
> > > > > > I did the carrier balance adjustment on the if unit as per the
> > > > > > manual.
> > > > > > It said to adjust tc2 and trimpot vr4 alternately.
> > > > > > Adjusting vr4 did nothing,so i tried keying the mike and
> > > adjusting vr4
> > > > > > and tc2 and was able to get output.
> > > > > > The alc meter was not kicking as high as USB was,so i just
> > > cranked up
> > > > > > the mic more on LSB and i got good signal reports.
> > > > > > >
> > > > > > I think one of my tubes has gone kaput.
> > > > > > I now have no ip reading and the bias test,will only yield 150
> > > ma's full
> > > > > > I get only 50 watts out,half the power and half bias output
> > > > > > >
> > > > > > As i have to get some new tubes i will wait until i get them
> before
> > > > > > doing any more test's with those mixed tubes.
> > > > > > In the meantime i am trying to custom fit a DS1 convertor on
> it as i
> > > > > > don't have a DS2
> > > > > > Wish me luck as i will need it
> > > > > > >
> > > > > > 73
> > > > > > Don/Ve2ud
> > > > > > >
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43192. Re: TS-830S,need help

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 22:38:17 UTC
From: Terry Wagoner
Topic: 43153 Message: 43192

Ravi:

Lets regroup and make sure I understand the problem statement so not going off on a tangent.

I will take a shot at it:

In LSB, USB, and CW modes off air signals are very weak or non-existent, audio level in the speaker is low and there is no S-meter deflection. The Marker signal produces a low level audio tone in the speaker, but no S-meter deflection. The S-meter does deflect up scale when the RF gain pot is lowered from full open or CW position.

When injecting 8.0mv @ 8.830mhz test signal at the output of the receiver 1st mixer (TP-2) on the RF board there is audio tone from the speaker, but the audio level is not normal and there is no S-meter deflection.

Please correct or amplify on this so I can determine if we need to alter our approach.

Terry K9TW

43193. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 22:44:49 UTC
From: Terry Wagoner
Topic: 43023 Message: 43193

OK that is good. While you are measuring things with rig down powered measure the cathode meter shunt resistors. Should not be much above 5 ohms.

Wait for awhile as it takes time for the 300 and 210 caps to discharge. Discharging the HV caps wont address voltage remaining on the final tube socket board.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
>
> Terry
> Will print this out as usual and have a go at it later tonight.
> I did check the voltages out on the tubes and all seemed close to spec's
>
> Many Thanks
> Don/Ve2ud
>
>
>
>
>
> On 02/07/2013 5:58 PM, Terry Wagoner wrote:
> >
> > Don:
> >
> > OK first of all no need to check the resting plate current every time
> > you load up your rig. Set it to 60ma and should be good for quite some
> > time. So for the near term dont worry about it.
> >
> > Try loading in CW mode. Have to do this quickly.
> >
> > After peaking the Drive in Tune mode then unkey the rig and place in
> > CW mode and place meter selector switch in IP. Get hand on the Plate
> > Capacitor then flip to send and see if you have plate current
> > indication and quickly adjust the Plate capacitor for a dip. It may
> > not dip at the white band reference mark on the arc behind the knob
> > and that is OK for now. If you cannot get a dip anywhere in the travel
> > unkey the rig.
> >
> > If you get a dip then switch to RF meter position and tune the Plate
> > and Load capacitors for maximum relative power on the meter. When done
> > unkey rig. Switch the meter to IP and key rig again and make sure not
> > exceeding 260ma.
> >
> > Report back your findings.

> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > >
> > >
> > > Terry
> > > That's the problem,as i can not load it up
> > > Here is the step's i take.
> > > First check ip for 60ma, ok
> > > next,meter to ALC,,good peak
> > > next meter to ip,in tune position,flip send and nothing on the
> > > meter,nothing to dip
> > > I then put the meter on RF and peak the plate and load,which will give
> > > me about 50 watts out.
> > > Note,the load control will flicker,when i try to peak the plate and
> > load
> > > in the RF position.
> > >
> > > Maybe this would help me
> > >
> > >
> > > http://www.usnews.com/news/articles/2013/07/01/could-an-italian-scientist-pave-the-way
-for-human-head-
> > >
> > >
> > > <http://www.usnews.com/news/articles/2013/07/01/could-an-italian-scientist-pave-the-wa
y-for-human-head-transplants>transplants
> > >
> > >
> > > <http://www.usnews.com/news/articles/2013/07/01/could-an-italian-scientist-pave-the-wa
y-for-human-head-transplants>
> > >
> > > 73
> > > Don/Ve2ud
> > >
> > >
> > > On 02/07/2013 3:18 PM, Terry Wagoner wrote:
> > > >
> > > > Don:
> > > >
> > > > As I said I do not recommend the K0ZL tube test. I had forgot it was
> > > > in the files section. If it were up to me it would not be there.
> > > >
> > > > As I mentioned you better have a good clean smooth bias pot. It only
> > > > takes a moment to have finals glowing red hot and be destroyed as you
> > > > move this pot for first time perhaps in years into uncharted waters.
> > > >
> > > > What is wrong with setting the resting plate current to 60ma and then

> > > > loading rig into a dummy load to 100 watts output and then reading
> > > > plate current? If you can do that at approx 225ma Ip your finals are
> > > > fine. A much safer and controlled test and not DC static test, but a
> > > > dynamic test with RF drive as the tubes will see in real operation.
> > > >
> > > > Just my opinion.
> > > >
> > > > Terry K9TW
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > > > >
> > > > > Terry
> > > > >
> > > > > Yes it is a typo error as i am using the original manual that
> > came with
> > > > > this rig,and i went and got another manual to check against it
> > and sure
> > > > > enough,it said TC-3 and not TC-2.
> > > > >
> > > > > I went to adjust the drive coils and i think the tube went puff
> > as the
> > > > > fuse blew.
> > > > > I replaced the fuse and thought all was ok until i tried to load
> > the
> > > > > rig.
> > > > > I could get my 60ma ok and good ALC reading,but when i went to
> > dip the
> > > > > plate there was no reading at all.
> > > > > I did the tube test by-----Testing Tubes, a previous post by Bill,
> > > > > K0ZL,and only got 150ma full adjustment and it should read at least
> > > > 200ma.
> > > > > I also did the tube tests for shorts,but did not find a problem
> > using
> > > > > the method by Walt N9WB
> > > > > HV test was about 850 watts
> > > > > Hard to start this tech stuff very late in life.but on the other
> > hand i
> > > > > think i have more fun learning this side of the hobby instead of
> > just
> > > > > being a DX chaser.
> > > > >
> > > > >
> > > > > Don/ve2ud
> > > > >
> > > > >
> > > > >
> > > > > On 02/07/2013 1:21 PM, Terry Wagoner wrote:
> > > > >

> > > > > > Don:
> > > > > >
> > > > > > You should not be adjusting TC-2 and VR-4 for LSB output. Is
> > this a
> > > > > > typo? You adjust VR-4 and TC-3 for Balanced Modulator carrier
> > > > > > suppression or null.
> > > > > >
> > > > > > This is done after completing the SSB Frequency Response
> > adjustment
> > > > > > detailed in Step 30. Some call this step the Carrier Set Point
> > > > > > adjustment. Here you will be setting both the LSB and USB
> > Carrier Osc
> > > > > > trimmers to set the 3dB roll off to the factory recommended
> > low and
> > > > > > high audio frequencies.
> > > > > >
> > > > > > To do Carrier null I connect a Pl-259 connector with two 100 ohm
> > > > > > resistors in parallel across the center to shell to the rig
> > SO-239.
> > > > > > You can measure across this small 50 ohm dummy load with your RF
> > > > > > probe/VTVM, RF millivolt meter, or O-scope. You alternately adjust
> > > > > > VR-4 and TC-3 for lowest RF voltage. You do it in LSB and USB
> > until
> > > > > > you get about same low level of rf voltage in each mode. Have
> > to go
> > > > > > back and forth multiple times for best balanced null. Not
> > possible to
> > > > > > get a complete null. Another way that works pretty well is to set
> > > > > > another receiver next to the rig and tune to same frequency and
> > > > listen
> > > > > > to the null. See Step 29.
> > > > > >
> > > > > > Regards Step 30 you do this at 50 watts because you will be having
> > > > > > longer than normal keydown times to adjust TC-2 LSB and TC-3 USB
> > > > > > trimmer caps at 300hz and 2700hz. Limiting the power to 50 watts
> > > > > > keydown with 5mv to 7 mv audio injected in to the mic line is
> > easier
> > > > > > on the Final tubes. You will adjust the respective trimmer
> > until you
> > > > > > see approx 25 watts at each frequency which represents the 3dB
> > roll
> > > > > > off points.
> > > > > >
> > > > > > Your statement about having no IP makes no sense when you say the
> > > > bias
> > > > > > test only produces 150ma. If you can read 150ma then you have Ip.
> > > > When
> > > > > > you say "bias test" are you saying you are varying the bias
> > voltage
> > > > > > pot for maximum plate current and watching IP to see if it

> > holds? If
> > > > > > so, have to be very careful doing this test. Have to make sure you
> > > > > > have a good clean smooth bias pot and never exceed 300ma for
> > just a
> > > > > > couple of seconds. I dont recommend this test for average person.
> > > > > >
> > > > > > It is possible you have damaged a final tube. Also, what is your
> > > > plate
> > > > > > voltage doing. If you have lost a HV cap can also have half power
> > > > output.
> > > > > >
> > > > > > Terry K9TW
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Don D"
> > <ve2ud@> wrote:
> > > > > > >
> > > > > > > Hi All
> > > > > > > Just a update on my problem with no LSB output
> > > > > > > I did the carrier balance adjustment on the if unit as per the
> > > > > > > manual.
> > > > > > > It said to adjust tc2 and trimpot vr4 alternately.
> > > > > > > Adjusting vr4 did nothing,so i tried keying the mike and
> > > > adjusting vr4
> > > > > > > and tc2 and was able to get output.
> > > > > > > The alc meter was not kicking as high as USB was,so i just
> > > > cranked up
> > > > > > > the mic more on LSB and i got good signal reports.
> > > > > > >
> > > > > > > I think one of my tubes has gone kaput.
> > > > > > > I now have no ip reading and the bias test,will only yield 150
> > > > ma's full
> > > > > > > I get only 50 watts out,half the power and half bias output
> > > > > > >
> > > > > > > As i have to get some new tubes i will wait until i get them
> > before
> > > > > > > doing any more test's with those mixed tubes.
> > > > > > > In the meantime i am trying to custom fit a DS1 convertor on
> > it as i
> > > > > > > don't have a DS2
> > > > > > > Wish me luck as i will need it
> > > > > > >
> > > > > > > 73
> > > > > > > Don/Ve2ud
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43194. Re: TS-820S -- recently repaired, possible alignment necessary?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 23:26:39 UTC
From: Terry Wagoner
Topic: 43180 Message: 43194

Dieter:

I dont think anyone has had time to respond yet and I am a little overtaxed at moment.

So quickly it appears that you most likely had final tube arc over. When that occurs you momentarily apply 900vdc from the anode to the suppressor grid/cathode and only thing that limits that current is the cathode resistors and ESR of the transformer. For a moment you have 900vdc across those meter shunt resistors and that series meter multiplier and meter movement sees that high voltage instead of the approx 1.0vdc it would see at 200ma of plate current. Very lucky not to have lost the meter movement. Ordinarily this does not hurt the power transformer so may be some other operator abuse issues such as long key down times, loading in excess of max plate current, running high duty cycle modes without reducing plate current etc.

Did you do an internal visual of the PA cage? If not, then do so after discharging the HV filter caps. Pay special attention to the large rf plate choke to ensure not discolored and look at the small vhf rf choke and the rf bypass capacitor at base of the big choke. These will also discolor and the cap will even split open.

If all looks good there go ahead and do the coil pack and IFT alignment and can follow the procedure listed in the Operating manual under the Maintenance Section 6. Do the Receive and Transmit coil pack and IFT alignment.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "w3drk" <dieter.kedrowitsch@...> wrote:
>
> I recently came into position of a TS-820S with a fried transformer and considerable damage the finals (burned chokes and cathode resistors) and it somehow managed to fry the plate current multiplier resistor (meter still OK) and damage to the BIAS switching on the RF board as well.
>
> The transformer has been replaced, I repaired the finals, new old stock RCA 6146Bs and driver, and after replacing a few fried resistors and an open transistor on the RF board, it seems to receive and transmit well with one exception. The when peaking the receiver with the drive control, its nowhere near peaking the ALC deflection when transmitting. And when transmitting on 20 meters the drive is fully clockwise but hasn't peaked. The behavior is similar with the screen off when neutralizing and watching RF output on a scope...on 20 meters the output from the driver never peaks even with drive fully clockwise.
>
> Am I right to assume it may be necessary for me to walk through Clif's "Simplified and quick alignment" procedure? Before I touched the alignment I figured I'd best check with the Hybrid experts first. Unless someone was tinkering with the cans or swapped the RX board from another radio can't imagine the alignment would be so far out...perhaps there is a damaged component I may have missed that's affecting the alignment?
>

> By the way, 9v from the AF-AVR board is a solid 9v.
>
> Any tips? Safe to proceed with alignment or any other suspect damage I should be looking for first?
>
> Thanks!
> Dieter - W3DRK
>

43195. TS-830S Serial numbers in the grand scheme of things

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 23:01:44 UTC
From: synovial_98
Topic: 43195 Message: 43195

Hi,

I have a TS-830S on the way and the seller says the serial number is in the "20 million" range. From everyone's experience, where does that place the rig in the total Kenwood production run?

Thanks and 73s,
Ken
WB4EJZ

43196. Re: Lessons learned

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 23:05:38 UTC
From: synovial_98
Topic: 43165 Message: 43196

Craig,
Thanks for those nuggets of wisdom - sage advice indeed! I appreciate all the info-sharing that takes place here. I'm sure I'll be asking my share of questions, as I have a (known) dead TS-830S on the way.
Regards and 73s,
Ken/WB4EJZ

--- In TS-520_820_530_830@yahoogroups.com, Craig Roberts <crgrbrts@...> wrote:
>
> This is primarily aimed at newbies -- like me -- who have just joined
> the Kenwood hybrid community.
>
> I am a convert. As proof of my new obsession, I have now purchased
> three hybrids - two TS-530Ss and a TS-830S. One of the 530s is in the
> expert hands of Jim Showker. The radio was essentially unused in mint
> cosmetic condition and still in its original, unmolested boxes when I
> obtained a month or so ago. And that was the problem. Decades of disuse
> rendered the radio pretty much inoperative due to tarnish and corrosion
> on connectors and contacts. Jim and his boys are bringing it back to
> life now.
>
> Although I have no regrets whatsoever about sending my mint prize to
> Jim, I now realize that I may very well have been able to resurrect this
> radio myself (although, admittedly, I don't have the nifty lab gear --
> sweep generator and such -- to do the very best post-service alignment
> possible.
>
> I worked on the other two radios personally with the invaluable aid of
> friends on this reflector and have both Kenwoods working very nicely
> now. The quality of their construction makes repairing these wonderful
> radios a fairly painless task. Here are some lessons learned from my
> experience:
>
> * Firstly, do NOT be offended by the oft-repeated advice to unplug
> your radio, let it sit idle for a spell and then discharge the HV
> components through the top of the plate choke in the finals cage
> before poking your fingers into or even near the machine's innards.
> Your friends are not assuming you're an idiot or careless when they
> pass along this counsel -- they're genuinely concerned about your
> welfare. It never hurts to be reminded. It does hurt to be bitten by
> 800 volts (though not necessarily for long).
>
> * It has been recommended that the HV caps should be changed out as a
> matter of course upon receipt of your new/old hybrid (unless the
> previous owner has done so). Jim Showker and Ken Kemski both sell HV

> cap replacement kits that include the attendant resistors and caps.
> The job is easy and serves as a good introduction to the bowels of
> the radio.
>
> * As has been mentioned time and time again, MOST problems from stock
> hybrids (unmodified or otherwise not messed with by previous owners)
> are due to tarnish and corrosion. The primary suspect is the band
> switch, the bane of nearly all older rigs, thanks to their
> vulnerability and mysteriously delicate construction. A gentle,
> thorough cleaning of all wafers, including those in the finals cage,
> cures many ills. DO THIS FIRST (unless your radio's working okay to
> begin with).
>
> * The same goes for the circuit board plugs and headers (if you think
> these Kenwoods are bad about this, try working on a Drake TR-7).
> Unplug them gently, wipe the headers with a contact cleaner
> moistened Q-Tip and replace the plugs. Some of the plugs are in
> awkward places for hammy fingers to grab. I use a pair of needle
> nose pliers with plastic tubing slipped over the tips to extract
> these plugs. I haven't killed one yet.
>
> * Relays are another vulnerable component. The antenna relay next to
> the finals on the underside of the radio (hidden by an easily
> removable metal shield) is subject to corroded or tarnished
> contacts. This can lead to "iffy" recovery in the transmit/receive
> cycle. The relay is a plug-in device (hooray!) and can be removed
> readily. The unsealed plastic cover can be snapped off (gently work
> the little tabs on either side of the base) and the contacts
> cleaned with a thin strip of paper moistened with contact cleaner.
> Don't be tempted to burnish the contacts with an abrasive of any
> kind - you'll do more harm than good). A replacement relay is
> available if yours is shot or damaged for some reason (possibly
> abused by a sandpaper wielding former owner).
>
> * If cleaning the antenna relay doesn't clear up your T/R problems
> (like receiver noise and slow recovery or intermittent signal
> attenuation), you may need to replace the pretty much unserviceable
> RL1 on the AF Board. (Again, replacements are available from Ken
> Kemski and Jim Showker). This task looks a LOT more daunting than
> it actually is. Getting to the underside of the AF Board is simply
> a matter of undoing the screws that hold the frame surrounding the
> board itself to the chassis and unscrewing a ground lug connection
> to the chassis at the rear of the board. No unsoldering of wires
> connected to the board is necessary and you probably don't need to
> unplug anything (though I did to clean the headers, etc.). You can
> simply flip the frame and board assembly over and go to work with
> your desoldering tool or, in my case, 25 watt miniature iron and
> Soder-Wick. It took less than ten minutes to remove the old relay
> and install the replacement. The result was dramatic. Not only did
> my T/R problems disappear, the receiver audio actually sounded

> considerably better. Who knew?
>
> * One other repair that I performed on my TS-830S was necessitated by
> a total lack of drive in the TUNE position. Our resident guru,
> Terry, suggested the problem might lie with R15 and/or R16 -- screen
> voltage dividers on the Rectifier Board. I tested them and, sure
> enough, R15 was open. I replaced both -- just 'cuz I was there --
> and the TUNE function sprang to life. I am told that this problem is
> not altogether uncommon. Once again, access to the underside of the
> affected board was simple and the component replacement task quick
> and easy.
>
> I will confess that I was shy initially about working on these radios
> myself. Sure, I have restored to as-new condition such densely packed
> beasts as the Hallicrafters SX-28 and SX-42 receivers, the Hammarlund
> SP-600 and the Collins R-388. For whatever reason, though, I thought
> the Kenwoods -- totally foreign to me (yuk-yuk) -- would be at least as
> intimidating. I was wrong. The TS-530S and TS-830S (and, I suspect,
> the 520 and 820) are a joy to work on. Their modular construction and
> excellent build quality make most service tasks, if not always dead
> simple, at least doable by the average guy who can harmlessly wield a
> screwdriver, needle nose pliers and soldering iron.
>
> Best of all, once you're done fiddling you'll end up with a truly
> wonderful radio.
>
> SINCERE THANKS TO JIM, KEN, TERRY AND ALL OTHERS WHO HAVE ENCOURAGED AND
> COACHED ME. I'll probably be back with more mysteries and queries
> before long, but I've learned a lot thus far, thanks to y'all.
>
> VY 73,
>
> Craig
> W3CRR
>
>
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>
>
>
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43197. Re: TS-820S -- recently repaired, possible alignment necessary?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 00:26:29 UTC
From: w3drk
Topic: 43180 Message: 43197

Hi Terry, and thanks for the response.

Yes I figured it was likely an arc that caused plate voltage to end up where it shouldn't have been that was the likely culprit. For what it's worth the 6146Bs that were in the radio when I got it were Chinese and both of them have discolored plates and rattle when shaken...certainly abused.

Anyway, yes the plate choke is fine but the smaller choke from B+ to the bottom of the plate choke at the bypass cap was blown open. I replaced the choke, bypass cap, and blocking cap as well to be on the safe side. Additionally the cathode shunt resistors and screen resistors have been replaced as well since they were not originals and poorly done.

Transmit works perfectly and looks great on the waterfall of my SDR rigs. Good reports on the air too...it's just the drive control that's way out of whack from the receive side.

I'll run through the necessary alignment steps to try and get transmit and receive to match up and report back with how it goes.

Thanks!

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Dieter:
>
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> Terry K9TW

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> > Thanks!
> > Dieter - W3DRK
> >
>

43198. Re: [TS-520_820_530_830] Lessons learned

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-02 21:59:28 UTC
From: AI4WM Bill
Topic: 43165 Message: 43198

Very well said Craig.

Also Ken and Jim are great and I found them always helpful.

73,
Bill
AI4WM

From: Geoff Hegarty <alicein49@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, July 2, 2013 3:49 PM
Subject: Re: [TS-520_820_530_830] Lessons learned

Dear Craig

Thanks for taking the time to spell all that out. As someone just embarking on restoring an old 530, I found your experience quite inspirational. I feel much more confident about my own project now.

Best regards
Geoff VK2HQA

From: Craig Roberts <crgrbrts@verizon.net>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, 3 July 2013 3:46 AM
Subject: [TS-520_820_530_830] Lessons learned

This is primarily aimed at newbies -- like me -- who have just joined the Kenwood hybrid community.

I am a convert. As proof of my new obsession, I have now purchased three hybrids - two TS-530Ss and a TS-830S. One of the 530s is in the expert hands of Jim Showker. The radio was essentially unused in mint cosmetic condition and still in its original, unmolested boxes when I obtained a month or so ago. And that was the problem. Decades of disuse rendered the radio pretty much inoperative due to tarnish and corrosion on connectors and contacts. Jim and his boys are bringing it back to life now.

Although I have no regrets whatsoever about sending my mint prize to Jim, I now realize that I may very well have been able to resurrect this radio myself (although, admittedly, I don't have the nifty lab gear -- sweep generator and such -- to do the very best post-service alignment possible.

I worked on the other two radios personally with the invaluable aid of friends on this reflector and have both Kenwoods working very nicely now. The quality of their construction makes repairing these wonderful radios a fairly painless task. Here are some lessons learned from my experience:

* Firstly, do NOT be offended by the oft-repeated advice to unplug your radio, let it sit idle for a spell and then discharge the HV components through the top of the plate choke in the finals cage before poking your fingers into or even near the machine's innards. Your friends are not assuming you're an idiot or careless when they pass along this counsel -- they're genuinely concerned about your welfare. It never hurts to be reminded. It does hurt to be bitten by 800 volts (though not necessarily for long).

* It has been recommended that the HV caps should be changed out as a matter of course upon receipt of your new/old hybrid (unless the previous owner has done so). Jim Showker and Ken Kemski both sell HV cap replacement kits that include the attendant resistors and caps. The job is easy and serves as a good introduction to the bowels of the radio.

* As has been mentioned time and time again, MOST problems from stock hybrids (unmodified or otherwise not messed with by previous owners) are due to tarnish and corrosion. The primary suspect is the band switch, the bane of nearly all older rigs, thanks to their vulnerability and mysteriously delicate construction. A gentle, thorough cleaning of all wafers, including those in the finals cage, cures many ills. DO THIS FIRST (unless your radio's working okay to begin with).

* The same goes for the circuit board plugs and headers (if you think these Kenwoods are bad about this, try working on a Drake TR-7). Unplug them gently, wipe the headers with a contact cleaner moistened Q-Tip and replace the plugs. Some of the plugs are in awkward places for hammy fingers to grab. I use a pair of needle nose pliers with plastic tubing slipped over the tips to extract these plugs. I haven't killed one yet.

* Relays are another vulnerable component. The antenna relay next to the finals on the underside of the radio (hidden by an easily removable metal shield) is subject to corroded or tarnished contacts. This can lead to "iffy" recovery in the transmit/receive cycle. The relay is a plug-in device (hooray!) and can be removed readily. The unsealed plastic cover can be snapped off (gently work the little tabs on either side of the base) and the contacts cleaned with a thin strip of paper moistened with contact cleaner. Don't be tempted to burnish the contacts with an abrasive of any kind - you'll do more harm than good). A replacement relay is available if yours is shot or damaged for some reason (possibly abused by a sandpaper wielding former owner).

* If cleaning the antenna relay doesn't clear up your T/R problems (like receiver noise and slow recovery or intermittent signal attenuation), you may need to replace the pretty much unserviceable RL1 on the AF Board. (Again, replacements are available from Ken Kemski and Jim Showker). This task looks a LOT more daunting than it actually is. Getting to the underside of the AF Board is simply a matter of undoing the screws that hold the frame surrounding the board itself to the chassis and unscrewing a ground lug connection to the chassis at the rear of the board. No unsoldering of wires connected to the board is necessary and you probably don't need to unplug anything (though I did to clean the headers, etc.). You can simply flip the frame and board assembly over and go to work with your desoldering tool or, in my case, 25 watt miniature iron and Soder-Wick. It took less than ten minutes to remove the old relay and install the replacement. The result was dramatic. Not only did my T/R problems disappear, the receiver audio actually sounded considerably better. Who knew?

* One other repair that I performed on my TS-830S was necessitated by a total lack of drive in the TUNE position. Our resident guru, Terry, suggested the problem might lie with R15 and/or R16 -- screen voltage dividers on the Rectifier Board. I tested them and, sure enough, R15 was open. I replaced both -- just 'cuz I was there -- and the TUNE function sprang to life. I am told that this problem is not altogether uncommon. Once again, access to the underside of the affected board was simple and the component replacement task quick and easy.

I will confess that I was shy initially about working on these radios myself. Sure, I have restored to as-new condition such densely packed beasts as the Hallicrafters SX-28 and SX-42 receivers, the Hammarlund SP-600 and the Collins R-388. For whatever reason, though, I thought the Kenwoods -- totally foreign to me (yuk-yuk) -- would be at least as intimidating. I was wrong. The TS-530S and TS-830S (and, I suspect, the 520 and 820) are a joy to work on. Their modular construction and excellent build quality make most service tasks, if not always dead simple, at least doable by the average guy who can harmlessly wield a screwdriver, needle nose pliers and soldering iron.

Best of all, once you're done fiddling you'll end up with a truly wonderful radio.

SINCERE THANKS TO JIM, KEN, TERRY AND ALL OTHERS WHO HAVE ENCOURAGED AND COACHED ME. I'll probably be back with more mysteries and queries before long, but I've learned a lot thus far, thanks to y'all.

VY 73,

Craig
W3CRR

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[Non-text portions of this message have been removed]

43199. Re: [TS-520_820_530_830] Re: TS-830S,need help

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 01:00:15 UTC
From: ravi sumith
Topic: 43153 Message: 43199

Hi Terry,

I amplified,they are in color

73's de 4s6rav (Ravi)

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, 3 July 2013 4:08 AM
Subject: [TS-520_820_530_830] Re: TS-830S,need help

Ravi:

Lets regroup and make sure I understand the problem statement so not going off on a tangent.

I will take a shot at it:

In LSB, USB, and CW modes off air signals are very weak or non-existent, (other than on 40 meters where signals are fairly ok) audio level in the speaker is low and there is no S-meter deflection. The Marker signal produces a low level audio tone in the speaker, but no S-meter deflection. The S-meter does deflect up scale when the RF gain pot is lowered from full open or CW position.

When injecting 8.0mv @ 8.830mhz test signal at the output of the receiver 1st mixer (TP-2) on the RF board there is audio tone from the speaker, but the audio level is not normal and there is no S-meter deflection. Same results when injecting 8.0mv@14.200mhz signal at TP-4 and at RB1 terminals. Voltages at RB1 terminal reads 1.03V in REC and minus 3.28V in SEND.

Please correct or amplify on this so I can determine if we need to alter our approach.

Terry K9TW

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Terry K9TW

[Non-text portions of this message have been removed]

43200. Re: [TS-520_820_530_830] Re: TS-830S,need help

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 01:09:33 UTC
From: ravi sumith
Topic: 43153 Message: 43200

Looks like highlighted color is not showing in mail.
I put them in brackets ( )

From: ravi sumith <mindover2003@yahoo.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wednesday, 3 July 2013 6:30 AM
Subject: Re: [TS-520_820_530_830] Re: TS-830S,need help

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I amplified,they are in color

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To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, 3 July 2013 4:08 AM
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43201. Re: TS-820S -- recently repaired, possible alignment necessary?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 01:38:29 UTC
From: Terry Wagoner
Topic: 43180 Message: 43201

OK typically a good coil pack alignment should result in the Drive control peaking at approx 1200 with VFO at around 200 in both receive and transmit. Sometimes you will find someone has cranked a ferrite core full in or full out. Be careful not to crack a core. Sometimes I apply just a drop of lube from a toothpick at top outer edge of core to get some lube to flow down between it and the cardboard former before I try to turn them. If you get a real stubborn one the tip of a soldering iron applied to the core will usually free it up. Sounds like you have done some good work and close to getting it where it needs to be.

I have never used the Chinese final but have heard nothing good about them. I try to use RCA 6146Bs when can get them but also have had good luck with JAN6146W (Sylvania).

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "w3drk" <dieter.kedrowitsch@...> wrote:
>
> Hi Terry, and thanks for the response.
>
> Yes I figured it was likely an arc that caused plate voltage to end up where it shouldn't have been that was the likely culprit. For what it's worth the 6146Bs that were in the radio when I got it were Chinese and both of them have discolored plates and rattle when shaken...certainly abused.
>
> Anyway, yes the plate choke is fine but the smaller choke from B+ to the bottom of the plate choke at the bypass cap was blown open. I replaced the choke, bypass cap, and blocking cap as well to be on the safe side. Additionally the cathode shunt resistors and screen resistors have been replaced as well since they were not originals and poorly done.
>
> Transmit works perfectly and looks great on the waterfall of my SDR rigs. Good reports on the air too...it's just the drive control that's way out of whack from the receive side.
>
> I'll run through the necessary alignment steps to try and get transmit and receive to match up and report back with how it goes.
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meter movement sees that high voltage instead of the approx 1.0vdc it would see at 200ma of plate current. Very lucky not to have lost the meter movement. Ordinarily this does not hurt the power transformer so may be some other operator abuse issues such as long key down times, loading in excess of max plate current, running high duty cycle modes without reducing plate current etc.
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> > Did you do an internal visual of the PA cage? If not, then do so after discharging the HV filter caps. Pay special attention to the large rf plate choke to ensure not discolored and look at the small vhf rf choke and the rf bypass capacitor at base of the big choke. These will also discolor and the cap will even split open.
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> > > The transformer has been replaced, I repaired the finals, new old stock RCA 6146Bs and driver, and after replacing a few fried resistors and an open transistor on the RF board, it seems to receive and transmit well with one exception. The when peaking the receiver with the drive control, its nowhere near peaking the ALC deflection when transmitting. And when transmitting on 20 meters the drive is fully clockwise but hasn't peaked. The behavior is similar with the screen off when neutralizing and watching RF output on a scope...on 20 meters the output from the driver never peaks even with drive fully clockwise.
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> > > By the way, 9v from the AF-AVR board is a solid 9v.
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> > > Any tips? Safe to proceed with alignment or any other suspect damage I should be looking for first?
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> > > Thanks!
> > > Dieter - W3DRK
> > >
> >
>

43202. Re: TS-820S -- recently repaired, possible alignment necessary?

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 02:13:48 UTC
From: w3drk
Topic: 43180 Message: 43202

Well shucks....I can't seem find my small blade alignment tool for the antenna and mixer cans but my larger one fits the drive cores just fine. Until I figure out where the heck that tool went I simply checked the antenna and mixer coils appear to be at least close since peak deflection of the S meter when dialed to the calibrator mid-band and drive is at 1200 when VFO. I touched up the drive coils to peak the ALC at the same DRIVE position and the radio is now working as it should. Some of the drive cores weren't even in the right ball-park.

Once I find the missing alignment tool I'll fire up the Boonton sig gen and scope so I can do a proper full alignment but as of now it looks like this abused radio is back in service.

By the way I had a spare set of NOS 1960s RCA 6146Bs still in the box along with a NOS 1960s RCA 12BY7A driver so it's now tricked out with some nice finals instead of some potentially troublesome Chinese parts.

Thanks for the advice Terry!

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> OK typically a good coil pack alignment should result in the Drive control peaking at approx 1200 with VFO at around 200 in both receive and transmit. Sometimes you will find someone has cranked a ferrite core full in or full out. Be careful not to crack a core. Sometimes I apply just a drop of lube from a toothpick at top outer edge of core to get some lube to flow down between it and the cardboard former before I try to turn them. If you get a real stubborn one the tip of a soldering iron applied to the core will usually free it up. Sounds like you have done some good work and close to getting it where it needs to be.
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> > > > Dieter - W3DRK
> > > >
> > >
> >
>

43203. TS-830-S Noise Blanker loss of effectiveness

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 02:18:00 UTC
From: kf4ofi
Topic: 43203 Message: 43203

First here is what I did... I pulled the IF board out and changed the 455 Murata filter with one from a 930. I didn't like it and changed it back. After putting it back together I notice that an electrical noise in my neighborhood was rather noisy. Tried increasing the noise blanker and no help. The noise blanker has always in the past been able to handle this noise with no problem, now it doesn't seem to do anything at all. Tried on several bands and other noises that it usually works great on and no help.

I have checked all the connections that I had contact with on the IF board and have found nothing.

Any ideas what I may have done or where I could look?

Thanks
Curt
KF4OFI

43204. Re: TS-830S,need help

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 02:52:25 UTC
From: Terry Wagoner
Topic: 43153 Message: 43204

Ravi:

If 40 meters is working and providing normal S-meter indication then can have no problem on RF board or IF board with exception of missing or low VCO signal at TP-3. VCO is the LO for the Mixer. Level is important.

Injecting substitute 8.830mhz RIF signal at TP-2 should have resulted in same action as you are seeing on 40 meters with exception you should have seen 30 over S9 with a 8mv signal.

Set your Sig gen to 7.200 and inject in to the SO-239 connector. Increase the RF output level until you get S9 indication. Assuming your S-meter is reasonably caled this is approx 50uv output level from your SG-402.

Now note the Sig gen level pot setting and dont move it. Go to a dead band and set Sig Gen to 8.830. Assuming levels are relatively constant then inject this signal at TP-2 and you should have approx S7 reading.

If 40 meters is working we are actually wasting our time with signal injection. It tells me you have missing or low VCO signal level at TP-3 for all the dead bands. This is very unusual. Go to TP-3 and measure the level on all the dead bands. You should have approx 1.0 rf volts. Measure with your Rf probe and DMM. I have seen cases where the VCO cable connector at PLL board or RF board was bad, but should affect all bands and not allow good 40 meter operation.

Step 9 of service manual tells you how to adjust the VCO.

Also does this mean that you have approx S9 Marker signal on 40 meters?

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, ravi sumith <mindover2003@...> wrote:
>
> Looks like highlighted color is not showing in mail.
> I put them in brackets ( )
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> _____
> From: ravi sumith <mindover2003@...>
> To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
> Sent: Wednesday, 3 July 2013 6:30 AM
> Subject: Re: [TS-520_820_530_830] Re: TS-830S,need help
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> Â Â Â Â
> Â
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> [Non-text portions of this message have been removed]
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43205. Re: [TS-520_820_530_830] Re: TS-830S,need help

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 03:35:53 UTC
From: ravi sumith
Topic: 43153 Message: 43205

Hi Terry,

I think I must correct our understanding on the problem.There is no S-meter indication in any of the bands to off air signals. But in 40 meters reception is good but no S-meter indication.In all other bands there is no band noise either. I mentioned this in my first mail.
Thanks
Ravi - 4s6rav

From: Terry Wagoner <wagstw46@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, 3 July 2013 8:22 AM
Subject: [TS-520_820_530_830] Re: TS-830S,need help

Ravi:

If 40 meters is working and providing normal S-meter indication then can have no problem on RF board or IF board with exception of missing or low VCO signal at TP-3. VCO is the LO for the Mixer. Level is important.

Injecting substitute 8.830mhz RIF signal at TP-2 should have resulted in same action as you are seeing on 40 meters with exception you should have seen 30 over S9 with a 8mv signal.

Set your Sig gen to 7.200 and inject in to the SO-239 connector. Increase the RF output level until you get S9 indication. Assuming your S-meter is reasonably caled this is approx 50uv output level from your SG-402.

Now note the Sig gen level pot setting and dont move it. Go to a dead band and set Sig Gen to 8.830. Assuming levels are relatively constant then inject this signal at TP-2 and you should have approx S7 reading.

If 40 meters is working we are actually wasting our time with signal injection. It tells me you have missing or low VCO signal level at TP-3 for all the dead bands. This is very unusual. Go to TP-3 and measure the level on all the dead bands. You should have approx 1.0 rf volts. Measure with your Rf probe and DMM. I have seen cases where the VCO cable connector at PLL board or RF board was bad, but should affect all bands and not allow good 40 meter operation.

Step 9 of service manual tells you how to adjust the VCO.

Also does this mean that you have approx S9 Marker signal on 40 meters?

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, ravi sumith <mindover2003@...> wrote:
>
> Looks like highlighted color is not showing in mail.

> I put them in brackets ( )
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> _____
> From: ravi sumith <mindover2003@...>
> To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
> Sent: Wednesday, 3 July 2013 6:30 AM
> Subject: Re: [TS-520_820_530_830] Re: TS-830S,need help
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> Hi Terry,
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> I amplified,they are in color
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> 73's de 4s6rav (Ravi)
>
> From: Terry Wagoner <wagstw46@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, 3 July 2013 4:08 AM
> Subject: [TS-520_820_530_830] Re: TS-830S,need help
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> Lets regroup and make sure I understand the problem statement so not going off on a tangent.
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> I will take a shot at it:
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> In LSB, USB, and CW modes off air signals are very weak or non-existent, (other than on 40 meters where signals are fairly ok) audio level in the speaker is low and there is no S-meter deflection. The Marker signal produces a low level audio tone in the speaker, but no S-meter deflection. The S-meter does deflect up scale when the RF gain pot is lowered from full open or CW position.
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> When injecting 8.0mv @ 8.830mhz test signal at the output of the receiver 1st mixer (TP-2) on the RF board there is audio tone from the speaker, but the audio level is not normal and there is no S-meter deflection.(Same results when injecting 8.0mv@... signal at TP-4 and at RB1 terminals.Â Voltages at RB1 terminal reads 1.03V in REC and minus 3.28V in SEND) Â Â
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43206. Re: [TS-520_820_530_830] Re: TS-830S,need help

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 04:08:39 UTC
From: Jerry Barr
Topic: 43153 Message: 43206

and when can we meet at storage/what day/ I can get the tool boxes saws drill press som of my stuff from room and trailor

Jerry
 KJ6NTL
Skcc# 10843
10-10 # 76401

From: ravi sumith <mindover2003@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, July 2, 2013 8:35 PM
Subject: Re: [TS-520_820_530_830] Re: TS-830S,need help

Hi Terry,

I think I must correct our understanding on the problem.There is no S-meter indication in any of the bands to off air signals. But in 40 meters reception is good but no S-meter indication.In all other bands there is no band noise either. I mentioned this in my first mail.
Thanks
Ravi - 4s6rav

From: Terry Wagoner <mailto:wagstw46%40yahoo.com>
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Wednesday, 3 July 2013 8:22 AM
Subject: [TS-520_820_530_830] Re: TS-830S,need help

Ravi:

If 40 meters is working and providing normal S-meter indication then can have no problem on RF board or IF board with exception of missing or low VCO signal at TP-3. VCO is the LO for the Mixer. Level is important.

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Now note the Sig gen level pot setting and dont move it. Go to a dead band and set Sig Gen to 8.830. Assuming levels are relatively constant then inject this signal at TP-2 and you should have approx S7 reading.

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Step 9 of service manual tells you how to adjust the VCO.

Also does this mean that you have approx S9 Marker signal on 40 meters?

Terry K9TW

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[Non-text portions of this message have been removed]

43207. Re: [TS-520_820_530_830] Re: TS-830S,need help

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 04:22:58 UTC
From: ravi sumith
Topic: 43153 Message: 43207

Thanks Terry. I will test the way you proposed and come back.

Meanwhile need a clarification, you said to measure RFG voltage at connection 6 on IF board.But according to schematic,RFG terminal is at Connection 8 Pin 2.
I assume you are referring to RIF terminal voltage at Connection 6 Pin 6.right?.

When you say filter switching diodes,are they D7 & D10 or D1 to D6 ?

Regards
Ravi-4s6rav

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, 3 July 2013 12:36 AM
Subject: [TS-520_820_530_830] Re: TS-830S,need help

Ravi:

1. Injected 8.30Mhz/8milivolts signal to TP-2 - No s-meter indication either on fast or slow But audio was good (AF nwhile gain control at 9 o'clock position & RF control fully CW). When I rotate RF control to 12 o'clock position,s-meter goes up and stay & audio is low (which is normal I believe).

My Response:

Yes rotating RF GAIN pot from full CW to 1200 should produce upscale movement of the S-meter. Should have approx S8 TO S9 indication at 1200 position of RF gain pot.

No reason to test any further back from TP-2 on the RF board. Assuming Conn 5 and its solder connections are good then problem has to be on the IF board. Q1 and L41 have nothing to do with substitute 8mv RIF signal not producing S-meter indication.

Injecting 8mv @ 8.830mhz at TP-2 should produce approx 30 over S-9 S-meter indication.

Do the following:

1. Measure RFG voltage at Conn 6 on IF board. With RF gain pot at full CW position should read approx 3.6vdc.

2. CAUTION: Measure AGC voltage at Conn 15 Pin 3 brown wire. Do not rely on the brown wire. Make sure you are on Pin 3 and not Pin 1 where there is 300vdc present. Depending on input Z of your meter the AGC bus voltage will read low and drive the S-meter up scale. A 11meg VTVM will read approx 3.0vdc and S meter will read S4 to S5.

3. If above tests are all good then inject 8.830 at IF board as follows:

A. At IF board Conn 6 pin 6 inject 8mv @ 8.830mhz and see if S-meter comes alive. If it does, the problem is between Conn 6 on IF board and Conn 5 on RF board. If it does not,

then need to move down the IF chain injecting until you find where it is being lost. Problem is there are not many good test points in the path.

B. Go to IF01 on rear panel and inject same 8mv @ 8.830mhz. If comes alive then problem is with Q1 RIF amp. If it does not then move down to the filter switching diodes and inject there. Once you get past Q2/Q3 Mixer will have to change frequency to 455khz.

Lastly, are you certain you have an 8mv signal? Can you inject into a known good rig? Another hybrid would be good. 8mv @ 8.830mhz into the coax connector on rear panel will give approx S4 to S5 indication and using 14.2mhz @ 8mv will give approx 40 over S-9 indication.

Terry K9TW

[Non-text portions of this message have been removed]

43208. RE: [TS-520_820_530_830] TS-830S Serial numbers in the grand scheme of things

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 09:59:54 UTC
From: fpath fpath
Topic: 43195 Message: 43208

20 million range is fantastic, but sure he meant 2 million range which is still great

73's

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: synovial_98@...
Date: Tue, 2 Jul 2013 23:01:44 +0000
Subject: [TS-520_820_530_830] TS-830S Serial numbers in the grand scheme of things

Hi,

I have a TS-830S on the way and the seller says the serial number is in the "20 million" range. From everyone's experience, where does that place the rig in the total Kenwood production run?

Thanks and 73s,
Ken
WB4EJZ

[Non-text portions of this message have been removed]

43209. RE: [TS-520_820_530_830] TS-830-S Noise Blanker loss of effectiveness

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 10:20:51 UTC
From: fpath fpath
Topic: 43203 Message: 43209

Curt,

Give your NB switch and pot a blast of Deoxit (working pot through full range of movement) followed by good blast of canned air, may need to do more than once. If no joy then it may pay to do the NB alignment. You'll need DVM, SSG and noise generator. NB on with pot fully CCW, AGC set to fast, all work is undertaken on the AF board, . Inject SSG signal at at 20db in to rear panel so239, TP4 with adjustment to T1 and T2, adjusting to minimum. Remove SSG and connect noise generator to rear panel SO239, noise generator should be set to about s5-s9. Reduce the noise generator to below the threshold sensitivity and the turn NB control to Full CW, which should blank out the noise.

Before attempting to tune T1 or T2, it will pay to use a clean solder iron and heat the slug and then turn slug, this usually helps to prevent cracking the slugs

73s

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: kf4ofi@...
Date: Wed, 3 Jul 2013 02:18:00 +0000
Subject: [TS-520_820_530_830] TS-830-S Noise Blanker loss of effectiveness

First here is what I did... I pulled the IF board out and changed the 455 Murata filter with one from a 930. I didn't like it and changed it back. After putting it back together I notice that an electrical noise in my neighborhood was rather noisy. Tried increasing the noise blanker and no help. The noise blanker has always in the past been able to handle this noise with no problem, now it doesn't seem to do anything at all. Tried on several bands and other noises that it usually works great on and no help.

I have checked all the connections that I had contact with on the IF board and have found nothing.

Any ideas what I may have done or where I could look?

Thanks
Curt
KF4OFI

[Non-text portions of this message have been removed]

43210. Re: [TS-520_820_530_830] TS-830S Serial numbers in the grand scheme of things

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 11:08:05 UTC
From: Ken Webb
Topic: 43195 Message: 43210

Hi Dave,
By that you mean it's likely a later model?
Thanks,
Ken
WB4EJZ

From: fpath fpath <fpath@...>
To: "TS-520_820_530_830@yahoogroups.com" <ts-520_820_530_830@yahoogroups.com>
Sent: Wednesday, July 3, 2013 5:59 AM
Subject: RE: [TS-520_820_530_830] TS-830S Serial numbers in the grand scheme of things

20 million range is fantastic, but sure he meant 2 million range which is still great

73's

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: synovial_98@yahoo.com
Date: Tue, 2 Jul 2013 23:01:44 +0000
Subject: [TS-520_820_530_830] TS-830S Serial numbers in the grand scheme of things

Hi,

I have a TS-830S on the way and the seller says the serial number is in the "20 million" range. From everyone's experience, where does that place the rig in the total Kenwood production run?

Thanks and 73s,
Ken
WB4EJZ

[Non-text portions of this message have been removed]

Yahoo! Groups Links

[Non-text portions of this message have been removed]

43211. Re: TS-830S,need help

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 11:16:02 UTC
From: Terry Wagoner
Topic: 43153 Message: 43211

Sorry, I had typo it is Conn 8. No need to do any of that testing or signal injection at filter switching diodes if 40 meters is working. If you have good S-meter action on 40 it means that RFG is feeding the AGC bus with RF-1 3.6vdc voltage and that IF amps are working and AGC detector and AGC amp is working.

--- In TS-520_820_530_830@yahoogroups.com, ravi sumith <mindover2003@...> wrote:
>
> Thanks Terry. I will test the way you proposed and come back.
>
> Meanwhile need a clarification, you said to measure RFG voltage at connection 6 on IF board.But according to schematic,RFG terminal is at Connection 8 Pin 2.
> I assume you are referring to RIF terminal voltage at Connection 6 Pin 6.right?.
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> Regards
> Ravi-4s6rav
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> _____
> From: Terry Wagoner <wagstw46@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, 3 July 2013 12:36 AM
> Subject: [TS-520_820_530_830] Re: TS-830S,need help
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> 1. Injected 8.30Mhz/8milivolts signal to TP-2 - No s-meter indication either on fast or slow But audio was good (AF nwhile gain control at 9 o'clock position & RF control fully CW). When I rotate RF control to 12 o'clock position,s-meter goes up and stay & audio is low (which is normal I believe).
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> My Response:
>
> Yes rotating RF GAIN pot from full CW to 1200 should produce upscale movement of the S-meter. Should have approx S8 TO S9 indication at 1200 position of RF gain pot.
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> No reason to test any further back from TP-2 on the RF board. Assuming Conn 5 and its solder connections are good then problem has to be on the IF board. Q1 and L41 have nothing to do with substitute 8mv RIF signal not producing S-meter indication.
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> Injecting 8mv @ 8.830mhz at TP-2 should produce approx 30 over S-9 S-meter indication.

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> Do the following:
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> 1. Measure RFG voltage at Conn 6 on IF board. With RF gain pot at full CW position should read approx 3.6vdc.
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> 2. CAUTION: Measure AGC voltage at Conn 15 Pin 3 brown wire. Do not rely on the brown wire. Make sure you are on Pin 3 and not Pin 1 where there is 300vdc present. Depending on input Z of your meter the AGC bus voltage will read low and drive the S-meter up scale. A 11meg VTVM will read approx 3.0vdc and S meter will read S4 to S5.
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> 3. If above tests are all good then inject 8.830 at IF board as follows:
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> A. At IF board Conn 6 pin 6 inject 8mv @ 8.830mhz and see if S-meter comes alive. If it does, the problem is between Conn 6 on IF board and Conn 5 on RF board. If it does not, then need to move down the IF chain injecting until you find where it is being lost. Problem is there are not many good test points in the path.
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> B. Go to IF01 on rear panel and inject same 8mv @ 8.830mhz. If comes alive then problem is with Q1 RIF amp. If it does not then move down to the filter switching diodes and inject there. Once you get past Q2/Q3 Mixer will have to change frequency to 455khz.
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> Lastly, are you certain you have an 8mv signal? Can you inject into a known good rig? Another hybrid would be good. 8mv @ 8.830mhz into the coax connector on rear panel will give approx S4 to S5 indication and using 14.2mhz @ 8mv will give approx 40 over S-9 indication.
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> [Non-text portions of this message have been removed]
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43212. Re: TS-830S,need help

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 11:51:54 UTC
From: Terry Wagoner
Topic: 43153 Message: 43212

Ravi:

I am sorry I missed the detail about 40 meters S-meter. I have been trying to process a lot of information from a lot of sources. Clearly my own fault. I guess I am having a mental block.

Then I now understand that 40 meters receive operation is not NORMAL. It is very difficult for me to assess what is happening with 40 meters not being able to hear the received signals.

So I cannot tell if you have a receiver sensitivity problem or an S-meter indication problem or both.

Only way I could tell is to inject a known level into the SO-239 connector. 50uv or -73dBM will produce loud tone and S9.

What confuses me is you say you are injecting 8mv @8.830mhz at output of 1st mixer (a very high level RIF signal) and get weak tone in speaker and no S-meter indication. Yet at same time you tell me you can copy off air 40 meter signals and no other bands. Those two do not equate in my feeble mind unless you have some broadcast band 40 meter stations that are giving you 1.0 volt at the antenna? I could see this on 160 but not on 40. Are these ham signals or broadcast signals?

I think I would confirm that you have good VCO level on all bands at TP-3 and I would confirm have good LO at the 2nd mixer on IF board. This is measured at TP-1 on rear of IF board and is the VBT oscillator approx 8.375 @ 1.0 volts. This LO signal is required to produce the 455 IF output from Mixer Q2/Q3.

Again if 40 meters is working then Mixer 1 and Mixer 2 have to be working to some degree.

Sorry but I am lost at this point. You can continue your signal injecting efforts with some level to see if you find a point where you get good loud audio and good S-meter indication. If you go to output of Mixer 2 need to change from 8.830mhz to 455khz. You can work backward from the last IF amp Q8. If you inject 455khz at drain of Q8 the S-meter should work. If not no sense doing anymore injection until that problem is resolved. Not common to lose the detector diodes.

I know there are lots of ways to work on these rigs with modest test gear, but I am spoiled by being able to inject and measure known signal levels and recognize normal responses.

Perhaps someone else can offer something that I am missing.

73s
Terry K9TW

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> Hi Terry,

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> I think I must correct our understanding on the problem.There is no S-meter indication in any of the bands to off air signals. But in 40 meters reception is good but no S-meter indication.In all other bands there is no band noise either. I mentioned this in my first mail.
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> Step 9 of service manual tells you how to adjust the VCO.
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> Also does this mean that you have approx S9 Marker signal on 40 meters?
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> > To: TS-520_820_530_830@yahoogroups.com
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43213. Re: TS-830S Serial numbers in the grand scheme of things

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 12:19:19 UTC
From: Terry Wagoner
Topic: 43195 Message: 43213

Ken:

A 2 million series TS-830 is not a late model run. It is nice to know the production date run but no need to be obsessive over it. Lots of confusion about this topic. You can try to determine a date by looking at the date codes on the Counter Display board ICs.

Here are some dates I have seen;
1 million = 1981
2 million = 1982
3 Million = 1983
4 million = 1985
6 million = 1986 (have also seen 1990 claim which I believe is wrong?)
7 million = 1986

You will see far more 2 million series offered on eBay. I see far more 2 million series across the bench than others as well. No way I know of to tell how many were manufactured.

Also no way to tell if your 2 million has had later boards installed or different VFO installed with the change in hands over all these years. Just get it in good state of tune and have fun with it.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Ken Webb <synovial_98@...> wrote:
>
> Hi Dave,
> By that you mean it's likely a later model?
> Thanks,
> Ken
> WB4EJZ
>
>
> _____
> From: fpath fpath <fpath@...>
> To: "TS-520_820_530_830@yahoogroups.com" <ts-520_820_530_830@yahoogroups.com>
> Sent: Wednesday, July 3, 2013 5:59 AM
> Subject: RE: [TS-520_820_530_830] TS-830S Serial numbers in the grand scheme of things
>
>
> 20 million range is fantastic, but sure he meant 2 million range which is still great
>
>
>
> 73's
>
> Dave

>
> VK5PDL
>
>
>
>
> To: TS-520_820_530_830@yahoogroups.com
> From: synovial_98@...
> Date: Tue, 2 Jul 2013 23:01:44 +0000
> Subject: [TS-520_820_530_830] TS-830S Serial numbers in the grand scheme of things
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>
>
> Hi,
>
> I have a TS-830S on the way and the seller says the serial number is in the "20 million" range. From everyone's experience, where does that place the rig in the total Kenwood production run?
>
> Thanks and 73s,
> Ken
> WB4EJZ
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> [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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43214. RE: [TS-520_820_530_830] TS-830S Serial numbers in the grand scheme of things

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 12:46:28 UTC
From: fpath fpath
Topic: 43195 Message: 43214

Hi Ken,

Yes it is a later model, there is a webpage that will give you an idea on year of manufacture in relation to the serial number, not sure name of site, perhaps another forum user may know.

73's

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: synovial_98@...
Date: Wed, 3 Jul 2013 04:08:05 -0700
Subject: Re: [TS-520_820_530_830] TS-830S Serial numbers in the grand scheme of things

Hi Dave,
By that you mean it's likely a later model?
Thanks,
Ken
WB4EJZ

From: fpath fpath <fpath@...>
To: "TS-520_820_530_830@yahoogroups.com" <ts-520_820_530_830@yahoogroups.com>
Sent: Wednesday, July 3, 2013 5:59 AM
Subject: RE: [TS-520_820_530_830] TS-830S Serial numbers in the grand scheme of things

20 million range is fantastic, but sure he meant 2 million range which is still great

73's

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: synovial_98@...
Date: Tue, 2 Jul 2013 23:01:44 +0000
Subject: [TS-520_820_530_830] TS-830S Serial numbers in the grand scheme of things

Hi,

I have a TS-830S on the way and the seller says the serial number is in the "20 million" range. From everyone's experience, where does that place the rig in the total Kenwood production run?

Thanks and 73s,
Ken
WB4EJZ

[Non-text portions of this message have been removed]

Yahoo! Groups Links

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

43215. Re: TS-830-S Noise Blanker loss of effectiveness

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 13:03:26 UTC
From: Terry Wagoner
Topic: 43203 Message: 43215

If you do not have a pulse generator or a diode noise bridge or dont feel like making one there is another easy trick.

Get a universal motor appliance. The older the better. I have a $5.00 garage sale blender that has a ring of fire around its commutator when running. Perfect impulse noise generator. Set it across the room and turn on and it replicates power line insulator noise and will peg your S-meter and you can align the NB to completely null it out as indicated by the S-meter at S1 or less.

Yes the noise isnt fun but it is only for short time and you are looking at S-meter and not listening for the null.

If you get a blender just dont be tempted to "gin" up any mixed drinks while using it to align the rig!

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
> Curt,
>
>
>
> Give your NB switch and pot a blast of Deoxit (working pot through full range of movement) followed by good blast of canned air, may need to do more than once. If no joy then it may pay to do the NB alignment. You'll need DVM, SSG and noise generator. NB on with pot fully CCW, AGC set to fast, all work is undertaken on the AF board, . Inject SSG signal at at 20db in to rear panel so239, TP4 with adjustment to T1 and T2, adjusting to minimum. Remove SSG and connect noise generator to rear panel SO239, noise generator should be set to about s5-s9. Reduce the noise generator to below the threshold sensitivity and the turn NB control to Full CW, which should blank out the noise.
>
>
>
> Before attempting to tune T1 or T2, it will pay to use a clean solder iron and heat the slug and then turn slug, this usually helps to prevent cracking the slugs
>
>
>
> 73s
>
> Dave
>
> VK5PDL
>
>

>
> To: TS-520_820_530_830@yahoogroups.com
> From: kf4ofi@...
> Date: Wed, 3 Jul 2013 02:18:00 +0000
> Subject: [TS-520_820_530_830] TS-830-S Noise Blanker loss of effectiveness
>
>
>
>
>
> First here is what I did... I pulled the IF board out and changed the 455 Murata filter with one from a 930. I didn't like it and changed it back. After putting it back together I notice that an electrical noise in my neighborhood was rather noisy. Tried increasing the noise blanker and no help. The noise blanker has always in the past been able to handle this noise with no problem, now it doesn't seem to do anything at all. Tried on several bands and other noises that it usually works great on and no help.
>
> I have checked all the connections that I had contact with on the IF board and have found nothing.
>
> Any ideas what I may have done or where I could look?
>
> Thanks
> Curt
> KF4OFI
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> [Non-text portions of this message have been removed]
>

43216. Re: Lessons learned

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 12:19:43 UTC
From: Barry
Topic: 43165 Message: 43216

Couldn't have said it better myself, Craig. I've had my 820 a month and have learned a LOT just reading these messages and following the advice of the very helpful guys here. Obviously there is still a lot that is way over my head, but hopefully some of the local guys that offer to help me will be able to team up and get the 820 going.

When my friend was helping me Monday morning on the 820, he took the cover off the high voltage area tubes and showed the way he gets the voltage out of them. He took a screwdriver and touched it to the chassis and then touched the wires that were coming off the top of the 2 tubes with it.

Is that a safe way to discharge the high voltage? Just curious in case I open it up again. I don't want to shock the hound out of myself if there's a better way to do it.

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

43217. Re: [TS-520_820_530_830] Re: Lessons learned

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 13:36:44 UTC
From: R Oler
Topic: 43165 Message: 43217

As long as the screwdriver is insulated yes...Robert WB5MZO and S2 something

Sent from my iPad

On Jul 3, 2013, at 7:31 PM, "Barry" <bonnevilleblb@...> wrote:

> Couldn't have said it better myself, Craig. I've had my 820 a month and have learned a LOT just reading these messages and following the advice of the very helpful guys here. Obviously there is still a lot that is way over my head, but hopefully some of the local guys that offer to help me will be able to team up and get the 820 going.
>
> When my friend was helping me Monday morning on the 820, he took the cover off the high voltage area tubes and showed the way he gets the voltage out of them. He took a screwdriver and touched it to the chassis and then touched the wires that were coming off the top of the 2 tubes with it.
>
> Is that a safe way to discharge the high voltage? Just curious in case I open it up again. I don't want to shock the hound out of myself if there's a better way to do it.
>
> Barry
> KK4RXN
> Jeremiah 29:11-13 / John 3:16
>
>

[Non-text portions of this message have been removed]

43218. TS-830S Serial numbers in the grand scheme of things

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 13:54:23 UTC
From: Craig Roberts
Topic: 43195 Message: 43218

My newly revived TS-830S is serial # 1030342 and, according to a notation from the original owner on the back of the owner's manual, was purchased on Jan. 12, 1981 (from EGE, Inc.). So, this early one must have been manufactured in 1980.

43219. Re: [TS-520_820_530_830] Re: TS-830S,need help

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 15:37:56 UTC
From: ravi sumith
Topic: 43153 Message: 43219

That's Ok Terry I understand.I take this opportunity to thank you for all the advises & guidance you gave me.To-day I did not had a time to work on the rig.Will wait for the weekend.I will post a update thereafter.

Thanks & best regards
de 4s6rav (Ravi)

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, 3 July 2013 5:21 PM
Subject: [TS-520_820_530_830] Re: TS-830S,need help

Ravi:

I am sorry I missed the detail about 40 meters S-meter. I have been trying to process a lot of information from a lot of sources. Clearly my own fault. I guess I am having a mental block.

Then I now understand that 40 meters receive operation is not NORMAL. It is very difficult for me to assess what is happening with 40 meters not being able to hear the received signals.

So I cannot tell if you have a receiver sensitivity problem or an S-meter indication problem or both.

Only way I could tell is to inject a known level into the SO-239 connector. 50uv or -73dBM will produce loud tone and S9.

What confuses me is you say you are injecting 8mv @8.830mhz at output of 1st mixer (a very high level RIF signal) and get weak tone in speaker and no S-meter indication. Yet at same time you tell me you can copy off air 40 meter signals and no other bands. Those two do not equate in my feeble mind unless you have some broadcast band 40 meter stations that are giving you 1.0 volt at the antenna? I could see this on 160 but not on 40. Are these ham signals or broadcast signals?

I think I would confirm that you have good VCO level on all bands at TP-3 and I would confirm have good LO at the 2nd mixer on IF board. This is measured at TP-1 on rear of IF board and is the VBT oscillator approx 8.375 @ 1.0 volts. This LO signal is required to produce the 455 IF output from Mixer Q2/Q3.

Again if 40 meters is working then Mixer 1 and Mixer 2 have to be working to some degree.

Sorry but I am lost at this point. You can continue your signal injecting efforts with some level to see if you find a point where you get good loud audio and good S-meter indication. If you go to output of Mixer 2 need to change from 8.830mhz to 455khz. You can work backward from the last IF amp Q8. If you inject 455khz at drain of Q8 the S-meter should work. If not no sense doing anymore injection until that problem is resolved. Not common to

lose the detector diodes.

I know there are lots of ways to work on these rigs with modest test gear, but I am spoiled by being able to inject and measure known signal levels and recognize normal responses.

Perhaps someone else can offer something that I am missing.

73s
Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, ravi sumith <mindover2003@...> wrote:
>
> Hi Terry,
>
> I think I must correct our understanding on the problem.There is no S-meter indication in any of the bands to off air signals. But in 40 meters reception is good but no S-meter indication.In all other bands there is no band noise either. I mentioned this in my first mail.
> Thanks
> Ravi - 4s6rav
>
> _____
> From: Terry Wagoner <wagstw46@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, 3 July 2013 8:22 AM
> Subject: [TS-520_820_530_830] Re: TS-830S,need help
>
>
>
> Â
> Ravi:
>
> If 40 meters is working and providing normal S-meter indication then can have no problem on RF board or IF board with exception of missing or low VCO signal at TP-3. VCO is the LO for the Mixer. Level is important.
>
> Injecting substitute 8.830mhz RIF signal at TP-2 should have resulted in same action as you are seeing on 40 meters with exception you should have seen 30 over S9 with a 8mv signal.
>
> Set your Sig gen to 7.200 and inject in to the SO-239 connector. Increase the RF output level until you get S9 indication. Assuming your S-meter is reasonably caled this is approx 50uv output level from your SG-402.
>
> Now note the Sig gen level pot setting and dont move it. Go to a dead band and set Sig Gen to 8.830. Assuming levels are relatively constant then inject this signal at TP-2 and you should have approx S7 reading.
>
> If 40 meters is working we are actually wasting our time with signal injection. It tells me you have missing or low VCO signal level at TP-3 for all the dead bands. This is very unusual. Go to TP-3 and measure the level on all the dead bands. You should have approx 1.0 rf volts. Measure with your Rf probe and DMM. I have seen cases where the VCO cable

connector at PLL board or RF board was bad, but should affect all bands and not allow good 40 meter operation.
>
> Step 9 of service manual tells you how to adjust the VCO.
>
> Also does this mean that you have approx S9 Marker signal on 40 meters?
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, ravi sumith <mindover2003@> wrote:
> >
> > Looks like highlighted color is not showing in mail.
> > I put them in brackets ( )
> >
> >
> >
> >
> > _____
> > From: ravi sumith <mindover2003@>
> > To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
> > Sent: Wednesday, 3 July 2013 6:30 AM
> > Subject: Re: [TS-520_820_530_830] Re: TS-830S,need help
> >
> >
> >
> > Ã‚Â
> > Hi Terry,
> >
> > I amplified,they are in color
> >
> > 73's de 4s6rav (Ravi)
> >
> > From: Terry Wagoner <wagstw46@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Wednesday, 3 July 2013 4:08 AM
> > Subject: [TS-520_820_530_830] Re: TS-830S,need help
> >
> >
> > Ã‚Â
> > Ravi:
> >
> > Lets regroup and make sure I understand the problem statement so not going off on a tangent.
> >
> > I will take a shot at it:
> >
> > In LSB, USB, and CW modes off air signals are very weak or non-existent, (other than on 40 meters where signals are fairly ok) audio level in the speaker is low and there is no S-meter deflection. The Marker signal produces a low level audio tone in the speaker, but no S-meter deflection. The S-meter does deflect up scale when the RF gain pot is lowered from full open or CW position.

> >
> > When injecting 8.0mv @ 8.830mhz test signal at the output of the receiver 1st mixer (TP-2) on the RF board there is audio tone from the speaker, but the audio level is not normal and there is no S-meter deflection.(Same results when injecting 8.0mv@ signal at TP-4 and at RB1 terminals.Ã‚Â Voltages at RB1 terminal reads 1.03V in REC and minus 3.28V in SEND) Ã‚Â Ã‚Â
> > Ã‚Â Ã‚Â Ã‚Â Ã‚Â Ã‚Â
> > Ã‚Â
> >
> > Please correct or amplify on this so I can determine if we need to alter our approach.
> >
> > Terry K9TW
> >
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43220. Re: Lessons learned

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 13:44:35 UTC
From: Barry
Topic: 43165 Message: 43220

Good deal.

I'm going to get to the bottom of why that thing isn't transmitting soon, I hope.

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, R Oler <orbitjet@...> wrote:
>
> As long as the screwdriver is insulated yes...Robert WB5MZO and S2 something
>
> Sent from my iPad
>
> On Jul 3, 2013, at 7:31 PM, "Barry" <bonnevilleblb@...> wrote:
>
> > Couldn't have said it better myself, Craig. I've had my 820 a month and have learned a LOT just reading these messages and following the advice of the very helpful guys here. Obviously there is still a lot that is way over my head, but hopefully some of the local guys that offer to help me will be able to team up and get the 820 going.
> >
> > When my friend was helping me Monday morning on the 820, he took the cover off the high voltage area tubes and showed the way he gets the voltage out of them. He took a screwdriver and touched it to the chassis and then touched the wires that were coming off the top of the 2 tubes with it.
> >
> > Is that a safe way to discharge the high voltage? Just curious in case I open it up again. I don't want to shock the hound out of myself if there's a better way to do it.
> >
> > Barry
> > KK4RXN
> > Jeremiah 29:11-13 / John 3:16
> >
> >
>
>
> [Non-text portions of this message have been removed]
>

43221. Re: TS-830-S Noise Blanker loss of effectiveness

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 14:39:53 UTC
From: kf4ofi
Topic: 43203 Message: 43221

Thanks Dave and Terry for your responses. As you intuitively suspected, I do not have the necessary equipment to "properly" align the NB, but the noises in my neighborhood should prove to be enough to attempt to adjustments. Now that I know where the NB is located I can diddle a little bit and see it there is something loose or not working properly. I had cleaned all the front panel switches and pots a couple of months ago, but I will go through them again.

Possibly it was just coincidence that this happened when I had the IF board out, but I feel I have done something to it. Should have just left it alone. Oh well.

Any other thoughts are still welcome.

Thanks
Curt

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> If you do not have a pulse generator or a diode noise bridge or dont feel like making one there is another easy trick.
>
> Get a universal motor appliance. The older the better. I have a $5.00 garage sale blender that has a ring of fire around its commutator when running. Perfect impulse noise generator. Set it across the room and turn on and it replicates power line insulator noise and will peg your S-meter and you can align the NB to completely null it out as indicated by the S-meter at S1 or less.
>
> Yes the noise isnt fun but it is only for short time and you are looking at S-meter and not listening for the null.
>
> If you get a blender just dont be tempted to "gin" up any mixed drinks while using it to align the rig!
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@> wrote:
> >
> > Curt,
> >
> >
> >
> > Give your NB switch and pot a blast of Deoxit (working pot through full range of movement) followed by good blast of canned air, may need to do more than once. If no joy then it may pay to do the NB alignment. You'll need DVM, SSG and noise generator. NB on with pot fully CCW, AGC set to fast, all work is undertaken on the AF board, . Inject SSG signal at at 20db in to rear panel so239, TP4 with adjustment to T1 and T2, adjusting to minimum. Remove SSG and connect noise generator to rear panel SO239, noise generator should

be set to about s5-s9. Reduce the noise generator to below the threshold sensitivity and the turn NB control to Full CW, which should blank out the noise.
> >
> >
> >
> > Before attempting to tune T1 or T2, it will pay to use a clean solder iron and heat the slug and then turn slug, this usually helps to prevent cracking the slugs
> >
> >
> >
> > 73s
> >
> > Dave
> >
> > VK5PDL
> >
> >
> >
> > To: TS-520_820_530_830@yahoogroups.com
> > From: kf4ofi@
> > Date: Wed, 3 Jul 2013 02:18:00 +0000
> > Subject: [TS-520_820_530_830] TS-830-S Noise Blanker loss of effectiveness
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> >
> >
> > First here is what I did... I pulled the IF board out and changed the 455 Murata filter with one from a 930. I didn't like it and changed it back. After putting it back together I notice that an electrical noise in my neighborhood was rather noisy. Tried increasing the noise blanker and no help. The noise blanker has always in the past been able to handle this noise with no problem, now it doesn't seem to do anything at all. Tried on several bands and other noises that it usually works great on and no help.
> >
> > I have checked all the connections that I had contact with on the IF board and have found nothing.
> >
> > Any ideas what I may have done or where I could look?
> >
> > Thanks
> > Curt
> > KF4OFI
> >
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> > [Non-text portions of this message have been removed]
> >

>

43222. TS-820 PLL

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 17:08:18 UTC
From: coyoteinventor@ymail.com
Topic: 43222 Message: 43222

I have a general question. Will replacing all caps on my TS-820 improve the reliability of the PLL (or at least the caps ones on that board)? Or not really?

My PLL locks when it wants to, and then it unlocks and goes crazy for a while. Switching bands usually helps. Other times it works great for a long time. I had a fellow ham radio tune it a couple of weeks ago and it worked well for a little while, but it's unlocking sometimes again and jumping around.

Thanks.

--Cesar-- K1TNT

43223. Re: [TS-520_820_530_830] Re: TS-830-S Noise Blanker loss of effectiveness

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 15:54:30 UTC
From: Robert Fish
Topic: 43203 Message: 43223

I seem to remember reading about a method of generating pulse type noise for testing noise blankers that involved scraping a wire across a metal file. Unfortunately I don't remember much more than that.
I don't remember if the file and wire were under power or grounded or what. It seems like there would have to be some kind of power to generate noise that you could hear.

I think it may have been on one of the Drake groups (I have followed those guys for years). A Google search should turn it up.

You can't get a cheaper noise generator than that.

73,

Bob K6GGO

> If you do not have a pulse generator or a diode noise bridge or dont feel like making one there is another easy trick.
>
> Get a universal motor appliance. The older the better. I have a $5.00 garage sale blender that has a ring of fire around its commutator when running. Perfect impulse noise generator. Set it across the room and turn on and it replicates power line insulator noise and will peg your S-meter and you can align the NB to completely null it out as indicated by the S-meter at S1 or less.
>
> Yes the noise isnt fun but it is only for short time and you are looking at S-meter and not listening for the null.
>
> If you get a blender just dont be tempted to "gin" up any mixed drinks while using it to align the rig!
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>> Curt,
>>
>>
>>
>> Give your NB switch and pot a blast of Deoxit (working pot through full range of movement) followed by good blast of canned air, may need to do more than once. If no joy then it may pay to do the NB alignment. You'll need DVM, SSG and noise generator. NB on with pot fully CCW, AGC set to fast, all work is undertaken on the AF board, . Inject SSG signal at at 20db in to rear panel so239, TP4 with adjustment to T1 and T2, adjusting to minimum. Remove SSG and connect noise generator to rear panel SO239, noise generator should be set to about s5-s9. Reduce the noise generator to below the threshold sensitivity and

the turn NB control to Full CW, which should blank out the noise.
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>>
>> Before attempting to tune T1 or T2, it will pay to use a clean solder iron and heat the slug and then turn slug, this usually helps to prevent cracking the slugs
>>
>>
>>
>> 73s
>>
>> Dave
>>
>> VK5PDL
>>
>>
>>
>> To: TS-520_820_530_830@yahoogroups.com
>> From: kf4ofi@...
>> Date: Wed, 3 Jul 2013 02:18:00 +0000
>> Subject: [TS-520_820_530_830] TS-830-S Noise Blanker loss of effectiveness
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>>
>>
>> First here is what I did... I pulled the IF board out and changed the 455 Murata filter with one from a 930. I didn't like it and changed it back. After putting it back together I notice that an electrical noise in my neighborhood was rather noisy. Tried increasing the noise blanker and no help. The noise blanker has always in the past been able to handle this noise with no problem, now it doesn't seem to do anything at all. Tried on several bands and other noises that it usually works great on and no help.
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>> I have checked all the connections that I had contact with on the IF board and have found nothing.
>>
>> Any ideas what I may have done or where I could look?
>>
>> Thanks
>> Curt
>> KF4OFI
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43224. Re: [TS-520_820_530_830] Re: TS-830-S Noise Blanker loss of effectiveness

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 17:32:00 UTC
From: W5RKL
Topic: 43203 Message: 43224

A push mower will do the same thing. All you have to have is a pulse noise that acts like an ignition system on a lawn mower or your car.

I think you are referring to a low voltage battery with the negative lead connected to the file and the positive lead connected to one lead of a 100 ohm resistor and the other resistor lead scrapped across the file. This will produce sparks which will result in noise very similar to power line noise.

Terry's appliance idea is much better, you don't have to hold anything just turn it on and make adjustments to the NB.

You may have a bad connection or broken/cracked foil run that was created when you removed the board. I would check those first before you do anything else.

73
Mike W5RKL

On 7/3/2013 9:39 AM, kf4ofi wrote:
>
> Thanks Dave and Terry for your responses. As you intuitively
> suspected, I do not have the necessary equipment to "properly" align
> the NB, but the noises in my neighborhood should prove to be enough to
> attempt to adjustments. Now that I know where the NB is located I can
> diddle a little bit and see it there is something loose or not working
> properly. I had cleaned all the front panel switches and pots a couple
> of months ago, but I will go through them again.
>
> Possibly it was just coincidence that this happened when I had the IF
> board out, but I feel I have done something to it. Should have just
> left it alone. Oh well.
>
> Any other thoughts are still welcome.
>
> Thanks
> Curt
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Terry Wagoner"
> <wagstw46@...> wrote:
> >
> > If you do not have a pulse generator or a diode noise bridge or dont
> feel like making one there is another easy trick.
> >

> > Get a universal motor appliance. The older the better. I have a
> $5.00 garage sale blender that has a ring of fire around its
> commutator when running. Perfect impulse noise generator. Set it
> across the room and turn on and it replicates power line insulator
> noise and will peg your S-meter and you can align the NB to completely
> null it out as indicated by the S-meter at S1 or less.
> >
> > Yes the noise isnt fun but it is only for short time and you are
> looking at S-meter and not listening for the null.
> >
> > If you get a blender just dont be tempted to "gin" up any mixed
> drinks while using it to align the rig!
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, fpath fpath <fpath@> wrote:
> > >
> > > Curt,
> > >
> > >
> > >
> > > Give your NB switch and pot a blast of Deoxit (working pot through
> full range of movement) followed by good blast of canned air, may need
> to do more than once. If no joy then it may pay to do the NB
> alignment. You'll need DVM, SSG and noise generator. NB on with pot
> fully CCW, AGC set to fast, all work is undertaken on the AF board, .
> Inject SSG signal at at 20db in to rear panel so239, TP4 with
> adjustment to T1 and T2, adjusting to minimum. Remove SSG and connect
> noise generator to rear panel SO239, noise generator should be set to
> about s5-s9. Reduce the noise generator to below the threshold
> sensitivity and the turn NB control to Full CW, which should blank out
> the noise.
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> > > Before attempting to tune T1 or T2, it will pay to use a clean
> solder iron and heat the slug and then turn slug, this usually helps
> to prevent cracking the slugs
> > >
> > >
> > >
> > > 73s
> > >
> > > Dave
> > >
> > > VK5PDL
> > >
> > >
> > >

> > > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > From: kf4ofi@
> > > Date: Wed, 3 Jul 2013 02:18:00 +0000
> > > Subject: [TS-520_820_530_830] TS-830-S Noise Blanker loss of
> effectiveness
> > >
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> > >
> > > First here is what I did... I pulled the IF board out and changed
> the 455 Murata filter with one from a 930. I didn't like it and
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> electrical noise in my neighborhood was rather noisy. Tried increasing
> the noise blanker and no help. The noise blanker has always in the
> past been able to handle this noise with no problem, now it doesn't
> seem to do anything at all. Tried on several bands and other noises
> that it usually works great on and no help.
> > >
> > > I have checked all the connections that I had contact with on the
> IF board and have found nothing.
> > >
> > > Any ideas what I may have done or where I could look?
> > >
> > > Thanks
> > > Curt
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> > >
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43225. Re: [TS-520_820_530_830] TS-820 PLL

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 17:42:09 UTC
From: W5RKL
Topic: 43222 Message: 43225

The answer to your question about replacing the caps to fix a PLL problem is no. This is a common misunderstanding that caps are the source of most problems which is not true. There are problems associated with capacitors but those are few.

Your problem appears to be, based on your statements, dirty contacts in the VFO variable capacitor shaft to frame connection and the band switch wafers. If the VFO signal is disrupted, lost, for any reason, can result in the PLL going into UNLOCK. I recommend you clean the VFO shaft to frame connection with contact cleaner. Your problem can also be caused by dirty internal contacts in the PLL module (there are 2 boards inside the PLL module that interconnect with internal fixed pins). If these pins get dirty/corroded then instability in the PLL system can result in intermittent LOCK/UNLOCK states occurring.

Also try loosening the PC board mounting screws 1 full turn then tighten. Over time the screws become lose and dirt/corrosion occurs between the board and the ground which can cause problems. So clean the 820 then test. Be careful when removing the individual plugs on the modules. Use straight up pulling with very little rocking to remove the plug. Do NOT pull the plug wires to remove the plug. A pair of needle nose pliers will work, grasp the plug in the middle and pull straight up.

If you don't have the 820 service manual then download, you can't work on the 820 without it. There are screws that hold the module to the chassis, they must be removed after the plugs have been removed. Make note of how and where the plugs are plugged into the boards. If necessary, take a picture with your cell phone or digital camera BEFORE you remove anything! Don't assume you will remember how and where the plugs go, you can assume wrong!!

73
Mike W5RKL

On 7/3/2013 12:08 PM, coyoteinventor@... wrote:
>
> I have a general question. Will replacing all caps on my TS-820
> improve the reliability of the PLL (or at least the caps ones on that
> board)? Or not really?
>
> My PLL locks when it wants to, and then it unlocks and goes crazy for
> a while. Switching bands usually helps. Other times it works great for
> a long time. I had a fellow ham radio tune it a couple of weeks ago
> and it worked well for a little while, but it's unlocking sometimes
> again and jumping around.
>

> Thanks.
>
> --Cesar-- K1TNT
>
>

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43226. Re: Lessons learned

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 20:33:45 UTC
From: Terry Wagoner
Topic: 43165 Message: 43226

I dont agree. My rigs are not welding machines.

Depending on how soon after down power that you short the plate choke to PA cage with a screw driver you can get a large pop and transfer of metal. Impressive but needless. I dont want any pitting or burn marks in my PA cage.

Also, it is needlessly hard on the Filter caps to place a short across them.

I suppose if you always wait a sufficient time for the bleeders to do their job a screwdriver is fine.

I use a dual alligator clip jumper lead made from good flexible Belden 5kv test prod wire with good Mueller rubber boots on each clip and inserted a 10k 5 watt resistor in series in the middle. I heat shrinked resistor in place. Resistor is not critical just not too low and not too high. 10 ohms would be too low and 100k would be too high.

To use this safety tool I ring it with ohm meter each time to make sure it has good continuity. I connect one alligator clip to chassis ground and connect the other end to top of plate choke or at the HV filter caps. I dont tap it on I connect it and leave it in place to insure all stored energy is discharged.

If I apply it with 800 vdc on the caps then 800/10k = 80 ma of discharge current instead of potentially 100s of amps using a screw driver.

Just my opinion and how I treat my rigs and customers rigs.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, R Oler <orbitjet@...> wrote:
>
> As long as the screwdriver is insulated yes...Robert WB5MZO and S2 something
>
> Sent from my iPad
>
> On Jul 3, 2013, at 7:31 PM, "Barry" <bonnevilleblb@...> wrote:
>
> > Couldn't have said it better myself, Craig. I've had my 820 a month and have learned a LOT just reading these messages and following the advice of the very helpful guys here. Obviously there is still a lot that is way over my head, but hopefully some of the local guys that offer to help me will be able to team up and get the 820 going.
> >
> > When my friend was helping me Monday morning on the 820, he took the cover off the high voltage area tubes and showed the way he gets the voltage out of them. He took a screwdriver and touched it to the chassis and then touched the wires that were coming off the top of the 2 tubes with it.
> >
> > Is that a safe way to discharge the high voltage? Just curious in case I open it up

again. I don't want to shock the hound out of myself if there's a better way to do it.
> >
> > Barry
> > KK4RXN
> > Jeremiah 29:11-13 / John 3:16
> >
> >
>
>
> [Non-text portions of this message have been removed]
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43227. Re: [TS-520_820_530_830] Re: TS-830-S Noise Blanker loss of effectiveness

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 21:36:30 UTC
From: <pmarkavage@...>
Topic: 43203 Message: 43227

A germanium diode in series with battery and a pot(to control the level)
makes a nice simple noise generator. Older ARRL handbooks had the
details. I built one back in the "good old days" and still use it today.

Pete, wa2cwa

On Wed, 03 Jul 2013 12:32:00 -0500 W5RKL <w5rkl@...> writes:
> A push mower will do the same thing. All you have to have is a pulse
>
> noise that acts like an ignition system on a lawn mower or your
> car.
>
> I think you are referring to a low voltage battery with the negative
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> lead connected to the file and the positive lead connected to one
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> of a 100 ohm resistor and the other resistor lead scrapped across
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> file. This will produce sparks which will result in noise very
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> to power line noise.
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> Terry's appliance idea is much better, you don't have to hold
> anything
> just turn it on and make adjustments to the NB.
>
> You may have a bad connection or broken/cracked foil run that was
> created when you removed the board. I would check those first before
> you
> do anything else.
>
> 73
> Mike W5RKL

43228. Re: [TS-520_820_530_830] Re: TS-830-S Noise Blanker loss of effectiveness

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 21:48:10 UTC
From: Mark Gilger
Topic: 43203 Message: 43228

What I do is to turn on my variable heat
soldering pencil. It has an SCR that control the
heat from a pot on the base. Those are pretty
noisy devices. Anyway, if you stick a wire into
your SO-239 on the rear of the radio and lay it
near the soldering gun, you will have a good noise source for testing.

Regards,
Mark

At 11:54 AM 7/3/2013, Robert Fish wrote:
>
>
>I seem to remember reading about a method of generating pulse type noise
>for testing noise blankers that involved scraping a wire across a metal
>file. Unfortunately I don't remember much more than that.
>I don't remember if the file and wire were under power or grounded or
>what. It seems like there would have to be some kind of power to
>generate noise that you could hear.
>
>I think it may have been on one of the Drake groups (I have followed
>those guys for years). A Google search should turn it up.
>
>You can't get a cheaper noise generator than that.
>
>73,
>
>Bob K6GGO
>
> > If you do not have a pulse generator or a
> diode noise bridge or dont feel like making one there is another easy trick.
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> > Get a universal motor appliance. The older
> the better. I have a $5.00 garage sale blender
> that has a ring of fire around its commutator
> when running. Perfect impulse noise generator.
> Set it across the room and turn on and it
> replicates power line insulator noise and will
> peg your S-meter and you can align the NB to
> completely null it out as indicated by the S-meter at S1 or less.
> >
> > Yes the noise isnt fun but it is only for
> short time and you are looking at S-meter and not listening for the null.
> >

> > If you get a blender just dont be tempted to
> "gin" up any mixed drinks while using it to align the rig!
> >
> > Terry K9TW
> >
> > --- In
> <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com,
> fpath fpath <fpath@...> wrote:
> >> Curt,
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> >> Give your NB switch and pot a blast of
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> movement) followed by good blast of canned air,
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> it may pay to do the NB alignment. You'll need
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> >> Before attempting to tune T1 or T2, it will
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> slug and then turn slug, this usually helps to prevent cracking the slugs
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> >>
> >>
> >> 73s
> >>
> >> Dave
> >>
> >> VK5PDL
> >>
> >>
> >>
> >> To:
> <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
> >> From: kf4ofi@...
> >> Date: Wed, 3 Jul 2013 02:18:00 +0000
> >> Subject: [TS-520_820_530_830] TS-830-S Noise Blanker loss of effectiveness
> >>

> >>
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> >> First here is what I did... I pulled the IF
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> handle this noise with no problem, now it
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> several bands and other noises that it usually works great on and no help.
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> >> I have checked all the connections that I
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> >> Any ideas what I may have done or where I could look?
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> >> Thanks
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> >> [Non-text portions of this message have been removed]
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43229. Re: TS-830-S Noise Blanker loss of effectiveness

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-03 23:59:00 UTC
From: Terry Wagoner
Topic: 43203 Message: 43229

You can use a diode noise generator, but it is not as effective as an impulse generator.

The noise blanker works best on repetitive short duration impulse type noise ie auto ignition, power line insulator leakage, electrical contact arcing, door bell buzzer, electric fence etc.

I have a nice Palomar noise bridge and an Omega bridge and they just dont provide a repetitive ignition type pulse. The noise they produce is more like white noise. I use them with Spectrogram to align LSB/USB Carrier Osc. Great for that.

As I mentioned the hybrid noise blanker is most effective on repetitive impulse noise and wont work on random lightning or white noise or background hiss type noise.

I use to use my Palomar noise bridge to align Kenwood hybrid noise blankers and was not satisfied that I had them aligned as well as could be until I remembered the havoc my mom use to make on my receivers back in my Novice days when she would run the sweeper and blank out any and all reception. Even the diode ANL function in those old boatanchor receivers didnt help. Then it occurred to me I needed something with a commutator and brushes and the more dirty and worn the better to simulate what the Hybrid blankers are designed to act on.

Of course you can build an impulse noise generator by using a device that can be abruptly and fast switched like a Triac in a lite dimmer. You will get a fast (a few tens of microseconds)repetitive pulse rich in harmonics.

There are several simple impulse generator circuits on line that use SCR or Triac and 555 timer to trigger them.

I was suggesting a simple and cheap alternative to building a impulse generator. Maybe I will get around to building one with variable time constants someday and can retire the old blender.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, <pmarkavage@...> wrote:
>
> A germanium diode in series with battery and a pot(to control the level)
> makes a nice simple noise generator. Older ARRL handbooks had the
> details. I built one back in the "good old days" and still use it today.
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> Pete, wa2cwa
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> On Wed, 03 Jul 2013 12:32:00 -0500 W5RKL <w5rkl@...> writes:
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> > Mike W5RKL
>

43230. Re: TS-830-S Noise Blanker loss of effectiveness

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-04 00:08:46 UTC
From: Terry Wagoner
Topic: 43203 Message: 43230

Mark:

That makes sense to me and had not thought about the SCR control. I will have to check out my solder station. Maybe the old blender will go on the junk heap!

The blender will give me S9 plus about 8 feet away and I can almost completely null it. Will have to see what bringing short antenna near solder station will do. Sure would be a lot quieter!

Thanks for the suggestion.
Terry

--- In TS-520_820_530_830@yahoogroups.com, Mark Gilger <mgilger@...> wrote:
>
> What I do is to turn on my variable heat
> soldering pencil. It has an SCR that control the
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> near the soldering gun, you will have a good noise source for testing.
>
> Regards,
> Mark
>
> At 11:54 AM 7/3/2013, Robert Fish wrote:
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> > >>
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> > >>

> > >> Dave
> > >>
> > >> VK5PDL
> > >>
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> > >>
> > >> To:
> > <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
> > >> From: kf4ofi@
> > >> Date: Wed, 3 Jul 2013 02:18:00 +0000
> > >> Subject: [TS-520_820_530_830] TS-830-S Noise Blanker loss of effectiveness
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43231. Re: [TS-520_820_530_830] Re: TS-830-S Noise Blanker loss of effectiveness

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-04 02:37:53 UTC
From: Mark Gilger
Topic: 43203 Message: 43231

Where there is a will, you'll find the way.....

Mark

At 08:08 PM 7/3/2013, Terry Wagoner wrote:
>
>
>Mark:
>
>That makes sense to me and had not thought about
>the SCR control. I will have to check out my
>solder station. Maybe the old blender will go on the junk heap!
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> > >You can't get a cheaper noise generator than that.
> > >
> > >73,
> > >
> > >Bob K6GGO
> > >
> > > > If you do not have a pulse generator or a
> > > > diode noise bridge or dont feel like making
> one there is another easy trick.
> > > >
> > > > Get a universal motor appliance. The older
> > > > the better. I have a $5.00 garage sale blender
> > > > that has a ring of fire around its commutator
> > > > when running. Perfect impulse noise generator.
> > > > Set it across the room and turn on and it
> > > > replicates power line insulator noise and will
> > > > peg your S-meter and you can align the NB to
> > > > completely null it out as indicated by the S-meter at S1 or less.
> > > >
> > > > Yes the noise isnt fun but it is only for
> > > > short time and you are looking at S-meter and not listening for the null.
> > > >
> > > > If you get a blender just dont be tempted to
> > > > "gin" up any mixed drinks while using it to align the rig!
> > > >
> > > > Terry K9TW
> > > >
> > > > --- In
> > >
> <mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%40yahoogroups.co
m>TS-520_820_530_830@yahoogroups.com,
>
> > > fpath fpath <fpath@> wrote:
> > > >> Curt,
> > > >>
> > > >>
> > > >>
> > > >> Give your NB switch and pot a blast of
> > > > Deoxit (working pot through full range of
> > > > movement) followed by good blast of canned air,
> > > > may need to do more than once. If no joy then
> > > > it may pay to do the NB alignment. You'll need
> > > > DVM, SSG and noise generator. NB on with pot
> > > > fully CCW, AGC set to fast, all work is
> > > > undertaken on the AF board, . Inject SSG signal
> > > > at at 20db in to rear panel so239, TP4 with

> > > adjustment to T1 and T2, adjusting to minimum.
> > > Remove SSG and connect noise generator to rear
> > > panel SO239, noise generator should be set to
> > > about s5-s9. Reduce the noise generator to
> > > below the threshold sensitivity and the turn NB
> > > control to Full CW, which should blank out the noise.
> > > >>
> > > >>
> > > >>
> > > >> Before attempting to tune T1 or T2, it will
> > > pay to use a clean solder iron and heat the
> > > slug and then turn slug, this usually helps to prevent cracking the slugs
> > > >>
> > > >>
> > > >>
> > > >> 73s
> > > >>
> > > >> Dave
> > > >>
> > > >> VK5PDL
> > > >>
> > > >>
> > > >>
> > > >> To:
> > > >
> <mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%40yahoogroups.co
m>TS-520_820_530_830@yahoogroups.com
> > > >> From: kf4ofi@
> > > >> Date: Wed, 3 Jul 2013 02:18:00 +0000
> > > >> Subject: [TS-520_820_530_830] TS-830-S
> Noise Blanker loss of effectiveness
> > > >>
> > > >>
> > > >>
> > > >>
> > > >>
> > > >> First here is what I did... I pulled the IF
> > > board out and changed the 455 Murata filter
> > > with one from a 930. I didn't like it and
> > > changed it back. After putting it back together
> > > I notice that an electrical noise in my
> > > neighborhood was rather noisy. Tried increasing
> > > the noise blanker and no help. The noise
> > > blanker has always in the past been able to
> > > handle this noise with no problem, now it
> > > doesn't seem to do anything at all. Tried on
> > > several bands and other noises that it
> usually works great on and no help.
> > > >>
> > > >> I have checked all the connections that I

> > > had contact with on the IF board and have found nothing.
> > > >>
> > > >> Any ideas what I may have done or where I could look?
> > > >>
> > > >> Thanks
> > > >> Curt
> > > >> KF4OFI
> > > >>
> > > >>
> > > >>
> > > >>
> > > >>
> > > >>
> > > >>
> > > >> [Non-text portions of this message have been removed]
> > > >>
> > > >
> > > >
> > > >
> > > > ------------------------------------
> > > >
> > > > Yahoo! Groups Links
> > > >
> > > >
> > > >
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> > > >
> > >
> > >
> > >
> > > [Non-text portions of this message have been removed]
> >
>
>

[Non-text portions of this message have been removed]

43232. Re: [TS-520_820_530_830] Re: TS-830-S Noise Blanker loss of effectiveness

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-04 04:06:37 UTC
From: Wes Will
Topic: 43203 Message: 43232

> generator. Maybe I will get around to building one with variable time
> constants someday and can retire the old blender.

I can upgrade your blender a bit.

"Sunbeam Electric Mixer" ca. 1967. That thing was the NOISIEST gadget going. It would shut down television and radio reception for a LONG way around, a couple of houses away, anyway, every time my mother would fire it up to whip some mashed potatoes or stir up a cake. It was the small, hand-mixer type and I've seen them for fifty cents in thrift stores.

I'm going to grab one for JUST this reason next time I see one. Thanks for the great idea.

--
Wes Will
N9KDY

43233. Re: [TS-520_820_530_830] Re: TS-830-S Noise Blanker loss of effectiveness

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-04 04:28:30 UTC
From: spudcol
Topic: 43203 Message: 43233

I remember in the early 60's my father was barber, and his hair clippers would drive tv's and radios crazy when they were running!

From: Wes Will <wwill@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, July 4, 2013 12:06 AM
Subject: Re: [TS-520_820_530_830] Re: TS-830-S Noise Blanker loss of effectiveness

> generator. Maybe I will get around to building one with variable time
> constants someday and can retire the old blender.

I can upgrade your blender a bit.

"Sunbeam Electric Mixer" ca. 1967. That thing was the NOISIEST gadget going. It would shut down television and radio reception for a LONG way around, a couple of houses away, anyway, every time my mother would fire it up to whip some mashed potatoes or stir up a cake. It was the small, hand-mixer type and I've seen them for fifty cents in thrift stores.

I'm going to grab one for JUST this reason next time I see one. Thanks for the great idea.

--
Wes Will
N9KDY

[Non-text portions of this message have been removed]

43234. Re: TS-830-S Noise Blanker loss of effectiveness

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-04 11:54:45 UTC
From: Terry Wagoner
Topic: 43203 Message: 43234

I can see it now hundreds of hybrid shacks with sweepers, blenders, hand mixers and electric hair clippers running while aligning the noise blankers. Just make sure other rigs are not on VOX.

I may take Marks idea and run to Home Depot today and buy a cheap light dimmer, get a air conditioner AC motor start/run capacitor, an old auto ignition spark coil and make me a impulse noise generator.

Forgot about this as helped my kids use this approach for power source for their Tesla coil projects. By selecting value of the cap can get a nice fat white spark. Now that is the kind of test impulse noise we need.

Just have to be careful and not get on the 40,000 volts! I love the smell of Ozone.

OK enough fun with this.

73s
Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, spudcol <spudcol@...> wrote:
>
> I remember in the early 60's my father was barber, and his hair clippers would drive tv's and radios crazy when they were running!
>
>
> _____
> From: Wes Will <wwill@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, July 4, 2013 12:06 AM
> Subject: Re: [TS-520_820_530_830] Re: TS-830-S Noise Blanker loss of effectiveness
>
>
>
> Â
> > > generator. Maybe I will get around to building one with variable time
> > > constants someday and can retire the old blender.
> >
> > I can upgrade your blender a bit.
> >
> > "Sunbeam Electric Mixer" ca. 1967. That thing was the NOISIEST gadget
> > going. It would shut down television and radio reception for a LONG way
> > around, a couple of houses away, anyway, every time my mother would fire
> > it up to whip some mashed potatoes or stir up a cake. It was the small,
> > hand-mixer type and I've seen them for fifty cents in thrift stores.
> >
> > I'm going to grab one for JUST this reason next time I see one. Thanks

> for the great idea.
>
> --
> Wes Will
> N9KDY
>
>
>
>
> [Non-text portions of this message have been removed]
>

43235. restore from mod CB in TS-830M and replace of 1s1555 with 1n4148

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-04 07:30:43 UTC
From: vierugo
Topic: 43235 Message: 43235

Hello everyone

I purchased a TS-830M used, where, unfortunately, is the change was made for 11 mt CB.

the change is that with the diodes as shown in the files section.
in my case the result is :

position 29 mhz -> 27 Mhz,
29.5 Mhz -> 27.5 Mhz

and are interested D26, D44, D48

Unfortunately, the diodes have been cut (D26), extracted (D44) and welded on (D48) and D44 link to D44;

At this point I have extracted, cleaned the contacts and replaced the 3 diodes with 1N4148.

When i powered on the rtx, there is a new problem:
1.8 - frequency display off
3.5 - frequency on , but if i switch appers on/of...on....(there seems to be a bad contact)
7.0 - frequency display off
10.1 - frequency display OK
14.0 - frequency display off
18.0 - frequency display OK
21.0 - frequency display OK
24.8 - frequency display OK
28.0 - frequency display OK, OK +500 Khz
29.0 - frequency display OK, OK +500 Khz

Before you try to remove D26 as before and try to reconnect with D48 D44 to verify if the cause is 1n4148, has anyone who knows what other modules or jumpers could have been changed for the 11 mT

Thanks to all for attention

Ugo

43236. Re: [TS-520_820_530_830] Re: TS-830-S Noise Blanker loss of effectiveness

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-04 15:05:25 UTC
From: Jim S
Topic: 43203 Message: 43236

No, wait, I haven't contributed my thought, yet. We could hook up a key
to the line voltage, and use them as spark transmitters ! BUZZZ Buz
BUZZZZ Buz - - BUZZZZ BUZZZZ Buz BUZZZZZ. Whoops, sorry, I guess
the FCC outlawed that type of rig years ago. NEVER MIND ! ! !

Jim AG3Y

On 7/4/2013 7:54 AM, Terry Wagoner wrote:
>
> I can see it now hundreds of hybrid shacks with sweepers, blenders,
> hand mixers and electric hair clippers running while aligning the
> noise blankers. Just make sure other rigs are not on VOX.
>
> I may take Marks idea and run to Home Depot today and buy a cheap
> light dimmer, get a air conditioner AC motor start/run capacitor, an
> old auto ignition spark coil and make me a impulse noise generator.
>
> Forgot about this as helped my kids use this approach for power source
> for their Tesla coil projects. By selecting value of the cap can get a
> nice fat white spark. Now that is the kind of test impulse noise we need.
>
> Just have to be careful and not get on the 40,000 volts! I love the
> smell of Ozone.
>
> OK enough fun with this.
>
> 73s
> Terry K9TW
>
> --
>

[Non-text portions of this message have been removed]

43237. Re: restore from mod CB in TS-830M and replace of 1s1555 with 1n4148

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-04 15:10:47 UTC
From: Terry Wagoner
Topic: 43235 Message: 43237

Ugo:

I think this mod was done on component side of the board by cutting and splicing diodes? You may need to remove board and replace all involved diodes and make sure have good solder connections. Could have been some damage done during application of soldering iron heat.

Also, I dont think a 1N4148 is a recommended sub for a 1S1555 diode? A NTE177 is a sub for a 1S1555.

The 1N4148 is a fast switcher that has reverse recovery of 4ns and junction capacitance of 4pf.

The 1S1555 is a small signal switching diode with very low junction capacitance around 1pf.

The NTE177 has reverse recovery time of approx 50ns and junction capacitance of 1.5pf.

Not sure why Kenwood would have speced a low pn-junction capacitance diode for this application. The idea behind a small signal switching diode is that it is used where a small ac signal rides on top a dc bias voltage.

I have had no experience subing a 1S1555 with a 1N4148. Probably not related to your problem but just wanted to point it out.

Suggest you recheck your solder work and make sure traces have not been cut that you overlooked. Again if you tried to restore from component side of board might be better to remove and inspect board and replace all involved diodes.

Hopefully someone else will have had hands on experience with reversing this mod.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "vierugo" <vierugo@...> wrote:
>
> Hello everyone
>
> I purchased a TS-830M used, where, unfortunately, is the change was made for 11 mt CB.
>
> the change is that with the diodes as shown in the files section.
> in my case the result is :
>
> position 29 mhz -> 27 Mhz,
> 29.5 Mhz -> 27.5 Mhz
>
> and are interested D26, D44, D48
>
> Unfortunately, the diodes have been cut (D26), extracted (D44) and welded on (D48) and D44 link to D44;
>

> At this point I have extracted, cleaned the contacts and replaced the 3 diodes with 1N4148.
>
> When i powered on the rtx, there is a new problem:
> 1.8 - frequency display off
> 3.5 - frequency on , but if i switch appers on/of...on....(there seems to be a bad contact)
> 7.0 - frequency display off
> 10.1 - frequency display OK
> 14.0 - frequency display off
> 18.0 - frequency display OK
> 21.0 - frequency display OK
> 24.8 - frequency display OK
> 28.0 - frequency display OK, OK +500 Khz
> 29.0 - frequency display OK, OK +500 Khz
>
> Before you try to remove D26 as before and try to reconnect with D48 D44 to verify if the cause is 1n4148, has anyone who knows what other modules or jumpers could have been changed for the 11 mT
>
>
> Thanks to all for attention
>
> Ugo
>

43238. Re: TS-830-S Noise Blanker loss of effectiveness

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-04 15:21:36 UTC
From: Terry Wagoner
Topic: 43203 Message: 43238

Jim:

If you like reading radio history read Robert Shrader W6BNB (author of classic text Electronic Communications) QCWA biography where he discusses 2KW Spark gap transmitters and Regenerative detectors on board ships where he served during the 30s.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Jim S <jimstan@...> wrote:
>
> No, wait, I haven't contributed my thought, yet. We could hook up a key
> to the line voltage, and use them as spark transmitters ! BUZZZ Buz
> BUZZZZ Buz - - BUZZZZ BUZZZZ Buz BUZZZZZ. Whoops, sorry, I guess
> the FCC outlawed that type of rig years ago. NEVER MIND ! ! !
>
> Jim AG3Y
>
>
>
> On 7/4/2013 7:54 AM, Terry Wagoner wrote:
> >
> > I can see it now hundreds of hybrid shacks with sweepers, blenders,
> > hand mixers and electric hair clippers running while aligning the
> > noise blankers. Just make sure other rigs are not on VOX.
> >
> > I may take Marks idea and run to Home Depot today and buy a cheap
> > light dimmer, get a air conditioner AC motor start/run capacitor, an
> > old auto ignition spark coil and make me a impulse noise generator.
> >
> > Forgot about this as helped my kids use this approach for power source
> > for their Tesla coil projects. By selecting value of the cap can get a
> > nice fat white spark. Now that is the kind of test impulse noise we need.
> >
> > Just have to be careful and not get on the 40,000 volts! I love the
> > smell of Ozone.
> >
> > OK enough fun with this.
> >
> > 73s
> > Terry K9TW
> >
> > --
> >
>
>
>

> [Non-text portions of this message have been removed]
>

43239. Re: TS-830-S Noise Blanker loss of effectiveness

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-04 15:42:34 UTC
From: Terry Wagoner
Topic: 43203 Message: 43239

Jim:

I forgot to mention if you are ARRL member go to QST archive and look at Jan 2006 article that Shrader wrote on history of transmitters. He covers the evolution of spark gap transmitters and talks about arc converter blowing up covering the operator with black soot when operator keyed it after failing to purge out the hydrogen gas.

I for one am glad transmitters are no longer rotating machines!

Terry K9TW

>

43240. WTB, Kenwood twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-04 14:27:19 UTC
From: kf5wbs
Topic: 43240 Message: 43240

I have returned to ham radio after a very long (career long) absence and would like to set up my old shack. I would like to find a set of "minty" Kenwood twins with cables. If you have a set that needs a new home please contact me.

Thanks so much

Tom
KF5WBS

43241. Re: [TS-520_820_530_830] WTB, Kenwood twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-04 17:16:59 UTC
From: Dale Parfitt
Topic: 43240 Message: 43241

There is a clean set of the original 599's on eBay:
321153218367Item #

Pricey and the seller does not mention the transceive cable.

Dale W4OP
----- Original Message -----
From: kf5wbs
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, July 04, 2013 10:27 AM
Subject: [TS-520_820_530_830] WTB, Kenwood twins

I have returned to ham radio after a very long (career long) absence and would like to set up my old shack. I would like to find a set of "minty" Kenwood twins with cables. If you have a set that needs a new home please contact me.

Thanks so much

Tom
KF5WBS

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.2904 / Virus Database: 3204/6458 - Release Date: 07/02/13

[Non-text portions of this message have been removed]

43242. Re: [TS-520_820_530_830] WTB, Kenwood twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-04 17:49:31 UTC
From: <pmarkavage@...>
Topic: 43240 Message: 43242

Looks like two of the bidders got the big itch and are driving the price up. Shown are the 599D series which was the last of the series. I still have my original ones that I bought back in the 70's. If interested, I would drop the seller an e-mail and ask if it includes the transceive cable.

Pete, wa2cwa
http://www.manualman.com

On Thu, 4 Jul 2013 13:16:59 -0400 "Dale Parfitt" <parinc1@...>
writes:
>
> There is a clean set of the original 599's on eBay:
> 321153218367Item #
>
> Pricey and the seller does not mention the transceive cable.
>
> Dale W4OP
> ----- Original Message -----
> From: kf5wbs
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, July 04, 2013 10:27 AM
> Subject: [TS-520_820_530_830] WTB, Kenwood twins
>
>
>
> I have returned to ham radio after a very long (career long)
> absence and would like to set up my old shack. I would like to find
> a set of "minty" Kenwood twins with cables. If you have a set that
> needs a new home please contact me.
>
> Thanks so much
>
> Tom
> KF5WBS

43243. Re: [TS-520_820_530_830] WTB, Kenwood twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-04 17:36:10 UTC
From: thomas branton
Topic: 43240 Message: 43243

Hi Dale,

Thanks, I saw those and its actually what got me considering a twins station. I emailed the seller on ebay yesterday and asked about the transceiver cable and for some history on the radios. I did not receive any response from him. I always get somewhat concerned when a seller on ebay won't respond to questions. They do look like very nice units. Probably early production.

Thanks again,

Tom

From: Dale Parfitt <parinc1@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, July 4, 2013 12:16 PM
Subject: Re: [TS-520_820_530_830] WTB, Kenwood twins

There is a clean set of the original 599's on eBay:
321153218367Item #

Pricey and the seller does not mention the transceive cable.

Dale W4OP
----- Original Message -----
From: kf5wbs
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Thursday, July 04, 2013 10:27 AM
Subject: [TS-520_820_530_830] WTB, Kenwood twins

I have returned to ham radio after a very long (career long) absence and would like to set up my old shack. I would like to find a set of "minty" Kenwood twins with cables. If you have a set that needs a new home please contact me.

Thanks so much

Tom
KF5WBS

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.2904 / Virus Database: 3204/6458 - Release Date: 07/02/13

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[Non-text portions of this message have been removed]

43244. Re: [TS-520_820_530_830] WTB, Kenwood twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-04 18:26:37 UTC
From: Young Kim
Topic: 43240 Message: 43244

hi Tom,
I suggest you to select D series that is a later version with improvement and black (Dark grey) face which looks better in my opinion.
You can find aroound $500 or less. $750 is way too high. I bought one set including cables about 5 years ago at the swap meet for $100 for all. hi hi
Best luck.
Young
K6hm

From: thomas branton <kf5wbs@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Thursday, July 4, 2013 10:36 AM
Subject: Re: [TS-520_820_530_830] WTB, Kenwood twins

Hi Dale,

Thanks, I saw those and its actually what got me considering a twins station. I emailed the seller on ebay yesterday and asked about the transceiver cable and for some history on the radios. I did not receive any response from him. I always get somewhat concerned when a seller on ebay won't respond to questions. They do look like very nice units. Probably early production.

Thanks again,

Tom

From: Dale Parfitt <mailto:parinc1%40frontier.com>
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Thursday, July 4, 2013 12:16 PM
Subject: Re: [TS-520_820_530_830] WTB, Kenwood twins

There is a clean set of the original 599's on eBay:
321153218367Item #

Pricey and the seller does not mention the transceive cable.

Dale W4OP
----- Original Message -----
From: kf5wbs
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Thursday, July 04, 2013 10:27 AM
Subject: [TS-520_820_530_830] WTB, Kenwood twins

I have returned to ham radio after a very long (career long) absence and would like to set up my old shack. I would like to find a set of "minty" Kenwood twins with cables. If you

have a set that needs a new home please contact me.

Thanks so much

Tom
KF5WBS

No virus found in this message.
Checked by AVG - http://www.avg.com/
Version: 2013.0.2904 / Virus Database: 3204/6458 - Release Date: 07/02/13

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[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

43245. Re: [TS-520_820_530_830] WTB, Kenwood twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-04 18:50:04 UTC
From: Dale Parfitt
Topic: 43240 Message: 43245

I would also agree on the "D" model. A bit more attractive golden front panel and the MIC gain is on the front panel as opposed to under the hood.
$400 or thereabouts is a good price.
DaleW4OP
----- Original Message -----
From: thomas branton
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, July 04, 2013 1:36 PM
Subject: Re: [TS-520_820_530_830] WTB, Kenwood twins

Hi Dale,

Thanks, I saw those and its actually what got me considering a twins station. I emailed the seller on ebay yesterday and asked about the transceiver cable and for some history on the radios. I did not receive any response from him. I always get somewhat concerned when a seller on ebay won't respond to questions. They do look like very nice units. Probably early production.

Thanks again,

Tom

From: Dale Parfitt <parinc1@frontier.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, July 4, 2013 12:16 PM
Subject: Re: [TS-520_820_530_830] WTB, Kenwood twins

There is a clean set of the original 599's on eBay:
321153218367Item #

Pricey and the seller does not mention the transceive cable.

Dale W4OP
----- Original Message -----
From: kf5wbs
To: mailto:TS-520_820_530_830%40yahoogroups.com
Sent: Thursday, July 04, 2013 10:27 AM
Subject: [TS-520_820_530_830] WTB, Kenwood twins

I have returned to ham radio after a very long (career long) absence and would like to set up my old shack. I would like to find a set of "minty" Kenwood twins with cables. If you have a set that needs a new home please contact me.

Thanks so much

Tom
KF5WBS

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.2904 / Virus Database: 3204/6458 - Release Date: 07/02/13

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.2904 / Virus Database: 3204/6458 - Release Date: 07/02/13

[Non-text portions of this message have been removed]

43246. Re: restore from mod CB in TS-830M & replace of 1s1555 with 1n4148 : RESOLVED

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-04 19:32:47 UTC
From: vierugo
Topic: 43235 Message: 43246

Hi Terry

Thank you for info:
is not simple but the nte177 may found in Italy ...

I found what is the problem :

During inspect with glass i found near D27 a kind of imprint:

initially I had seen it but I thought it was the resin that comes when you solder any part and that once removed leaves a footprint:
NO actually the problem was that there was a footprint but a track completely eliminated , burned , by those who had made the change for the CB
After confirmation had a tester, I redid the link at the bottom with a small wire as bridge and the result was:

the band switch passes in all bands from 1.8 to 29.5 in the
correct way and using (I did not yet available NTE177) the
1n4148 did not affect the proper operation of the counter

I hope that this result can also be used for others like me who have tried or are trying to remove the CB in ts-380S/M

Ciao
Ugo

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Ugo:
>
> I think this mod was done on component side of the board by cutting and splicing diodes? You may need to remove board and replace all involved diodes and make sure have good solder connections. Could have been some damage done during application of soldering iron heat.
>
> Also, I dont think a 1N4148 is a recommended sub for a 1S1555 diode? A NTE177 is a sub for a 1S1555.
>
> The 1N4148 is a fast switcher that has reverse recovery of 4ns and junction capacitance of 4pf.
>
> The 1S1555 is a small signal switching diode with very low junction capacitance around 1pf.
>
> The NTE177 has reverse recovery time of approx 50ns and junction capacitance of 1.5pf.
>

> Not sure why Kenwood would have speced a low pn-junction capacitance diode for this application. The idea behind a small signal switching diode is that it is used where a small ac signal rides on top a dc bias voltage.
>
> I have had no experience subing a 1S1555 with a 1N4148. Probably not related to your problem but just wanted to point it out.
>
> Suggest you recheck your solder work and make sure traces have not been cut that you overlooked. Again if you tried to restore from component side of board might be better to remove and inspect board and replace all involved diodes.
>
> Hopefully someone else will have had hands on experience with reversing this mod.
>
> Terry K9TW
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "vierugo" <vierugo@> wrote:
> >
> > Hello everyone
> >
> > I purchased a TS-830M used, where, unfortunately, is the change was made for 11 mt CB.
> >
> > the change is that with the diodes as shown in the files section.
> > in my case the result is :
> >
> > position 29 mhz -> 27 Mhz,
> > 29.5 Mhz -> 27.5 Mhz
> >
> > and are interested D26, D44, D48
> >
> > Unfortunately, the diodes have been cut (D26), extracted (D44) and welded on (D48) and D44 link to D44;
> >
> > At this point I have extracted, cleaned the contacts and replaced the 3 diodes with 1N4148.
> >
> > When i powered on the rtx, there is a new problem:
> > 1.8 - frequency display off
> > 3.5 - frequency on , but if i switch appers on/of...on....(there seems to be a bad contact)
> > 7.0 - frequency display off
> > 10.1 - frequency display OK
> > 14.0 - frequency display off
> > 18.0 - frequency display OK
> > 21.0 - frequency display OK
> > 24.8 - frequency display OK
> > 28.0 - frequency display OK, OK +500 Khz
> > 29.0 - frequency display OK, OK +500 Khz
> >

> > Before you try to remove D26 as before and try to reconnect with D48 D44 to verify if the cause is 1n4148, has anyone who knows what other modules or jumpers could have been changed for the 11 mT
> >
> >
> > Thanks to all for attention
> >
> > Ugo
> >
>

43247. Re: [TS-520_820_530_830] WTB, Kenwood twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-04 20:44:26 UTC
From: Young Kim
Topic: 43240 Message: 43247

From: kf5wbs <kf5wbs@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, July 4, 2013 7:27 AM
Subject: [TS-520_820_530_830] WTB, Kenwood twins

I have returned to ham radio after a very long (career long) absence and would like to set up my old shack. I would like to find a set of "minty" Kenwood twins with cables. If you have a set that needs a new home please contact me.

Thanks so much

Tom
KF5WBS

[Non-text portions of this message have been removed]

43248. Re: restore from mod CB in TS-830M & replace of 1s1555 with 1n4148 : RESOLVED

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-04 22:32:50 UTC
From: Terry Wagoner
Topic: 43235 Message: 43248

OK very good find. Bright light and magnifier can be big help.

I have seen some 1S1555 available on eBay, but I would not worry about it unless you see some performance issue.

I just believe that Kenwood design engineers speced components for a reason and if possible best to go back with original if available. Not being an rf design engineer the reason is not always apparent to me. I guess the exception would be if there is a new device with better performance characteristics available today that was not available 35 plus years ago.

Glad you were able to restore this ham band transceiver to its original purpose. Have fun.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "vierugo" <vierugo@...> wrote:
>
>
>
> Hi Terry
>
> Thank you for info:
> is not simple but the nte177 may found in Italy ...
>
> I found what is the problem :
>
> During inspect with glass i found near D27 a kind of imprint:
>
> initially I had seen it but I thought it was the resin that comes when you solder any part and that once removed leaves a footprint:
> NO actually the problem was that there was a footprint but a track completely eliminated , burned , by those who had made the change for the CB
> After confirmation had a tester, I redid the link at the bottom with a small wire as bridge and the result was:
>
> the band switch passes in all bands from 1.8 to 29.5 in the
> correct way and using (I did not yet available NTE177) the
> 1n4148 did not affect the proper operation of the counter
>
> I hope that this result can also be used for others like me who have tried or are trying to remove the CB in ts-380S/M
>
> Ciao
> Ugo
>

> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Ugo:
> >
> > I think this mod was done on component side of the board by cutting and splicing diodes? You may need to remove board and replace all involved diodes and make sure have good solder connections. Could have been some damage done during application of soldering iron heat.
> >
> > Also, I dont think a 1N4148 is a recommended sub for a 1S1555 diode? A NTE177 is a sub for a 1S1555.
> >
> > The 1N4148 is a fast switcher that has reverse recovery of 4ns and junction capacitance of 4pf.
> >
> > The 1S1555 is a small signal switching diode with very low junction capacitance around 1pf.
> >
> > The NTE177 has reverse recovery time of approx 50ns and junction capacitance of 1.5pf.
> >
> > Not sure why Kenwood would have speced a low pn-junction capacitance diode for this application. The idea behind a small signal switching diode is that it is used where a small ac signal rides on top a dc bias voltage.
> >
> > I have had no experience subing a 1S1555 with a 1N4148. Probably not related to your problem but just wanted to point it out.
> >
> > Suggest you recheck your solder work and make sure traces have not been cut that you overlooked. Again if you tried to restore from component side of board might be better to remove and inspect board and replace all involved diodes.
> >
> > Hopefully someone else will have had hands on experience with reversing this mod.
> >
> > Terry K9TW
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "vierugo" <vierugo@> wrote:
> > >
> > > Hello everyone
> > >
> > > I purchased a TS-830M used, where, unfortunately, is the change was made for 11 mt CB.
> > >
> > > the change is that with the diodes as shown in the files section.
> > > in my case the result is :
> > >
> > > position 29 mhz -> 27 Mhz,
> > > 29.5 Mhz -> 27.5 Mhz
> > >

> > > and are interested D26, D44, D48
> > >
> > > Unfortunately, the diodes have been cut (D26), extracted (D44) and welded on (D48) and D44 link to D44;
> > >
> > > At this point I have extracted, cleaned the contacts and replaced the 3 diodes with 1N4148.
> > >
> > > When i powered on the rtx, there is a new problem:
> > > 1.8 - frequency display off
> > > 3.5 - frequency on , but if i switch appers on/of...on....(there seems to be a bad contact)
> > > 7.0 - frequency display off
> > > 10.1 - frequency display OK
> > > 14.0 - frequency display off
> > > 18.0 - frequency display OK
> > > 21.0 - frequency display OK
> > > 24.8 - frequency display OK
> > > 28.0 - frequency display OK, OK +500 Khz
> > > 29.0 - frequency display OK, OK +500 Khz
> > >
> > > Before you try to remove D26 as before and try to reconnect with D48 D44 to verify if the cause is 1n4148, has anyone who knows what other modules or jumpers could have been changed for the 11 mT
> > >
> > >
> > > Thanks to all for attention
> > >
> > > Ugo
> > >
> >
>

43249. Volunteer fire chief looking forKPG 134Dn

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-05 01:37:29 UTC
From: mountainsidesupply
Topic: 43249 Message: 43249

I recently bought 4 3312 kenwood portables and being a volunteer fire dept in Bolar Va we have limited funds. I was wondering if someone cold email me KPG 134DN to Mountainsidesupply@...

43250. Re: Volunteer fire chief looking forKPG 134Dn

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-05 02:38:11 UTC
From: w5rkl
Topic: 43249 Message: 43250

I assume you are referring to programming software for the commercial Kenwood 3312 hand held transceiver. The Kenwood 3312 "Instruction Manual" can be downloaded free at the following link:

http://cdn.shopify.com/s/files/1/0206/3552/files/TK-2312E_3312E_Instruction_Manual_B62-2262-00_English.pdf?1756

There is a Yahoo Group that appears to deal with Kenwood RSS software, see the following link:

http://finance.groups.yahoo.com/group/Kenwood_Rss/

There is also a website that appears to deal with the "KPG 134Dn" software, see the following link:

http://kpg-134dn.software.informer.com/questions/

Mike
Yahoo Kenwood Amateur Radio Group Moderator

--- In TS-520_820_530_830@yahoogroups.com, "mountainsidesupply" <mountainsidesupply@...> wrote:
>
> I recently bought 4 3312 kenwood portables and being a volunteer fire dept in Bolar Va we have limited funds. I was wondering if someone cold email me KPG 134DN to Mountainsidesupply@...
>

43251. Selling 830 parts

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-05 03:49:33 UTC
From: n6wk_skcc3
Topic: 43251 Message: 43251

I am selling off some of my 830 stash of parts. First up is two Digital display/Counter boards Both work great one is part number J25-2771-23 and the other is J25-2771-13. They both will work in any TS-830S. I have tested them both.
Asking $40.00 each plus $5.50 shipping or $75.00 for both plus $5.50 shipping.
Next up is an internal VFO. Asking $45.00 plus $5.50 shipping. No Knob !
Contact me direct n6wk at n6wk dot com

Next is a very clean TS-830S front panel.
Asking $35.00 plus $10.00 shipping.

Pictures on request

Thanks and more to come in a day or so.
73,
Gordon
N6WK

43252. Re: WTB, Kenwood twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-05 13:41:37 UTC
From: kf5wbs
Topic: 43240 Message: 43252

In fairness to the EBay seller, he contacted me and said he did have the transceive cables. He said he was selling the twins for his Dad. I would prefer the newer edition of the twins but if someone is seeking the first edition these would be nice.

Tom

--- In TS-520_820_530_830@yahoogroups.com, thomas branton <kf5wbs@...> wrote:
>
> Hi Dale,
> Â
> Thanks, I saw those and its actually what got me considering a twins station.Â I emailed the seller on ebay yesterday and asked about the transceiver cable and for some history on the radios.Â I did not receive any response from him.Â I always get somewhat concerned when a seller on ebay won't respond to questions.Â They do look like very nice units.Â Probably early production.
> Â
> Thanks again,
> Â
> Tom
> Â
> Â
>
>
> _____
> From: Dale Parfitt <parinc1@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, July 4, 2013 12:16 PM
> Subject: Re: [TS-520_820_530_830] WTB, Kenwood twins
>
> Â
>
>
> There is a clean set of the original 599's on eBay:
> 321153218367Item #
>
> Pricey and the seller does not mention the transceive cable.
>
> Dale W4OP
> ----- Original Message -----
> From: kf5wbs
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Thursday, July 04, 2013 10:27 AM
> Subject: [TS-520_820_530_830] WTB, Kenwood twins
>
> I have returned to ham radio after a very long (career long) absence and would like to

set up my old shack. I would like to find a set of "minty" Kenwood twins with cables. If you have a set that needs a new home please contact me.
>
> Thanks so much
>
> Tom
> KF5WBS
>
> No virus found in this message.
> Checked by AVG - www.avg.com
> Version: 2013.0.2904 / Virus Database: 3204/6458 - Release Date: 07/02/13
>
> [Non-text portions of this message have been removed]
>
>
>
>
> [Non-text portions of this message have been removed]
>

43253. Re: [TS-520_820_530_830] Re: WTB, Kenwood twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-05 17:41:25 UTC
From: <pmarkavage@...>
Topic: 43240 Message: 43253

The Twins that are listed are the late and last edition. They are NOT the first edition. If you mouse over the picture, you can see that the front panels are marked R-599D and T-599D. All the cartons for any of the editions only said T-599 and R-599.

Pete, wa2cwa
http://www.manualman.com

On Fri, 05 Jul 2013 13:41:37 -0000 "kf5wbs" <kf5wbs@...> writes:
> In fairness to the EBay seller, he contacted me and said he did have
> the transceive cables. He said he was selling the twins for his
> Dad. I would prefer the newer edition of the twins but if someone
> is seeking the first edition these would be nice.
>
> Tom
>
> --- In TS-520_820_530_830@yahoogroups.com, thomas branton
> <kf5wbs@...> wrote:
> >
> > Hi Dale,
> > ?
> > Thanks, I saw those and its actually what got me considering a
> twins station.? I emailed the seller on ebay yesterday and asked
> about the transceiver cable and for some history on the radios.? I
> did not receive any response from him.? I always get somewhat
> concerned when a seller on ebay won't respond to questions.? They
> do look like very nice units.? Probably early production.
> > ?
> > Thanks again,
> > ?
> > Tom
> > ?
> > ?
> >
> >
> > _____
> > From: Dale Parfitt <parinc1@...>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Thursday, July 4, 2013 12:16 PM
> > Subject: Re: [TS-520_820_530_830] WTB, Kenwood twins
> >
> > ?
> >
> >
> > There is a clean set of the original 599's onItem #

> >
> > Pricey and the seller does not mention the transceive cable.
> >
> > Dale W4OP
> > ----- Original Message -----
> > From: kf5wbs
> > To: mailto:TS-520_820_530_830%40yahoogroups.com
> > Sent: Thursday, July 04, 2013 10:27 AM
> > Subject: [TS-520_820_530_830] WTB, Kenwood twins
> >
> > I have returned to ham radio after a very long (career long)
> absence and would like to set up my old shack. I would like to find
> a set of "minty" Kenwood twins with cables. If you have a set that
> needs a new home please contact me.
> >
> > Thanks so much
> >
> > Tom
> > KF5WBS
> >
> > No virus found in this message.
> > Checked by AVG - www.avg.com
> > Version: 2013.0.2904 / Virus Database: 3204/6458 - Release Date:
> 07/02/13
> >
> > [Non-text portions of this message have been removed]
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> > [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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43254. Re: Selling 830 parts

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-05 18:14:05 UTC
From: n6wk_skcc3
Topic: 43251 Message: 43254

The VFO and the counter Boards have been sold.

I still have the front Panel and will be digging out more stuff later today or tomorrow.
Thanks to everyone.
73,
Gordon
N6WK

--- In TS-520_820_530_830@yahoogroups.com, "n6wk_skcc3" <n6wk@...> wrote:
>
> I am selling off some of my 830 stash of parts. First up is two Digital display/Counter boards Both work great one is part number J25-2771-23 and the other is J25-2771-13. They both will work in any TS-830S. I have tested them both.
> Asking $40.00 each plus $5.50 shipping or $75.00 for both plus $5.50 shipping.
> Next up is an internal VFO. Asking $45.00 plus $5.50 shipping. No Knob !
> Contact me direct n6wk at n6wk dot com
>
> Next is a very clean TS-830S front panel.
> Asking $35.00 plus $10.00 shipping.
>
> Pictures on request
>
> Thanks and more to come in a day or so.
> 73,
> Gordon
> N6WK
>

43255. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-06 13:42:54 UTC
From: Don
Topic: 43023 Message: 43255

Hi Terry&Group

Well here goes.
I took out the 6146a which i thought was bad and put in a 6146b that i had dropped on the floor[35 bucks down the drain] a while back and the glass had broken on it.
So i decided to put it in[not recommend]to see what would happen.
Well i got plate meter reading again and not quite half power output.The test tube[6146b] did not light up at all,so i decide to buy a new tube from a local tube seller.
Bingo,full output and ip plate current back to normal.
I did the carrier balance and now have good LSB output.I replaced the driver tube as it was week on ten meters.
I also measured the cathode shut resistors and they all checked out fine.
The only problem i had was that the load control was acting up when i loaded the rig in cw full output.It would jump back down or flicker on the rf meter.
At times i could load the rig with no problems and another time it would jump back down to zero reading on the rf scale and then jump right back up.
Right now it seems to have settled down.Some bands it would do it and other bands,higher in freq it was fine.
I will put it through its paces slowly to see if any other adjustments is needed as right now i am happy to see it alive again as i was sure it was heading as a parts radio only
Moral of the story,do not mix you tubes!

So many thanks Terry for your help as if it was not for you and others on this group.it would be back on Ebay as for parts only,not working.5 out of ten,sold as is no returns hi hi

I'LL be back

73'3
Don/Ve2ud/Ve2dzo

On 02/07/2013 6:44 PM, Terry Wagoner wrote:
>
> OK that is good. While you are measuring things with rig down powered
> measure the cathode meter shunt resistors. Should not be much above 5
> ohms.
>
> Wait for awhile as it takes time for the 300 and 210 caps to
> discharge. Discharging the HV caps wont address voltage remaining on
> the final tube socket board.
>
> Terry K9TW

>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> >
> > Terry
> > Will print this out as usual and have a go at it later tonight.
> > I did check the voltages out on the tubes and all seemed close to spec's
> >
> > Many Thanks
> > Don/Ve2ud
> >
> >
> >
> >
> >
> > On 02/07/2013 5:58 PM, Terry Wagoner wrote:
> > >
> > > Don:
> > >
> > > OK first of all no need to check the resting plate current every time
> > > you load up your rig. Set it to 60ma and should be good for quite
> some
> > > time. So for the near term dont worry about it.
> > >
> > > Try loading in CW mode. Have to do this quickly.
> > >
> > > After peaking the Drive in Tune mode then unkey the rig and place in
> > > CW mode and place meter selector switch in IP. Get hand on the Plate
> > > Capacitor then flip to send and see if you have plate current
> > > indication and quickly adjust the Plate capacitor for a dip. It may
> > > not dip at the white band reference mark on the arc behind the knob
> > > and that is OK for now. If you cannot get a dip anywhere in the
> travel
> > > unkey the rig.
> > >
> > > If you get a dip then switch to RF meter position and tune the Plate
> > > and Load capacitors for maximum relative power on the meter. When
> done
> > > unkey rig. Switch the meter to IP and key rig again and make sure not
> > > exceeding 260ma.
> > >
> > > Report back your findings.
> > >
> > > Terry K9TW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > > >

> > > >
> > > > Terry
> > > > That's the problem,as i can not load it up
> > > > Here is the step's i take.
> > > > First check ip for 60ma, ok
> > > > next,meter to ALC,,good peak
> > > > next meter to ip,in tune position,flip send and nothing on the
> > > > meter,nothing to dip
> > > > I then put the meter on RF and peak the plate and load,which
> will give
> > > > me about 50 watts out.
> > > > Note,the load control will flicker,when i try to peak the plate and
> > > load
> > > > in the RF position.
> > > >
> > > > Maybe this would help me
> > > >
> > > >
> > >
> http://www.usnews.com/news/articles/2013/07/01/could-an-italian-scientist-pave-the-way-f
or-human-head-
>
> > >
> > > >
> > >
> <http://www.usnews.com/news/articles/2013/07/01/could-an-italian-scientist-pave-the-way-
for-human-head-transplants>transplants
>
> > >
> > > >
> > >
> <http://www.usnews.com/news/articles/2013/07/01/could-an-italian-scientist-pave-the-way-
for-human-head-transplants>
> > > >
> > > > 73
> > > > Don/Ve2ud
> > > >
> > > >
> > > > On 02/07/2013 3:18 PM, Terry Wagoner wrote:
> > > > >
> > > > > Don:
> > > > >
> > > > > As I said I do not recommend the K0ZL tube test. I had forgot
> it was
> > > > > in the files section. If it were up to me it would not be there.
> > > > >
> > > > > As I mentioned you better have a good clean smooth bias pot.
> It only
> > > > > takes a moment to have finals glowing red hot and be destroyed
> as you

> > > > > move this pot for first time perhaps in years into uncharted
> waters.
> > > > > >
> > > > > > What is wrong with setting the resting plate current to 60ma
> and then
> > > > > > loading rig into a dummy load to 100 watts output and then reading
> > > > > > plate current? If you can do that at approx 225ma Ip your
> finals are
> > > > > > fine. A much safer and controlled test and not DC static test,
> but a
> > > > > > dynamic test with RF drive as the tubes will see in real
> operation.
> > > > > >
> > > > > > Just my opinion.
> > > > > >
> > > > > > Terry K9TW
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > > > > > >
> > > > > > > Terry
> > > > > > >
> > > > > > > Yes it is a typo error as i am using the original manual that
> > > came with
> > > > > > > this rig,and i went and got another manual to check against it
> > > and sure
> > > > > > > enough,it said TC-3 and not TC-2.
> > > > > > >
> > > > > > > I went to adjust the drive coils and i think the tube went puff
> > > as the
> > > > > > > fuse blew.
> > > > > > > I replaced the fuse and thought all was ok until i tried to
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> > > the
> > > > > > > rig.
> > > > > > > I could get my 60ma ok and good ALC reading,but when i went to
> > > dip the
> > > > > > > plate there was no reading at all.
> > > > > > > I did the tube test by-----Testing Tubes, a previous post by
> Bill,
> > > > > > > K0ZL,and only got 150ma full adjustment and it should read
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> > > > > > > 200ma.
> > > > > > > I also did the tube tests for shorts,but did not find a problem
> > > using
> > > > > > > the method by Walt N9WB
> > > > > > > HV test was about 850 watts
> > > > > > > Hard to start this tech stuff very late in life.but on the

> other
> > > hand i
> > > > > > think i have more fun learning this side of the hobby
> instead of
> > > just
> > > > > > being a DX chaser.
> > > > > >
> > > > > >
> > > > > > Don/ve2ud
> > > > > >
> > > > > >
> > > > > >
> > > > > > On 02/07/2013 1:21 PM, Terry Wagoner wrote:
> > > > > > >
> > > > > > > Don:
> > > > > > >
> > > > > > > You should not be adjusting TC-2 and VR-4 for LSB output. Is
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> > > > > > > typo? You adjust VR-4 and TC-3 for Balanced Modulator carrier
> > > > > > > suppression or null.
> > > > > > >
> > > > > > > This is done after completing the SSB Frequency Response
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> > > > > > > detailed in Step 30. Some call this step the Carrier Set Point
> > > > > > > adjustment. Here you will be setting both the LSB and USB
> > > Carrier Osc
> > > > > > > trimmers to set the 3dB roll off to the factory recommended
> > > low and
> > > > > > > high audio frequencies.
> > > > > > >
> > > > > > > To do Carrier null I connect a Pl-259 connector with two
> 100 ohm
> > > > > > > resistors in parallel across the center to shell to the rig
> > > SO-239.
> > > > > > > You can measure across this small 50 ohm dummy load with
> your RF
> > > > > > > probe/VTVM, RF millivolt meter, or O-scope. You
> alternately adjust
> > > > > > > VR-4 and TC-3 for lowest RF voltage. You do it in LSB and USB
> > > until
> > > > > > > you get about same low level of rf voltage in each mode. Have
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> > > > > > > back and forth multiple times for best balanced null. Not
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> > > > > > > get a complete null. Another way that works pretty well is
> to set
> > > > > > > another receiver next to the rig and tune to same
> frequency and
> > > > > listen
> > > > > > > to the null. See Step 29.

> > > > > > >
> > > > > > > > Regards Step 30 you do this at 50 watts because you will
> be having
> > > > > > > > longer than normal keydown times to adjust TC-2 LSB and
> TC-3 USB
> > > > > > > > trimmer caps at 300hz and 2700hz. Limiting the power to 50
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> > > > > > > > test only produces 150ma. If you can read 150ma then you
> have Ip.
> > > > > When
> > > > > > > > you say "bias test" are you saying you are varying the bias
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> > > > > > > > pot for maximum plate current and watching IP to see if it
> > > holds? If
> > > > > > > > so, have to be very careful doing this test. Have to make
> sure you
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> > > > > > > > Terry K9TW
> > > > > > > >
> > > > > > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
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> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Don D"
> > > <ve2ud@> wrote:
> > > > > > > >
> > > > > > > > Hi All

> > > > > > > > Just a update on my problem with no LSB output
> > > > > > > > > I did the carrier balance adjustment on the if unit as
> per the
> > > > > > > > > manual.
> > > > > > > > > It said to adjust tc2 and trimpot vr4 alternately.
> > > > > > > > > Adjusting vr4 did nothing,so i tried keying the mike and
> > > > > adjusting vr4
> > > > > > > > > and tc2 and was able to get output.
> > > > > > > > > The alc meter was not kicking as high as USB was,so i just
> > > > > cranked up
> > > > > > > > > the mic more on LSB and i got good signal reports.
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> > > > > > > > > I think one of my tubes has gone kaput.
> > > > > > > > > I now have no ip reading and the bias test,will only
> yield 150
> > > > ma's full
> > > > > > > > > I get only 50 watts out,half the power and half bias output
> > > > > > > > >
> > > > > > > > > As i have to get some new tubes i will wait until i get
> them
> > > before
> > > > > > > > > doing any more test's with those mixed tubes.
> > > > > > > > > In the meantime i am trying to custom fit a DS1
> convertor on
> > > it as i
> > > > > > > > > don't have a DS2
> > > > > > > > > Wish me luck as i will need it
> > > > > > > > >
> > > > > > > > > 73
> > > > > > > > > Don/Ve2ud
> > > > > > > > >
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43256. TS-530S saved !

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-06 14:00:58 UTC
From: Ron
Topic: 43256 Message: 43256

Hello everyone,
I love restoring the old hybrid rigs. If it is dirty and non working then I can't resist the temptation to buy it and restore it to like new condition. I ran across a non functional TS-530S a few weeks ago.
I have never seen a rig with such a thick coating of nicotine on it. It was the worst I have ever seen. I told myself there is no way I am buying this one. No way. Then I bought it. So I come toting this rig home. My wife immediately started complaining that my new purchase was stinking up the whole house. I agreed. So I pop the covers off to see what the inside looked like. It was disgusting. Thick sticky nicotine on everything. I took the knobs off and soaked them. I could not get all of the yellow off of them. I decided to take a few parts out and throw the rest in the local electronics recycle bin. I first made sure all of the HV caps were discharged. Then I took out the meter, VFO, Display, Front panel and tubes. I had read many a thread on using a dishwasher on antique radios. So I thought what do I have to lose. I put the knobs, faceplate, cabinet half's and RF cage cover in the dishwasher. I ran it on normal wash and air dry setting. They all came out looking like new. So what do I have to lose. I put the rest of the entire radio in there. I ran it with air dry setting and the radio came out looking like new. I took compressed air and blew out the pots and switches etc. and sprayed them with contact cleaner and lube. . Then I removed the boards and cleaned the printed circuit sides and the connectors. I cleaned the antenna relay and replaced RL1 and all of the HV caps. I also replaced the band switch coupler. I lubed all moving parts. I then cleaned and reinstalled the meter, Vfo etc. I left the covers off and let it sit for about three days. When I determined everything was totally dry I hooked up the antenna and ground and plugged it in and turned it on. It received great on all of the bands. I turned the heater switch on with the SG switch off for a while. Then I turned on the SG and checked the idle bias. I checked power out and had over 100 watts out except on the WARC bands. I had to cut the blue wire at AF board because the WARC bands were never enabled on the radio. I checked the alignment and all was ok.
I have made several contacts with the radio and it looks and works like brand new.
Now I am not suggesting that you go and pop your rig into the dishwasher. Please don't ! It could be very dangerous. Especially if the HV caps are not discharged ! I have a lot of experience working on old HV tube rigs. I did this out of curiosity and as a last resort. In my case the results were fantastic.

It just goes to show you though how good these fine old rigs are made !!!!

Oh yeah, My wife made me scrub the dishwasher out really really good !!! lol

Ron WD9IQN

43257. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-06 14:24:59 UTC
From: Terry Wagoner
Topic: 43023 Message: 43257

Don:

Did you try cleaning your RF detector sensitivity pot on rear panel? If not try that first. Use Deoxit sparingly and run pot thru range several times and blow out with canned air. I like to try to get a little Fader lube in after cleaning. Many folks use external wattmeter and never use the internal RF sniffer and the pot sets in one spot for long time.

If you have an external SWR bridge see if its forward power position meter indication also flickers simultaneously with the rig RF meter. If it does then it is not dirty sensitivity pot or the meter selector switch contacts. It is actual change in RF output.

If external SWR indication flickers with the internal RF indication then try cleaning the rotor shaft wiper contact on the Plate Load capacitor.

Does it do this on all bands? Does it do it at same point of unmeshing the Plate Load capacitor plates? Hopefully this is not due to arcing over at that point. Can you hear any frying or arcing sounds at this point?

Terry
K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Hi Terry&Group
>
> Well here goes.
> I took out the 6146a which i thought was bad and put in a 6146b that i
> had dropped on the floor[35 bucks down the drain] a while back and the
> glass had broken on it.
> So i decided to put it in[not recommend]to see what would happen.
> Well i got plate meter reading again and not quite half power output.The
> test tube[6146b] did not light up at all,so i decide to buy a new tube
> from a local tube seller.
> Bingo,full output and ip plate current back to normal.
> I did the carrier balance and now have good LSB output.I replaced the
> driver tube as it was week on ten meters.
> I also measured the cathode shut resistors and they all checked out fine.
> The only problem i had was that the load control was acting up when i
> loaded the rig in cw full output.It would jump back down or flicker on
> the rf meter.
> At times i could load the rig with no problems and another time it would
> jump back down to zero reading on the rf scale and then jump right back up.
> Right now it seems to have settled down.Some bands it would do it and
> other bands,higher in freq it was fine.
> I will put it through its paces slowly to see if any other adjustments
> is needed as right now i am happy to see it alive again as i was sure it

> was heading as a parts radio only
> Moral of the story,do not mix you tubes!
>
> So many thanks Terry for your help as if it was not for you and others
> on this group.it would be back on Ebay as for parts only,not working.5
> out of ten,sold as is no returns hi hi
>
> I'LL be back
>
> 73'3
> Don/Ve2ud/Ve2dzo
>
>
> On 02/07/2013 6:44 PM, Terry Wagoner wrote:
> >
> > OK that is good. While you are measuring things with rig down powered
> > measure the cathode meter shunt resistors. Should not be much above 5
> > ohms.
> >
> > Wait for awhile as it takes time for the 300 and 210 caps to
> > discharge. Discharging the HV caps wont address voltage remaining on
> > the final tube socket board.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > >
> > >
> > > Terry
> > > Will print this out as usual and have a go at it later tonight.
> > > I did check the voltages out on the tubes and all seemed close to spec's
> > >
> > > Many Thanks
> > > Don/Ve2ud
> > >
> > >
> > >
> > >
> > >
> > > On 02/07/2013 5:58 PM, Terry Wagoner wrote:
> > > >
> > > > Don:
> > > >
> > > > OK first of all no need to check the resting plate current every time
> > > > you load up your rig. Set it to 60ma and should be good for quite
> > some
> > > > time. So for the near term dont worry about it.
> > > >
> > > > Try loading in CW mode. Have to do this quickly.

> > > >
> > > > After peaking the Drive in Tune mode then unkey the rig and place in
> > > > CW mode and place meter selector switch in IP. Get hand on the Plate
> > > > Capacitor then flip to send and see if you have plate current
> > > > indication and quickly adjust the Plate capacitor for a dip. It may
> > > > not dip at the white band reference mark on the arc behind the knob
> > > > and that is OK for now. If you cannot get a dip anywhere in the
> > travel
> > > > unkey the rig.
> > > >
> > > > If you get a dip then switch to RF meter position and tune the Plate
> > > > and Load capacitors for maximum relative power on the meter. When
> > done
> > > > unkey rig. Switch the meter to IP and key rig again and make sure not
> > > > exceeding 260ma.
> > > >
> > > > Report back your findings.
> > > >
> > > > Terry K9TW
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > > > >
> > > > >
> > > > > Terry
> > > > > That's the problem,as i can not load it up
> > > > > Here is the step's i take.
> > > > > First check ip for 60ma, ok
> > > > > next,meter to ALC,,good peak
> > > > > next meter to ip,in tune position,flip send and nothing on the
> > > > > meter,nothing to dip
> > > > > I then put the meter on RF and peak the plate and load,which
> > will give
> > > > > me about 50 watts out.
> > > > > Note,the load control will flicker,when i try to peak the plate and
> > > > load
> > > > > in the RF position.
> > > > >
> > > > > Maybe this would help me
> > > > >
> > > > >
> > > > >
> > > > > http://www.usnews.com/news/articles/2013/07/01/could-an-italian-scientist-pave-the-way
-for-human-head-
> > >
> > > > >
> > > > >
> > > > >
> > > > >
> > > > > <http://www.usnews.com/news/articles/2013/07/01/could-an-italian-scientist-pave-the-wa

y-for-human-head-transplants>transplants
> >
> > > >
> > > > >
> > > >
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y-for-human-head-transplants>
> > > > >
> > > > > 73
> > > > > Don/Ve2ud
> > > > > >
> > > > > >
> > > > > On 02/07/2013 3:18 PM, Terry Wagoner wrote:
> > > > > > >
> > > > > > > Don:
> > > > > > >
> > > > > > > As I said I do not recommend the K0ZL tube test. I had forgot
> > it was
> > > > > > > in the files section. If it were up to me it would not be there.
> > > > > > >
> > > > > > > As I mentioned you better have a good clean smooth bias pot.
> > It only
> > > > > > > takes a moment to have finals glowing red hot and be destroyed
> > as you
> > > > > > > move this pot for first time perhaps in years into uncharted
> > waters.
> > > > > > >
> > > > > > > What is wrong with setting the resting plate current to 60ma
> > and then
> > > > > > > loading rig into a dummy load to 100 watts output and then reading
> > > > > > > plate current? If you can do that at approx 225ma Ip your
> > finals are
> > > > > > > fine. A much safer and controlled test and not DC static test,
> > but a
> > > > > > > dynamic test with RF drive as the tubes will see in real
> > operation.
> > > > > > >
> > > > > > > Just my opinion.
> > > > > > >
> > > > > > > Terry K9TW
> > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > > > > > >
> > > > > > > Terry
> > > > > > >
> > > > > > > Yes it is a typo error as i am using the original manual that
> > > > came with
> > > > > > > this rig,and i went and got another manual to check against it

> > > > and sure
> > > > > > > enough,it said TC-3 and not TC-2.
> > > > > > >
> > > > > > > I went to adjust the drive coils and i think the tube went puff
> > > > as the
> > > > > > > fuse blew.
> > > > > > > I replaced the fuse and thought all was ok until i tried to
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> > > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Don D"
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> > > > > > > > > don't have a DS2
> > > > > > > > > Wish me luck as i will need it

> > > > > > > > > >
> > > > > > > > > > 73
> > > > > > > > > > Don/Ve2ud
> > > > > > > > > >
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> [Non-text portions of this message have been removed]
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43258. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-06 14:40:12 UTC
From: Terry Wagoner
Topic: 43023 Message: 43258

Don:

I am sorry did not see your statement about the behavior on all the bands. Disregard my question.

I forgot to ask if you had original RL-1 Aux Relay on AF board and if you have ever removed and cleaned RL-1 Antenna TR relay.

Another very rare one is the solder connection at the SO-239 connector inside the PA cage. I once gently tugged on the tinned lead and it pulled right out of the connector.

If cleaning sensitivity pot and plate load cap doesnt cure this problem then two things to measure:
1. RF drive levels
2. DC voltages at 6146 tube socket pins

I would probably start with RF drive levels.

Both are easy to check. Come back if you need help.

Terry
K9TW

>

43259. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-06 16:04:25 UTC
From: Don
Topic: 43023 Message: 43259

Terry
Could you tell me how to do the rf drive level measurement
Getting ready to go for a few days of holidays,so will print out your
reply's and have a go at it next week
thanks
Don/Ve2ud

On 06/07/2013 10:40 AM, Terry Wagoner wrote:
>
> Don:
>
> I am sorry did not see your statement about the behavior on all the
> bands. Disregard my question.
>
> I forgot to ask if you had original RL-1 Aux Relay on AF board and if
> you have ever removed and cleaned RL-1 Antenna TR relay.
>
> Another very rare one is the solder connection at the SO-239 connector
> inside the PA cage. I once gently tugged on the tinned lead and it
> pulled right out of the connector.
>
> If cleaning sensitivity pot and plate load cap doesnt cure this
> problem then two things to measure:
> 1. RF drive levels
> 2. DC voltages at 6146 tube socket pins
>
> I would probably start with RF drive levels.
>
> Both are easy to check. Come back if you need help.
>
> Terry
> K9TW
>
> >
>
>

[Non-text portions of this message have been removed]

43260. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-06 16:27:36 UTC
From: Terry Wagoner
Topic: 43023 Message: 43260

Don:

Have posted numerous times on this subject but may not be easy to retrieve. Takes a lot of typing to explain TX Level Diagrams and various test gear to take the readings.

Do you have a RF probe and VTVM?

Analog meter much better for watching RF drive level fluctuating.

If no RF probe/VTVM then an O-scope can be used.

Only need monitor RF drive levels at key points after you exhaust all the associated pot and contact cleaning I previously mentioned.

Can monitor the output of the TX Mixer at TP-4 on RF Board. Should have approx 2rms volts and steady under key down. If it is constant while RF output is varying you know that TIF signal from IF board is good and TX Mixer is good and problem has to be from output of Driver tube toward the finals. This is the RF drive level to the 12BY7A control grid.

To measure RF drive at output of 12BY7A at DRV you will need multi- diode RF probe or O-scope. Same with measuring the RF drive level at control grids Pin 5 of the 6146 finals. If you use your single diode probe you risk losing it. Not question about it if you use it at Plate of Driver Tube. Might get by at grids of finals but I wouldnt chance it.

Another thing you could do is run the Driver stage test and watch ALC indication. Do this with SG off in CW mode. Heaters on and key rig and peak Drive Control for max ALC indication (can set Car pot for ALC at top end of black box range). If ALC indication flickers it tells you that RF drive is varying.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Terry
> Could you tell me how to do the rf drive level measurement
> Getting ready to go for a few days of holidays,so will print out your
> reply's and have a go at it next week
> thanks
> Don/Ve2ud
>
>
>
>
>

43261. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-06 16:49:34 UTC
From: Don
Topic: 43023 Message: 43261

Terry
I have noticed that the tubes are not as bright as my other rigs,and
also the ip plate reading is 250ma's
and when i back it down to 225ma the output power drops a lot.
My other rigs all read max 225 ma's.Maybe they are drawing too much current?
Something not quite right,but will have to put it on the back burner
until i get back
Thanks
Don/Ve2ud

On 06/07/2013 12:27 PM, Terry Wagoner wrote:
>
> Don:
>
> Have posted numerous times on this subject but may not be easy to
> retrieve. Takes a lot of typing to explain TX Level Diagrams and
> various test gear to take the readings.
>
> Do you have a RF probe and VTVM?
>
> Analog meter much better for watching RF drive level fluctuating.
>
> If no RF probe/VTVM then an O-scope can be used.
>
> Only need monitor RF drive levels at key points after you exhaust all
> the associated pot and contact cleaning I previously mentioned.
>
> Can monitor the output of the TX Mixer at TP-4 on RF Board. Should
> have approx 2rms volts and steady under key down. If it is constant
> while RF output is varying you know that TIF signal from IF board is
> good and TX Mixer is good and problem has to be from output of Driver
> tube toward the finals. This is the RF drive level to the 12BY7A
> control grid.
>
> To measure RF drive at output of 12BY7A at DRV you will need multi-
> diode RF probe or O-scope. Same with measuring the RF drive level at
> control grids Pin 5 of the 6146 finals. If you use your single diode
> probe you risk losing it. Not question about it if you use it at Plate
> of Driver Tube. Might get by at grids of finals but I wouldnt chance it.
>
> Another thing you could do is run the Driver stage test and watch ALC
> indication. Do this with SG off in CW mode. Heaters on and key rig and
> peak Drive Control for max ALC indication (can set Car pot for ALC at
> top end of black box range). If ALC indication flickers it tells you
> that RF drive is varying.

>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> > Terry
> > Could you tell me how to do the rf drive level measurement
> > Getting ready to go for a few days of holidays,so will print out your
> > reply's and have a go at it next week
> > thanks
> > Don/Ve2ud
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[Non-text portions of this message have been removed]

43262. Re: WTB, Kenwood twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-06 19:26:41 UTC
From: k4esa
Topic: 43240 Message: 43262

What price range would a set of early Twins with connection cable and matching speaker be in? I have a pair I am thinking of selling.

I have a set in nice looking condition. The R-599 works great, I use it as an extra receiver in the shack, mostly on 40M. It has the transvetors for 6 and 2 meters is it. The T-599 has new belts
(o-rings?) on it this year, but I have not tested it anymore yet. This pair with the speaker and cable came from a SK donation to a local Ham Club a few years ago. I also have an extra MC-50 to my needs I could be talked out of the go with the Twins. (The TS-820s, TS-830s and TS-600 only need one each)

I planned to sort out the transmitter , but other time commitments keep getting in the way.

Bob
W4GA

--- In TS-520_820_530_830@yahoogroups.com, "Dale Parfitt" <parinc1@...> wrote:
>
>
> I would also agree on the "D" model. A bit more attractive golden front panel and the MIC gain is on the front panel as opposed to under the hood.
> $400 or thereabouts is a good price.
> DaleW4OP
> ----- Original Message -----
> From: thomas branton
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, July 04, 2013 1:36 PM
> Subject: Re: [TS-520_820_530_830] WTB, Kenwood twins
>
>
>
> Hi Dale,
>
> Thanks, I saw those and its actually what got me considering a twins station. I emailed the seller on ebay yesterday and asked about the transceiver cable and for some history on the radios. I did not receive any response from him. I always get somewhat concerned when a seller on ebay won't respond to questions. They do look like very nice units. Probably early production.
>
> Thanks again,
>
> Tom
>
>
>
>

> _____
> From: Dale Parfitt <parinc1@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, July 4, 2013 12:16 PM
> Subject: Re: [TS-520_820_530_830] WTB, Kenwood twins
>
>
>
>
> There is a clean set of the original 599's on eBay:
> 321153218367Item #
>
> Pricey and the seller does not mention the transceive cable.
>
> Dale W4OP
> ----- Original Message -----
> From: kf5wbs
> To: mailto:TS-520_820_530_830%40yahoogroups.com
> Sent: Thursday, July 04, 2013 10:27 AM
> Subject: [TS-520_820_530_830] WTB, Kenwood twins
>
> I have returned to ham radio after a very long (career long) absence and would like to set up my old shack. I would like to find a set of "minty" Kenwood twins with cables. If you have a set that needs a new home please contact me.
>
> Thanks so much
>
> Tom
> KF5WBS
>
> No virus found in this message.
> Checked by AVG - www.avg.com
> Version: 2013.0.2904 / Virus Database: 3204/6458 - Release Date: 07/02/13
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> [Non-text portions of this message have been removed]
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>
> No virus found in this message.
> Checked by AVG - www.avg.com
> Version: 2013.0.2904 / Virus Database: 3204/6458 - Release Date: 07/02/13
>
>
> [Non-text portions of this message have been removed]
>

43263. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-06 19:34:30 UTC
From: Terry Wagoner
Topic: 43023 Message: 43263

Don:

When you get around to it measure the filament voltage at the tube socket pins.

My two 830s both running 6146Ws begin to fall off if I try to load much above approx 225ma. I can reliably get 100 watts output into 50 ohm dummy load at 225ma. I have had some 830s that would load to 250ma and exceed 100 watts output. I dont remember any above that. 6146Bs generally will do a little better than 6146W, but certainly not enough to fuss about or make a difference on the receiving end.

When you say "back it down" to 225ma I assume you mean that you tune for max rf output at 225ma and not just reduce the IP reading?

Remember IP X HV = DC input power and if you can get close to approx 180 watts dc input power (800vdc X .225a)that is what the rigs were designed for. Of course Ip includes screen grid current so not a precise calculation. Also meter accuracy depends on the cathode meter shunt values and the series meter multiplier value. The metering circuit is not meant for precise measurement. I suspect about 5% is as good as it gets.

This is another reason I recommend folks buy a wattmeter. In addition to being a great loading aid it is handy diagnostic tool. If you can load into 50ohm dummy load and get close to 100 watts out you generally have a pretty good indication that your TS830 is working close to design TX efficiency.

Howver, loading to 800vdc @225ma does not guarantee you will realize RF output level that approximates 56% class AB1 efficiency (100 watts output). Normally it does, but not always. There can be reasons output power indicates more or less than what you would expect including problems in the PA and tank circuit and problems in the coax and the load. Problems with the RF plate choke, problems with Tank LC ratios, feedline open or shorts or combinations of XC and XL in the load can all result in different RF output level than expected.

Looking at the relative power in the RF meter position will tell you something is going on, but not very useful information.

Adding a wattmeter to your IP meter and HV meter is a good idea. Doesnt have to be a Bird. A Heath HW102 or a Drake W4 is a good choice.

Just my opinion.

Terry
K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Terry
> I have noticed that the tubes are not as bright as my other rigs,and
> also the ip plate reading is 250ma's

> and when i back it down to 225ma the output power drops a lot.
> My other rigs all read max 225 ma's.Maybe they are drawing too much current?
> Something not quite right,but will have to put it on the back burner
> until i get back
> Thanks
> Don/Ve2ud
>
>
>
>
>

43264. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-06 20:34:35 UTC
From: Don
Topic: 43023 Message: 43264

Terry
To get full output,i get about 250ma reading,tuning the normal way.Nice
100 watts out.
I check the ip plate and find it is 250ma's.
I then back off the carrier to 225 ma's and then i get about 65 watts out.
What does concern's me,but maybe it shouldn't is that the tubes are not
bright orange compared to my other rigs.[Maybe half as bright]
Now when i did take out the bad 6146a and put in the broken 6146b the
good 6146b was very bright like it should be.
Yes if i want to fool with this stuff i should buy a good wattmeter and
a rf wattmeter as i am enjoying this part of the hobby a lot more.
Going to take all the info you gave me and read them when i am at my
daughter's country place.

Hope i explained it right,as it real hot here and humid,plus the Blue
Jays lost again,and i am packing as i go.
Bringing my QRP stuff to play with while i am on my short holiday.

Don/Ve2ud

On 06/07/2013 3:34 PM, Terry Wagoner wrote:
>
> Don:
>
> When you get around to it measure the filament voltage at the tube
> socket pins.
>
> My two 830s both running 6146Ws begin to fall off if I try to load
> much above approx 225ma. I can reliably get 100 watts output into 50
> ohm dummy load at 225ma. I have had some 830s that would load to 250ma
> and exceed 100 watts output. I dont remember any above that. 6146Bs
> generally will do a little better than 6146W, but certainly not enough
> to fuss about or make a difference on the receiving end.
>
> When you say "back it down" to 225ma I assume you mean that you tune
> for max rf output at 225ma and not just reduce the IP reading?
>
> Remember IP X HV = DC input power and if you can get close to approx
> 180 watts dc input power (800vdc X .225a)that is what the rigs were
> designed for. Of course Ip includes screen grid current so not a
> precise calculation. Also meter accuracy depends on the cathode meter
> shunt values and the series meter multiplier value. The metering
> circuit is not meant for precise measurement. I suspect about 5% is as
> good as it gets.
>
> This is another reason I recommend folks buy a wattmeter. In addition

> to being a great loading aid it is handy diagnostic tool. If you can
> load into 50ohm dummy load and get close to 100 watts out you
> generally have a pretty good indication that your TS830 is working
> close to design TX efficiency.
>
> Howver, loading to 800vdc @225ma does not guarantee you will realize
> RF output level that approximates 56% class AB1 efficiency (100 watts
> output). Normally it does, but not always. There can be reasons output
> power indicates more or less than what you would expect including
> problems in the PA and tank circuit and problems in the coax and the
> load. Problems with the RF plate choke, problems with Tank LC ratios,
> feedline open or shorts or combinations of XC and XL in the load can
> all result in different RF output level than expected.
>
> Looking at the relative power in the RF meter position will tell you
> something is going on, but not very useful information.
>
> Adding a wattmeter to your IP meter and HV meter is a good idea.
> Doesnt have to be a Bird. A Heath HW102 or a Drake W4 is a good choice.
>
> Just my opinion.
>
> Terry
> K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> > Terry
> > I have noticed that the tubes are not as bright as my other rigs,and
> > also the ip plate reading is 250ma's
> > and when i back it down to 225ma the output power drops a lot.
> > My other rigs all read max 225 ma's.Maybe they are drawing too much
> current?
> > Something not quite right,but will have to put it on the back burner
> > until i get back
> > Thanks
> > Don/Ve2ud
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43265. TS520 VOX board Q8 repeated failures

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-06 21:12:54 UTC
From: zl3ha
Topic: 43265 Message: 43265

Hi all
Has anyone experienced repeated failures of Q8 on the VOX board which then prevents TX activating? I have replaced it twice with a NTE290A, and D8 with a 1N4148 and the rig works ok for a while (maybe 100 or so transmit cycles, more or less)and then it fails again for reasons unknown. Any ideas will be much appreciated - thank you
73, Grant, ZL3HA

43266. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-06 21:16:15 UTC
From: Terry Wagoner
Topic: 43023 Message: 43266

OK Don enjoy your holiday.

OK when I reduce the Car Level from 100 watts @ 225ma to approx 200ma I get approx 80 watts output.

As I mentioned when you get time measure the filament voltage at pins 2 and 7 of each socket and from H terminal on the Final board to chassis ground. H will be approx 12.8vac and 2 to 7 should be close to half that.

Terry
K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Terry
> To get full output,i get about 250ma reading,tuning the normal way.Nice
> 100 watts out.
> I check the ip plate and find it is 250ma's.
> I then back off the carrier to 225 ma's and then i get about 65 watts out.
> What does concern's me,but maybe it shouldn't is that the tubes are not
> bright orange compared to my other rigs.[Maybe half as bright]
> Now when i did take out the bad 6146a and put in the broken 6146b the
> good 6146b was very bright like it should be.
> Yes if i want to fool with this stuff i should buy a good wattmeter and
> a rf wattmeter as i am enjoying this part of the hobby a lot more.
> Going to take all the info you gave me and read them when i am at my
> daughter's country place.
>
> Hope i explained it right,as it real hot here and humid,plus the Blue
> Jays lost again,and i am packing as i go.
> Bringing my QRP stuff to play with while i am on my short holiday.
>
> Don/Ve2ud
>
>
>
> On 06/07/2013 3:34 PM, Terry Wagoner wrote:
> >
> > Don:
> >
> > When you get around to it measure the filament voltage at the tube
> > socket pins.
> >
> > My two 830s both running 6146Ws begin to fall off if I try to load
> > much above approx 225ma. I can reliably get 100 watts output into 50
> > ohm dummy load at 225ma. I have had some 830s that would load to 250ma

> > and exceed 100 watts output. I dont remember any above that. 6146Bs
> > generally will do a little better than 6146W, but certainly not enough
> > to fuss about or make a difference on the receiving end.
> >
> > When you say "back it down" to 225ma I assume you mean that you tune
> > for max rf output at 225ma and not just reduce the IP reading?
> >
> > Remember IP X HV = DC input power and if you can get close to approx
> > 180 watts dc input power (800vdc X .225a)that is what the rigs were
> > designed for. Of course Ip includes screen grid current so not a
> > precise calculation. Also meter accuracy depends on the cathode meter
> > shunt values and the series meter multiplier value. The metering
> > circuit is not meant for precise measurement. I suspect about 5% is as
> > good as it gets.
> >
> > This is another reason I recommend folks buy a wattmeter. In addition
> > to being a great loading aid it is handy diagnostic tool. If you can
> > load into 50ohm dummy load and get close to 100 watts out you
> > generally have a pretty good indication that your TS830 is working
> > close to design TX efficiency.
> >
> > Howver, loading to 800vdc @225ma does not guarantee you will realize
> > RF output level that approximates 56% class AB1 efficiency (100 watts
> > output). Normally it does, but not always. There can be reasons output
> > power indicates more or less than what you would expect including
> > problems in the PA and tank circuit and problems in the coax and the
> > load. Problems with the RF plate choke, problems with Tank LC ratios,
> > feedline open or shorts or combinations of XC and XL in the load can
> > all result in different RF output level than expected.
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> > Looking at the relative power in the RF meter position will tell you
> > something is going on, but not very useful information.
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> > Adding a wattmeter to your IP meter and HV meter is a good idea.
> > Doesnt have to be a Bird. A Heath HW102 or a Drake W4 is a good choice.
> >
> > Just my opinion.
> >
> > Terry
> > K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > >
> > > Terry
> > > I have noticed that the tubes are not as bright as my other rigs,and
> > > also the ip plate reading is 250ma's
> > > and when i back it down to 225ma the output power drops a lot.
> > > My other rigs all read max 225 ma's.Maybe they are drawing too much
> > current?

> > > Something not quite right,but will have to put it on the back burner
> > > until i get back
> > > Thanks
> > > Don/Ve2ud
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> [Non-text portions of this message have been removed]
>

43267. Re: TS520 VOX board Q8 repeated failures

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-06 21:46:13 UTC
From: Terry Wagoner
Topic: 43265 Message: 43267

It is good that you are replacing the back emf or flyback diode at same time. It appears the 1N4148 is not protecting your transistor.

I wonder if you should try a 1N60 as opposed to the 1N4148. The germanium diode has lower turn on so will act faster and was the original diode speced by Kenwood.

You could try a MOV or back to back zeners or a Transorb, but should not have to modify the design. Also, trying the more modern devices could affect the relay drop out time (make it faster)?

I think I would go with a 1N60 and see what happens.

Terry
K9TW

--- In TS-520_820_530_830@yahoogroups.com, "zl3ha" <grant.rawstorn@...> wrote:
>
> Hi all
> Has anyone experienced repeated failures of Q8 on the VOX board which then prevents TX activating? I have replaced it twice with a NTE290A, and D8 with a 1N4148 and the rig works ok for a while (maybe 100 or so transmit cycles, more or less)and then it fails again for reasons unknown. Any ideas will be much appreciated - thank you
> 73, Grant, ZL3HA
>

43268. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-06 22:27:48 UTC
From: Don
Topic: 43023 Message: 43268

Thanks Terry
It's nice to get away and see some different scenery for a change.
Yes i did measure them,and i think they are fine.
Tube #1 pin#2 12.9volts ac
Tube #1 pin#7 6.4volts ac----------H is 12.9volts ac
Tube#2 pin#2 6.4voults ac
Tube#2 pin#7 nil
Plate 927/881
PIN#3 both tubes 254/223
Pin#5 both tubes 102/59 minus dc volts

I still think that when the 6146a shorted out it took something with
it,but it's working a lot better than it was.

Ok will play with it when i get back.

Take Care
Don/Ve2ud

.

On 06/07/2013 5:16 PM, Terry Wagoner wrote:
>
> OK Don enjoy your holiday.
>
> OK when I reduce the Car Level from 100 watts @ 225ma to approx 200ma
> I get approx 80 watts output.
>
> As I mentioned when you get time measure the filament voltage at pins
> 2 and 7 of each socket and from H terminal on the Final board to
> chassis ground. H will be approx 12.8vac and 2 to 7 should be close to
> half that.
>
> Terry
> K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> > Terry
> > To get full output,i get about 250ma reading,tuning the normal way.Nice
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> > I check the ip plate and find it is 250ma's.
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> watts out.
> > What does concern's me,but maybe it shouldn't is that the tubes are not

> > bright orange compared to my other rigs.[Maybe half as bright]
> > Now when i did take out the bad 6146a and put in the broken 6146b the
> > good 6146b was very bright like it should be.
> > Yes if i want to fool with this stuff i should buy a good wattmeter and
> > a rf wattmeter as i am enjoying this part of the hobby a lot more.
> > Going to take all the info you gave me and read them when i am at my
> > daughter's country place.
> >
> > Hope i explained it right,as it real hot here and humid,plus the Blue
> > Jays lost again,and i am packing as i go.
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> > Don/Ve2ud
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> > > Just my opinion.
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> > > Terry
> > > K9TW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
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43269. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-06 23:00:54 UTC
From: Terry Wagoner
Topic: 43023 Message: 43269

Ok I cant think of many reasons other than low filament voltage that would make them glow less brite than your former tubes did unless different filament design like the RCA "dark" heater used in 6146 for mobile service (5 to 8 volt heater range)?

I suppose if the tube filament pins were oxidized could cause voltage drop a the socket interface. Maybe clean the tube pins and re-insert several times to wipe them?

Terry
K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Thanks Terry
> It's nice to get away and see some different scenery for a change.
> Yes i did measure them,and i think they are fine.
> Tube #1 pin#2 12.9volts ac
> Tube #1 pin#7 6.4volts ac----------H is 12.9volts ac
> Tube#2 pin#2 6.4voults ac
> Tube#2 pin#7 nil
> Plate 927/881
> PIN#3 both tubes 254/223
> Pin#5 both tubes 102/59 minus dc volts
>
> I still think that when the 6146a shorted out it took something with
> it,but it's working a lot better than it was.
>
> Ok will play with it when i get back.
>
> Take Care
> Don/Ve2ud
>
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> On 06/07/2013 5:16 PM, Terry Wagoner wrote:
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> > OK Don enjoy your holiday.
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> > OK when I reduce the Car Level from 100 watts @ 225ma to approx 200ma
> > I get approx 80 watts output.
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> > As I mentioned when you get time measure the filament voltage at pins
> > 2 and 7 of each socket and from H terminal on the Final board to
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> > > Now when i did take out the bad 6146a and put in the broken 6146b the
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> > > Yes if i want to fool with this stuff i should buy a good wattmeter and
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43270. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-06 23:08:47 UTC
From: Don
Topic: 43023 Message: 43270

Okie Dokie Terry will do
Thanks
Don/Ve2ud

On 06/07/2013 7:00 PM, Terry Wagoner wrote:
>
> Ok I cant think of many reasons other than low filament voltage that
> would make them glow less brite than your former tubes did unless
> different filament design like the RCA "dark" heater used in 6146 for
> mobile service (5 to 8 volt heater range)?
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43271. Re: WTB, Kenwood twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-06 22:32:11 UTC
From: Chuck Barnett
Topic: 43240 Message: 43271

I want the front panel.please contact me at arskm9u at gmail dot com.

[Non-text portions of this message have been removed]

43272. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-07 00:07:17 UTC
From: John Davidson
Topic: 43023 Message: 43272

Every band except 10M my TS520 ran 100 W output with 200 mA of plate current reading.

How are you "backing it down" from 250 mA? What is your plate voltage indicated on the meter under load (transmitting CW) ??
I would QUICKLY turn my loading capacitor counterclockwise if I dipped the Plate tuning to 250mA, and keep redipping the plate tuning and reducing the loading until I got 200 mA.
At that point I would obtain 100 Watts output on a calibrated meter.

From: Don <ve2ud@travel-net.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, July 6, 2013 12:49 PM
Subject: Re: [TS-520_820_530_830] Re: Early TS830's

Terry
I have noticed that the tubes are not as bright as my other rigs,and
also the ip plate reading is 250ma's
and when i back it down to 225ma the output power drops a lot.
My other rigs all read max 225 ma's.Maybe they are drawing too much current?
Something not quite right,but will have to put it on the back burner
until i get back
Thanks
Don/Ve2udl t

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.

[Non-text portions of this message have been removed]

43273. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-07 01:20:26 UTC
From: Don
Topic: 43023 Message: 43273

Hi John
Well i tried that and if i go too low,to 225ma or lower,i get no drive
at all

Don/Ve2ud

On 06/07/2013 8:07 PM, John Davidson wrote:
>
>
>
> Every band except 10M my TS520 ran 100 W output with 200 mA of plate
> current reading.
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> How are you "backing it down" from 250 mA? What is your plate voltage
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> .
>
> [Non-text portions of this message have been removed]

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>

[Non-text portions of this message have been removed]

43274. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-07 01:23:30 UTC
From: Don
Topic: 43023 Message: 43274

Terry
I think i had a bad pl259 on the coax from my watt meter.not making a
good ground.
So far no arching,but will fire it up in the morning before i leave and
see if it does it from a cold start
Don/Ve2ud

On 06/07/2013 5:16 PM, Terry Wagoner wrote:
>
> OK Don enjoy your holiday.
>
> OK when I reduce the Car Level from 100 watts @ 225ma to approx 200ma
> I get approx 80 watts output.
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> As I mentioned when you get time measure the filament voltage at pins
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> > > Remember IP X HV = DC input power and if you can get close to approx
> > > 180 watts dc input power (800vdc X .225a)that is what the rigs were
> > > designed for. Of course Ip includes screen grid current so not a
> > > precise calculation. Also meter accuracy depends on the cathode meter
> > > shunt values and the series meter multiplier value. The metering
> > > circuit is not meant for precise measurement. I suspect about 5%
> is as
> > > good as it gets.
> > >
> > > This is another reason I recommend folks buy a wattmeter. In addition
> > > to being a great loading aid it is handy diagnostic tool. If you can
> > > load into 50ohm dummy load and get close to 100 watts out you
> > > generally have a pretty good indication that your TS830 is working
> > > close to design TX efficiency.
> > >
> > > Howver, loading to 800vdc @225ma does not guarantee you will realize
> > > RF output level that approximates 56% class AB1 efficiency (100 watts
> > > output). Normally it does, but not always. There can be reasons
> output
> > > power indicates more or less than what you would expect including
> > > problems in the PA and tank circuit and problems in the coax and the
> > > load. Problems with the RF plate choke, problems with Tank LC ratios,
> > > feedline open or shorts or combinations of XC and XL in the load can
> > > all result in different RF output level than expected.
> > >
> > > Looking at the relative power in the RF meter position will tell you
> > > something is going on, but not very useful information.
> > >

> > > Adding a wattmeter to your IP meter and HV meter is a good idea.
> > > Doesnt have to be a Bird. A Heath HW102 or a Drake W4 is a good
> choice.
> > >
> > > Just my opinion.
> > >
> > > Terry
> > > K9TW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > > >
> > > > Terry
> > > > I have noticed that the tubes are not as bright as my other rigs,and
> > > > also the ip plate reading is 250ma's
> > > > and when i back it down to 225ma the output power drops a lot.
> > > > My other rigs all read max 225 ma's.Maybe they are drawing too much
> > > current?
> > > > Something not quite right,but will have to put it on the back burner
> > > > until i get back
> > > > Thanks
> > > > Don/Ve2ud
> > > >
> > > >
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43275. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-07 01:38:56 UTC
From: John Davidson
Topic: 43023 Message: 43275

"Drive" to the final grids is adjusted in the ALC position of the meter .
 Is that the Drive you are not getting. Not the same as output at all.
That should be peaked before you go on to tune the output network (Plate and loading controls)

From: Don <ve2ud@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, July 6, 2013 9:20 PM
Subject: Re: [TS-520_820_530_830] Re: Early TS830's

Hi John
Well i tried that and if i go too low,to 225ma or lower,i get no drive
at all

Don/Ve2ud

–

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43276. Re: [TS-520_820_530_830] Selling 830 parts

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-07 02:08:18 UTC
From: KA4AQM
Topic: 43251 Message: 43276

Gordon-

There is a clear plastic pointer/indicator that sits behind the PLATE knob on the 830...would you consider parting it out by itself?

Randy
KA4AQM
----- Original Message -----
From: n6wk_skcc3
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, July 04, 2013 11:49 PM
Subject: [TS-520_820_530_830] Selling 830 parts

I am selling off some of my 830 stash of parts. First up is two Digital display/Counter boards Both work great one is part number J25-2771-23 and the other is J25-2771-13. They both will work in any TS-830S. I have tested them both.
Asking $40.00 each plus $5.50 shipping or $75.00 for both plus $5.50 shipping.
Next up is an internal VFO. Asking $45.00 plus $5.50 shipping. No Knob !
Contact me direct n6wk at n6wk dot com

Next is a very clean TS-830S front panel.
Asking $35.00 plus $10.00 shipping.

Pictures on request

Thanks and more to come in a day or so.
73,
Gordon
N6WK

[Non-text portions of this message have been removed]

43277. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-07 02:13:08 UTC
From: Don
Topic: 43023 Message: 43277

Ok here goes
I turned the carrier down fully counter clockwise and i get 100
ma's,think it should be 225
As i turn it up to 150 ma's i get no movement at all by adjusting the
drive control[alc]
Now here's the weird part.
By adjusting the carrier up in ma's as soon as i get output on the alc meter
and go back to normal tune up procedures it jumps right back up to close
260 ma's,every time
Every time i play with lowering the carrier ma's and retuning it,it
jumps right back to 260 ma's
I just tested it again and i need at least 220 ma's to load the drive
and output is only about 55 watts,
But hey it working good,just i don't think the tubes will like it a lot

Don/Ve2ud

On 06/07/2013 9:38 PM, John Davidson wrote:
>
> "Drive" to the final grids is adjusted in the ALC position of the meter .
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> (Plate and loading controls)
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> _____
> From: Don <ve2ud@travel-net.com <mailto:ve2ud%40travel-net.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Saturday, July 6, 2013 9:20 PM
> Subject: Re: [TS-520_820_530_830] Re: Early TS830's
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> Don/Ve2ud
> _
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43278. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-07 02:51:30 UTC
From: Don
Topic: 43023 Message: 43278

John
Has been a long day and i am[maybe Terry too] getting ready to hit the sack
I am not great on the tech side,but i do know how to load the rig.My first rig was a ts520 over 37 years ago.
I got a ts520s over twenty five years go and still running strong and never touched.
I have two close to mint ts830's that i will only take the top cover off to have a peak inside
This rig i am working on was very close to being one of the first ones out and lots of problems with solder joints and who knows what else
I just brought it back from the dead[sitting on the shelve for a year] and with the groups help[mostly Terry] it is now working pretty decent except for a few adjustments maybe still needed.
It's a good one to practice trouble shooting on and it will help me down the road if my other ones fail.

73
Don/Ve2ud

On 06/07/2013 9:38 PM, John Davidson wrote:
>
> "Drive" to the final grids is adjusted in the ALC position of the meter .
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>
> _____
> From: Don <ve2ud@travel-net.com <mailto:ve2ud%40travel-net.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Saturday, July 6, 2013 9:20 PM
> Subject: Re: [TS-520_820_530_830] Re: Early TS830's
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>
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> Hi John
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> Don/Ve2ud
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43279. Re: [TS-520_820_530_830] Selling 830 parts

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-07 03:16:03 UTC
From: n6wk@...
Topic: 43251 Message: 43279

Randy,

I will check my Knobs drawer. I am not sure I still have any of the
clear plastic Pointer.

73,
Gordon

On 7/6/2013 7:08 PM, KA4AQM wrote:
>
> Gordon-
>
> There is a clear plastic pointer/indicator that sits behind the PLATE
> knob on the 830...would you consider parting it out by itself?
>
> Randy
> KA4AQM
> ----- Original Message -----
> From: n6wk_skcc3
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Thursday, July 04, 2013 11:49 PM
> Subject: [TS-520_820_530_830] Selling 830 parts
>
> I am selling off some of my 830 stash of parts. First up is two
> Digital display/Counter boards Both work great one is part number
> J25-2771-23 and the other is J25-2771-13. They both will work in any
> TS-830S. I have tested them both.
> Asking $40.00 each plus $5.50 shipping or $75.00 for both plus $5.50
> shipping.
> Next up is an internal VFO. Asking $45.00 plus $5.50 shipping. No Knob !
> Contact me direct n6wk at n6wk dot com
>
> Next is a very clean TS-830S front panel.
> Asking $35.00 plus $10.00 shipping.
>
> Pictures on request
>
> Thanks and more to come in a day or so.
> 73,
> Gordon
> N6WK
>
> [Non-text portions of this message have been removed]
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[Non-text portions of this message have been removed]

43280. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-07 11:36:05 UTC
From: Terry Wagoner
Topic: 43023 Message: 43280

Don:

Do I understand that while loading the rig if you turn the Carrier Level Pot full CCW with rig keyed you see 100ma on the IP meter???

Also why would you think it should be 225 ma? We can talk about that off the list if you like.

In Tune mode the meter should be in ALC position and Car Level Pot increased to get decent indication on meter to allow you to peak the Drive control. At this step NONE of the meter scales are being read or mean anything. It is just a relative indication to allow you to adjust the drive stage tune circuits to resonance. Use enough Car Level to give your self something on the meter to work with. Nothing less than far right hand end of the Black ALC box on meter face. What you are really looking at on the meter is the ALC bus voltage going down due to small amount of positive grid current flowing on the peak of the rf drive envelope being applied to the 6146 control grids. When the ALC bus voltage goes down it drives the meter up scale same as it does for AGC bus action in receive mode. After peaking this relative meter indication with Drive control then go to Ip and adjust the Plate Tuning capacitor to get your initial plate current dip.Now you are measuring final tube plate current on the Ip ma meter scale. Now it is safe to go to CW mode and load the rig. This initial step just makes sure your Tank capacitor is not so far off resonance that you have 300 plus ma plate current taxing the finals while rig is keyed.

If my question above is true then I suggest you check the Balanced Modulator carrier suppression. I would also measure CV terminal at Conn 8 on the IF board. With Car Pot full CCW you should have ZERO dc volts at CV. Not likely you have any voltage, but a quick check would be good.

The Balanced Modulator produces a 455khz double side band suppressed carrier output (DSBSC) which becomes your Transmit IF (TIF) signal and leaves the IF board and goes to RF board as input for your Transmit Mixer to produce the actual transmit frequency RF drive.

The only time you should have any output from the Balanced Modulator when loading the rig is when the Car Level pot is advanced off full CCW position. This supplies from approx 0 to 0.6vdc at the junction of D29/D32 to forward bias the ring diodes and unbalance the modulator and produce the 455khz dsbcc output. The other time is in SSB mode when you have Mic audio at input of the Balanced Modulator.

If you are seeing 100ma of Ip while trying to load the rig with Car Level pot at full CCW then you either have voltage from Car Level pot at its full CCW position or the Carrier Suppression has not been adjusted properly (can also have a failure in the BM but lets address carrier suppression first as it is the most likely cause).

Couple of ways to adjust Carrier Suppression. I have a PL-259 with two 100 ohm 1/2 watt resistors soldered from the center pin to the shell. Screw that on to the SO-239 and now have a 1 watt 50 ohm dummy load with resistor lead length that allows me to read the voltage across the resistors. Can use a RF probe/VTVM/DMM or O-scope, or RF millivolt meter

to monitor the voltage while I adjust VR-4 Trimmer pot and TC-3 Trimmer cap at Balanced Mod on the IF board. Adjust these trimmers for a minimum or null in voltage across the dummy load in CW mode. Then go to LSB and USB modes and go back and forth until you get the null balanced between them. This is touchy and wont be perfectly equal. Do this Carrier Suppression adjustments with the SG Switch off or your little dummy load wont like it.

Another way that works well is to use another receiver set near your TS-830 tuned to the frequency you will be nulling at. May need to place a short piece of wire in the receiver SO-239 and bring it near the TS830 so you can hear the Carrier. Now adjust VR-4 and TC-3 until you cant hear the Carrier in speaker or headphones. May not be able to get a complete null but should be able to get it very low.

With experience you will learn how VR-4 reacts vs how TC-3 reacts and the interaction between them.

After performing the Carrier Suppression go back and re-adjust the resting plate current for an Ip indication of 60ma in SSB mode.

Terry
K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
>
> Ok here goes
> I turned the carrier down fully counter clockwise and i get 100
> ma's

43281. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-07 13:29:57 UTC
From: John Davidson
Topic: 43023 Message: 43281

With the Carrier knob at full CCW you should get 60ma of plate current .MAX !
Your reading is WAY off.
 Can you adjust the bias pot for 60 mA?
If not there is no negative voltage coming from the power supply.

From: Don <ve2ud@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, July 6, 2013 10:13 PM
Subject: Re: [TS-520_820_530_830] Re: Early TS830's

Ok here goes
I turned the carrier down fully counter clockwise and i get 100
ma's,think it should be 225
As i turn it up to 150 ma's i get no movement at all by adjusting the
drive control[alc]
Now here's the weird part.
By adjusting the carrier up in ma's as soon as i get output on the alc meter
and go back to normal tune up procedures it jumps right back up to close
260 ma's,every time
Every time i play with lowering the carrier ma's and retuning it,it
jumps right back to 260 ma's
I just tested it again and i need at least 220 ma's to load the drive
and output is only about 55 watts,
But hey it working good,just i don't think the tubes will like it a lot

Don/Ve2ud

On 06/07/2013 9:38 PM, John Davidson wrote:
>
> "Drive" to the final grids is adjusted in the ALC position of the meter .
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> That should be peaked before you go on to tune the output network
> (Plate and loading controls)
>
> ---
> From: Don <ve2ud@... <mailto:ve2ud%40travel-net.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Saturday, July 6, 2013 9:20 PM
> Subject: Re: [TS-520_820_530_830] Re: Early TS830's
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> Hi John

> Well i tried that and if i go too low,to 225ma or lower,i get no drive
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43282. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-07 14:07:44 UTC
From: Terry Wagoner
Topic: 43023 Message: 43282

Wrong! His problem is not due to NO -C supply voltage.

If he had no cutoff or operating bias at Pin 5 control grids of the 6146 finals the tubes would have glowed red and been destroyed a long time ago. I suggest you really need to start reading and following these threads from the beginning.

He originally could not set the resting plate current to 60ma and we helped him diagnose that problem by cleaning and cycling the bias voltage adjustment pot thru its range and measuring the bias voltage from it. It turned out he had one bad final tube.

He now most recently reports that his cutoff bias in RX mode is -102vdc and his operating bias in TX mode is -59vdc measured at Pin 5 with two good final tubes installed.

Terry
K9TW

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> With the Carrier Â knob at full CCW you should get 60ma of plate current .MAX !
> Your reading is WAY off.
> Â Can you adjust the bias pot for 60 mA?Â
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> Sent: Saturday, July 6, 2013 10:13 PM
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> Â
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> I turned the carrier down fully counter clockwise and i get 100
> ma's,think it should be 225
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> Now here's the weird part.
> By adjusting the carrier up in ma's as soon as i get output on the alc meter
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43283. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-07 14:35:14 UTC
From: W5RKL
Topic: 43023 Message: 43283

Joe, I could be wrong but if you are referring to the bias supply when you say

"...there is no negative voltage coming from the power supply."

then the IP meter would not display 100ma but rather the IP meter would peg full scale to the right and the fuse would blow (final tubes would be conducting to saturation levels). The 830's "negative supply" is the "-C supply" on the Rectifier Unit that provides all the negative voltage in the 830, including final tube bias voltage. The -C supply also provides the negative voltage that is applied to the final tube screens, through relay RL1 on the Rectifier unit, when the SG switch is set to "OFF".

The final tube bias voltage applied to the grids of the final tubes controls the flow of electrons in the final tubes. By varying the level of negative voltage, more or less negative, controls the flow of electrons in the tube.

The following example assumes there is no RF applied from the driver tube (CAR set fully CCW) to the final tubes. The example is only concerned about basic electron flow in the tubes, not RF amplification.

Lets assume that with -100VDC applied to the grids of the final tubes the tubes are "biased to cut off". The term "Biased to cut off" refers to a level of negative voltage that when applied to the grids of the tube results in no current flow in the tube, cathode current is "zero". This is what happens when the 830 is in standby (transmitter is not keyed).

Lets also assume that if we reduce the bias voltage so it's "less negative", say to a negative voltage level of -65VDC, the tubes will conduct resulting in an IP current level of 60ma. This is what happens when the transmitter is keyed.

Now, lets assume there is a complete loss of negative voltage from the power supply (again, the negative voltage supply is the "-C" supply on the Rectifier Unit). Since there is no negative voltage applied to the grids of the final tube to control the flow of electrons in the tube, every electron that is emitted from the final tube's hot cathode will race towards any positive potential they see, i.e., the screens and anode (plate) in this case, resulting in saturation levels of current flowing in the tubes, the IP meter will peg full scale to the right, and the fuse will blow, assuming the correct rated fuse is in the fuse holder.

73
Mike
W5RKL

On 7/7/2013 8:29 AM, John Davidson wrote:
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> Your reading is WAY off.
> Can you adjust the bias pot for 60 mA?
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43284. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-07 14:44:31 UTC
From: W5RKL
Topic: 43023 Message: 43284

Sorry Terry, we seemed to be writing responses at the same time.

Mike
W5RKL

On 7/7/2013 9:07 AM, Terry Wagoner wrote:
>
> Wrong! His problem is not due to NO -C supply voltage.
>
> If he had no cutoff or operating bias at Pin 5 control grids of the
> 6146 finals the tubes would have glowed red and been destroyed a long
> time ago. I suggest you really need to start reading and following
> these threads from the beginning.
>
> He originally could not set the resting plate current to 60ma and we
> helped him diagnose that problem by cleaning and cycling the bias
> voltage adjustment pot thru its range and measuring the bias voltage
> from it. It turned out he had one bad final tube.
>
> He now most recently reports that his cutoff bias in RX mode is
> -102vdc and his operating bias in TX mode is -59vdc measured at Pin 5
> with two good final tubes installed.
>
> Terry
> K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, John Davidson
> <k8jd@...> wrote:
> >
> > With the Carrier Â knob at full CCW you should get 60ma of plate
> current .MAX !
> > Your reading is WAY off.
> > Â Can you adjust the bias pot for 60 mA?Â
> > If not there is no negative voltage coming from the power supply.
> >
> >
> > _____
> > From: Don <ve2ud@...>
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Saturday, July 6, 2013 10:13 PM
> > Subject: Re: [TS-520_820_530_830] Re: Early TS830's
> >
> >

> >
> > Â
> >
> > Ok here goes
> > I turned the carrier down fully counter clockwise and i get 100
> > ma's,think it should be 225
> > As i turn it up to 150 ma's i get no movement at all by adjusting the
> > drive control[alc]
> > Now here's the weird part.
> > By adjusting the carrier up in ma's as soon as i get output on the
> alc meter
> > and go back to normal tune up procedures it jumps right back up to
> close
> > 260 ma's,every time
> > Every time i play with lowering the carrier ma's and retuning it,it
> > jumps right back to 260 ma's
> > I just tested it again and i need at least 220 ma's to load the drive
> > and output is only about 55 watts,
> > But hey it working good,just i don't think the tubes will like it a lot
> >
> > Don/Ve2ud
> >
> > On 06/07/2013 9:38 PM, John Davidson wrote:
> > >
> > > "Drive" to the final grids is adjusted in the ALC position of the
> meter .
> > > Is that the Drive you are not getting. Not the same as output at all.
> > > That should be peaked before you go on to tune the output network
> > > (Plate and loading controls)
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> > > Hi John
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> > > Reply via web post Reply to sender Reply to group Start a New Topic
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> > >
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43285. Re: [TS-520_820_530_830] Selling 830 parts

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-07 16:26:29 UTC
From: KA4AQM
Topic: 43251 Message: 43285

Thank you sir.
Randy
----- Original Message -----
From: n6wk@...
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, July 06, 2013 11:16 PM
Subject: Re: [TS-520_820_530_830] Selling 830 parts

Randy,

I will check my Knobs drawer. I am not sure I still have any of the
clear plastic Pointer.

73,
Gordon

On 7/6/2013 7:08 PM, KA4AQM wrote:
>
> Gordon-
>
> There is a clear plastic pointer/indicator that sits behind the PLATE
> knob on the 830...would you consider parting it out by itself?
>
> Randy
> KA4AQM
> ----- Original Message -----
> From: n6wk_skcc3
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Thursday, July 04, 2013 11:49 PM
> Subject: [TS-520_820_530_830] Selling 830 parts
>
> I am selling off some of my 830 stash of parts. First up is two
> Digital display/Counter boards Both work great one is part number
> J25-2771-23 and the other is J25-2771-13. They both will work in any
> TS-830S. I have tested them both.
> Asking $40.00 each plus $5.50 shipping or $75.00 for both plus $5.50
> shipping.
> Next up is an internal VFO. Asking $45.00 plus $5.50 shipping. No Knob !
> Contact me direct n6wk at n6wk dot com
>
> Next is a very clean TS-830S front panel.
> Asking $35.00 plus $10.00 shipping.
>
> Pictures on request
>

> Thanks and more to come in a day or so.
> 73,
> Gordon
> N6WK
>
> [Non-text portions of this message have been removed]
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>

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[Non-text portions of this message have been removed]

43286. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-07 16:46:36 UTC
From: Terry Wagoner
Topic: 43023 Message: 43286

Mike:

No problem. I need all the help I can get.

Terry
K9TW

--- In TS-520_820_530_830@yahoogroups.com, W5RKL <w5rkl@...> wrote:
>
> Sorry Terry, we seemed to be writing responses at the same time.
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> Mike
> W5RKL
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> > If he had no cutoff or operating bias at Pin 5 control grids of the
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> > time ago. I suggest you really need to start reading and following
> > these threads from the beginning.
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> > He originally could not set the resting plate current to 60ma and we
> > helped him diagnose that problem by cleaning and cycling the bias
> > voltage adjustment pot thru its range and measuring the bias voltage
> > from it. It turned out he had one bad final tube.
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> > He now most recently reports that his cutoff bias in RX mode is
> > -102vdc and his operating bias in TX mode is -59vdc measured at Pin 5
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> > K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, John Davidson
> > <k8jd@> wrote:
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> > > With the Carrier Â knob at full CCW you should get 60ma of plate
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> > > If not there is no negative voltage coming from the power supply.
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> > > From: Don <ve2ud@>
> > > To: TS-520_820_530_830@yahoogroups.com
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> > > Sent: Saturday, July 6, 2013 10:13 PM
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> > >
> > > On 06/07/2013 9:38 PM, John Davidson wrote:
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> > > > "Drive" to the final grids is adjusted in the ALC position of the
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43287. KENWOOD HYBRID USER NET (July 7th, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-07 19:11:04 UTC
From: mvgilger
Topic: 43287 Message: 43287

The Saturday's net on 40 meter had 12 stations checking in with poor band conditions. We had 7 new check-in's, KD8TJL, K2GAV, K2QU, WD8INW, KE8D, K4BOF, and KB1LV.

Out of all stations checking in, there was:

5 running TS-520(x)
2 running TS-530(x)
2 running TS-820(x)
3 running TS-830S

I was running my TS-940s. The rest were running non hybrids of one model or another.

The Sunday's net on 20 meter we had 17 stations checking in under poor band conditions. We had 4 new check-in, KC9UVP, KV9O, KA9OYD, and K5SRG.

Out of those, there was:

2 running TS-520(x)
1 running TS-530(x)
1 running TS-820(x)
6 running TS-830S

I was running my TS-940s. The rest were running non hybrids of one model or another.

We have been having several people checking in regularly with their TS-430, TS-440, and TS-940's, which of course is not a hybrid, although over 30+ years old. Everyone is welcome as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a net control station, please send me an email. Currently it's just myself, WB2KNR and WB0SGA. I would like to get several more. If we do, we can alternate so everyone might be on a 3-4 week rotation. It's a lot of fun and a good way to make sure you station is optimized.

For anyone that has not heard, we have a new web site that WB4HFN is hosting. He currently has a very nice site for Drake, Collins and Heathkit and now Kenwood Hybrids. Good quality manuals plus sale flyers and brochures will be found here, along with user supplied information for all Hybrids.

His URL is:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754 check-ins, Sunday total 563 check-ins

November 2012, Saturday's, net total = 47, Sundays total = 20
December 2012, Saturday's, net total = 74, Sunday's total = 70
January 2013, Saturday's, net total = 93, Sunday's total = 87

February 2013, Saturday's net total = 103, Sundays total = 87
March 2013, Saturday's, net total = 112, Sunday's total =39
April 2013, Saturday's net total = 52, Sunday's total = 29
May 2013, Saturday's net total = 45, Sunday's total = 50
June 2013, Saturday's net total = 30, Sunday's total = 27
July 2013, Saturday's net total = 21, Sunday's total = 17 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

43288. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-07 19:59:27 UTC
From: John Davidson
Topic: 43023 Message: 43288

SO c- VOLTAGE IS STUCK SOMEWHERE BETWEEN CUTOFF AND NO BIAS BUT NOT -65v WHERE IT SHOULD BE
.
somewhere in the voltage divider resistors and adjustment pot is a changed value, look for a burned resistor. Bad pot ?

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, July 7, 2013 10:07 AM
Subject: [TS-520_820_530_830] Re: Early TS830's

Wrong! His problem is not due to NO -C supply voltage.

If he had no cutoff or operating bias at Pin 5 control grids of the 6146 finals the tubes would have glowed red and been destroyed a long time ago. I suggest you really need to start reading and following these threads from the beginning.

He originally could not set the resting plate current to 60ma and we helped him diagnose that problem by cleaning and cycling the bias voltage adjustment pot thru its range and measuring the bias voltage from it. It turned out he had one bad final tube.

He now most recently reports that his cutoff bias in RX mode is -102vdc and his operating bias in TX mode is -59vdc measured at Pin 5 with two good final tubes installed.

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43289. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-07 18:41:30 UTC
From: Wes Will
Topic: 43023 Message: 43289

On 07/07/2013 11:46 AM, Terry Wagoner wrote:
> Mike:
>
> No problem. I need all the help I can get.
>
> Terry
> K9TW

And me, and probably some others out there, REALLY appreciate the lot of you who take the time to write these things.

Me, I pull out the schematics for my 520 (even when it's an 830 or something under discussion, since they MOSTLY have all of the same main circuits like the finals and the RIF/TIF and drivers and such, excepting the nicer add-ons in the later/newer rigs) and try to follow along. I learned tube theory in the sixties and seventies, and I -KNOW- I'm out of date.

Once I get the VTVM back to spec, and the old O-scope working again, and the really old signal gennie back in line, and so on... and can do more than just twiddle around with that 520, I'm going to need all the expertise I can manage to con out of you lot of insanely well-educated people, with your unparalleled generosity in sharing expertise.

Yeah, it might sound like a bit of flattery, but it's meant GENUINELY, and stems from the mouth-hanging-open, bug-eyed, "ye ghods I wish I knew this stuff HALF that well" feelings of total inadequacy I get when I read one of these Master's theses on hybrid radios.

KUDOS, the lot of yer.

--
Wes Will
N9KDY

43290. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-07 21:39:14 UTC
From: Terry Wagoner
Topic: 43023 Message: 43290

I just told you the bias voltage pot has been cleaned and cycled and proven to be able to adjust the resting plate current.

If the problem is with the -C circuit why can he adjust the resting plate current in LSB/USB mode for 60ma Ip and then measure the bias voltage at Pin 5 at -60vdc? (Normal bias voltage will vary from rig to rig a few volts).

If his operating bias voltage is normal there is only one other way for the plate current to jump up to 100ma in CW mode with Car Level pot full CCW position when he flips to send to begin loading and that is to have carrier output from the Balanced Modulator (assuming there isnt shorted ring diodes which is very unlikely). Now how can you get carrier out of the BM if there is no dc voltage from the CAR pot? Maybe the following will help the lite bulb come on.

Do yourself a favor and remove the covers from your TS520 and do this:
1. Locate the Generator board, locate the Balanced Modulator, locate Balance Trim Pot VR-2.
2. Place rig in CW mode, set Car Level pot at full CCW
3. Place meter switch in Ip position
4. Flip to send and verify that the resting plate current is 60ma
5. Flip back to receive and insert your adjustment tool into VR-2 slot.
6. Keep hand on Send/Rec switch and Flip to Send and slowly adjust VR2 and when you see the IP meter jump upscale and you hear a groan, grunt, buzz from the PA cage and the Transformer quickly flip back to Rec. If your VR-2 is clean and smooth you will be able to set the IP to 100 ma or 150 ma or where ever you like. If it is touchy and dirty it may well peg the meter.
7. Set mode to SSB and Flip to send and adjust VR-2 for lowest IP level which should be close to the original 60ma resting current you had. Better to do full carrier suppression adjustment when you are done with this lesson.
8. If you still dont understand or believe what you just saw then connect your multimeter to Pin 5 of the finals and watch your operating bias voltage as you flip to send again and turn VR-2. It will not move from its normal -55vdc or so as your plate current runs up scale or pegs the meter.

Terry
K9TW

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> SO c- VOLTAGE IS STUCK SOMEWHERE BETWEEN CUTOFF AND NO BIAS BUT NOT -65v WHERE IT SHOULD BE .
> somewhere in the voltage divider resistors and adjustment pot is a changed value, look for a burned resistor. Bad pot ?
>
>
> _____
> From: Terry Wagoner <wagstw46@...>

> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sunday, July 7, 2013 10:07 AM
> Subject: [TS-520_820_530_830] Re: Early TS830's
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>

43291. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-07 21:47:00 UTC
From: Terry Wagoner
Topic: 43023 Message: 43291

Wes:

This is what I would hope most would do who are interested in learning how these radios work. It is why people like Mike and I dont just give and answer. We try to explain some of the how and why. It is also helpful to have others following along for a QC check and to keep me and others from straying off the path. If I am wrong will be first to admit it. Hate to bum dope anyone.

Part of problem is all advice is based on what we understand has been written and is being fed back. We cant observe the problem or any of the readings being taken. Sometimes can tell something is wrong if the readings dont make any sense or simply not possible.

Terry
K9TW

--- In TS-520_820_530_830@yahoogroups.com, Wes Will <wwill@...> wrote:
>
> On 07/07/2013 11:46 AM, Terry Wagoner wrote:
> > Mike:
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> > No problem. I need all the help I can get.
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> > Terry
> > K9TW
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> And me, and probably some others out there, REALLY appreciate the lot of
> you who take the time to write these things.
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> Me, I pull out the schematics for my 520 (even when it's an 830 or
> something under discussion, since they MOSTLY have all of the same main
> circuits like the finals and the RIF/TIF and drivers and such, excepting
> the nicer add-ons in the later/newer rigs) and try to follow along. I
> learned tube theory in the sixties and seventies, and I -KNOW- I'm out
> of date.
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> Once I get the VTVM back to spec, and the old O-scope working again, and
> the really old signal gennie back in line, and so on... and can do more
> than just twiddle around with that 520, I'm going to need all the
> expertise I can manage to con out of you lot of insanely well-educated
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> and stems from the mouth-hanging-open, bug-eyed, "ye ghods I wish I knew
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> read one of these Master's theses on hybrid radios.
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> KUDOS, the lot of yer.
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> --
> Wes Will
> N9KDY
>

43292. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-07 23:32:23 UTC
From: Wes Will
Topic: 43023 Message: 43292

On 07/07/2013 04:47 PM, Terry Wagoner wrote:
> We cant observe the problem or any of the
> readings being taken. Sometimes can tell something is wrong if the
> readings dont make any sense or simply not possible.

My last gig from which I am now retired was as the lead technician, trainer, and all they left (after mismanagement by two morons gutted my department) of Tier Three computer tech support at a semi-major midwestern university (go, salukis? or don't, I never gave a single rip about "sports).

I spent ten or more hours a day answering stupid questions on the stupid telephone posed by stupid people about their stupid computers, machines they were too deity-condemned DUMB to even be allowed to own. (Ask me some day how I -really- feel about that job of more than a decade and a half...)

Or training others how to answer those questions. Using bum data provided by unobservant idiots who couldn't be bothered even to learn the correct terminology. (Imagine trying to help someone with a hybrid rig who used the terms "resistor," "capacitor," "coil," and "tube" interchangeably....)

I well understand your challenges. That's why I spend my time going over the replies you guys send, so that maybe SOME of that will rub off on me. (Takes study, there's no osmosis going on. You -earned- your chops with these rigs after a lot of work.)

Kudos.

--
Wes Will
N9KDY

43293. Re: [TS-520_820_530_830] Selling 830 parts

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-08 04:36:03 UTC
From: n6wk@...
Topic: 43251 Message: 43293

Randy,
I do NOT have the clear dial you need.Sorry!
I suggest you contact Bob Mansker.
ke5ftf @ mail.com

73,
Gordon
N6WK

On 7/7/2013 9:26 AM, KA4AQM wrote:
>
> Thank you sir.
> Randy
> ----- Original Message -----
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> On 7/6/2013 7:08 PM, KA4AQM wrote:
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> > Gordon-
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> > There is a clear plastic pointer/indicator that sits behind the PLATE
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> > Randy
> > KA4AQM
> > ----- Original Message -----
> > From: n6wk_skcc3
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Thursday, July 04, 2013 11:49 PM
> > Subject: [TS-520_820_530_830] Selling 830 parts
> >

> > I am selling off some of my 830 stash of parts. First up is two
> > Digital display/Counter boards Both work great one is part number
> > J25-2771-23 and the other is J25-2771-13. They both will work in any
> > TS-830S. I have tested them both.
> > Asking $40.00 each plus $5.50 shipping or $75.00 for both plus $5.50
> > shipping.
> > Next up is an internal VFO. Asking $45.00 plus $5.50 shipping. No Knob !
> > Contact me direct n6wk at n6wk dot com
> >
> > Next is a very clean TS-830S front panel.
> > Asking $35.00 plus $10.00 shipping.
> >
> > Pictures on request
> >
> > Thanks and more to come in a day or so.
> > 73,
> > Gordon
> > N6WK
> >
> > [Non-text portions of this message have been removed]
> >
> >
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> --
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> [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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43294. RF

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-09 00:50:46 UTC
From: curteisj@frontier.com
Topic: 43294 Message: 43294

I need help with tuning my TS-830s. I can tune everything except the RF.
Any suggestion?

Curt W3SDA

43295. Re: RF

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-09 01:18:41 UTC
From: r_krohne@sbcglobal.net
Topic: 43294 Message: 43295

--- In TS-520_820_530_830@yahoogroups.com, "curteisj@..." <curteisj@...> wrote:
>
> I need help with tuning my TS-830s. I can tune everything except the RF.
> Any suggestion?
>
> Curt W3SDA
>
Curt,
What happens when you try to tune RF? The first time I tried tuning my TS-830s the meter pegged when I tuned RF. I mentioned this to Ken (K4EAA) and he told me to turn down the RF meter control in the upper left hand corner on the rear of the radio. If you are not seeing any swing or too much swing, try adjusting the meter control. Try adjusting it for about 3/4 swing. It's just for reference at this tuning stage.
I'm a newbie here, just putting in my two cents.
Ralph (KB1ZYI)

43296. Re: RF

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-09 02:22:19 UTC
From: Terry Wagoner
Topic: 43294 Message: 43296

Ralph:

I suspect you are correct that the RF detector sensitivity pot needs to be adjusted. One minor point you are not "TUNING RF".

When you use the RF position on the panel meter you are looking at a sample of the RF output power from your pi-network. They use a resistor voltage divider that is essentially connected to the center conductor of your coax connector and rectify the RF voltage with a diode and filter it and send it to your meter. It allows you to adjust the Plate Tune and Plate Load capacitors for maximum relative output power.

After you make your initial plate dip in Tune mode you can simply place your meter to RF position and alternately adjust Plate Load and Plate tune for a maximum on the meter. None of the scales are being used in the RF meter position. Once you get maximum indication unkey the rig and place meter in IP position and flip to Send again to make sure you are not exceeding maximum plate current for your radio. Typically 225ma for a TS-530/TS-830 and 200ma for all others.

At 100 watts out you have approx 71rf volts across a 50 ohm load. The RF position of your panel meter is measuring that voltage. So in theory when you get maximum indication in the RF position of the panel meter you are close to 100 watts output power into a 50 ohm dummy load.

When you get a few extra dollars invest in a wattmeter and you can leave your panel meter in the IP position and you can load rig to 100 watts out on the wattmeter and at same time see that you are not exceeding maximum plate current. No reason to do the old fashioned dip and load after doing the initial dip in Tune mode. The only reason you need to do it is in case the Plate tune capacitor is far from resonance for the band you are loading on and you would have very high initial off resonance plate current when you begin tuning which is needlessly hard on the final tubes.

The wattmeter in addition to being a good loading aid will also tell you at a glance when things are normal and when there is a problem. Much easier than interpreting relative RF meter indications.

Terry
K9TW

--- In TS-520_820_530_830@yahoogroups.com, "r_krohne@..." <r_krohne@...> wrote:
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "curteisj@" <curteisj@> wrote:
> >
> > I need help with tuning my TS-830s. I can tune everything except the RF.
> > Any suggestion?
> >

> > Curt W3SDA
> >
> Curt,
> What happens when you try to tune RF? The first time I tried tuning my TS-830s the meter pegged when I tuned RF. I mentioned this to Ken (K4EAA) and he told me to turn down the RF meter control in the upper left hand corner on the rear of the radio. If you are not seeing any swing or too much swing, try adjusting the meter control. Try adjusting it for about 3/4 swing. It's just for reference at this tuning stage.
> I'm a newbie here, just putting in my two cents.
> Ralph (KB1ZYI)
>

43297. Re: [TS-520_820_530_830] Re: RF

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-09 04:20:23 UTC
From: Wes Will
Topic: 43294 Message: 43297

> When you get a few extra dollars invest in a wattmeter and you can leave
...
> The wattmeter in addition to being a good loading aid will also tell you

Argh. Sorry. Pet Peeve time.

I had one supposed 'radio expert' (He never got above Technician.) try to tell me that leaving a wattmeter in-line all the time was a bad idea, it cost too much power.

I found out why he was saying that when I was at his home QTH one time and got a look at his wattmeter (and most particularly his patch cables FOR the wattmeter).

People, for crying in the dark, INVEST a few cents more for the BEST, lowest insertion loss co-ax and the top-end PL-259 connectors that you can find, particularly when you're just making a TWO FOOT JUMPER CABLE!! I understand full well cutting expenses, but that is penny-wise and pound-foolish. The difference is going to be less than a buck or two. Even I can afford THAT, on my (Illinois, Nine-Land) STATE retirement!! I hope.... (Please, Gov, leave my pension ALONE!!)

This numbnug had some of that really junky unbraided shield (just a spiral of wire wrapped around the center conductor, rather than a full braided shield), skinny, high-loss, JUNK coax jumper with -259 plugs made out of pot-metal crimped on the ends, that he apparently got from some chicken-band section of a truck stop. Of COURSE putting his wattmeter in-line was costing him probably half of the ERP (at 2 meters).

Now, I'm all for eggs-on-horseback at a truck stop, but I DON'T buy radio parts there. Not even co-ax.

Make the best jumpers you can, clean the sockets and plugs before you insert and screw them down, and the losses are minimal.

--
Wes Will
N9KDY

43298. Re: RF

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-09 12:31:46 UTC
From: Terry Wagoner
Topic: 43294 Message: 43298

I forgot to mention one other thing.

If cleaning and adjusting the RF detector sensitivity pot does not result in being able to obtain meter indication in the RF meter position then you may have lost Diode D9. I have had to replace a couple over the years.

It is a 1N60 germanium signal diode and is located inside the PA cage. If you find the diode bad check the voltage divider resistors R23/R24. R24 is mislabeled as 10 ohms and is a 10k ohm resistor. This gives you a 10/1 ratio so that 71 volts is reduced to approx 7 volts applied to the diode.

If you need to troubleshoot this circuit will need to make sure rig is unplugged and the HV filter capacitors are discharged before bare hand contacting anything inside the PA cage.

Terry K9TW

> Ralph:
>
> I suspect you are correct that the RF detector sensitivity pot needs to be adjusted. One minor point you are not "TUNING RF".
>
> >
> > > I need help with tuning my TS-830s. I can tune everything except the RF.

43299. Re: RF

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-09 15:15:03 UTC
From: r_krohne@sbcglobal.net
Topic: 43294 Message: 43299

Thanks for clarifying Terry. Obviously the only pi-network I am familiar with is apple, cherry and pumpkin :-)
Ralph (KB1ZYI)

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> I forgot to mention one other thing.
>
> If cleaning and adjusting the RF detector sensitivity pot does not result in being able to obtain meter indication in the RF meter position then you may have lost Diode D9. I have had to replace a couple over the years.
>
> It is a 1N60 germanium signal diode and is located inside the PA cage. If you find the diode bad check the voltage divider resistors R23/R24. R24 is mislabeled as 10 ohms and is a 10k ohm resistor. This gives you a 10/1 ratio so that 71 volts is reduced to approx 7 volts applied to the diode.
>
> If you need to troubleshoot this circuit will need to make sure rig is unplugged and the HV filter capacitors are discharged before bare hand contacting anything inside the PA cage.
>
> Terry K9TW
>
> > Ralph:
> >
> > I suspect you are correct that the RF detector sensitivity pot needs to be adjusted. One minor point you are not "TUNING RF".
> >
> > >
> > > I need help with tuning my TS-830s. I can tune everything except the RF.
>

43300. Selling Yaesu FT-757GX, supply and tuner to focus on TS-820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-09 13:23:02 UTC
From: Barry
Topic: 43300 Message: 43300

I'm going to sell my Yaesu FT-757GX Mark I, FP-757GX power supply, FT-757AT auto antenna tuner, MH-1 mic and original manuals and boxes so I can focus on using my TS-820. If you'd like more info, here's my webpage for info:

http://www.digcservices.com/ham/yaesu/Yaesu_FT-757GX_Mark_I_Set2.html

Now I'll clean up the 820 and see if I can get it transmitting!

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

43301. Re: RF

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-09 18:25:58 UTC
From: Terry Wagoner
Topic: 43294 Message: 43301

OK Ralph no problem. If you stick with it long enough and have the aptitude and interest those fruits can be replaced by capacitors and inductors. Hopefully you will find them just as tasty!

No shame in not understanding how a pi-network tank circuit works. You are not in the minority. If you want to start building a library suggest you get a late 70s ARRL handbook and a copy of ARRL Understanding Amateur Radio. The latter is a condensed version of the Handbook. It will take you thru basic electronics and how receivers and transmitters work with very little math. A good primer for vacuum tubes is Basic Radio Course by John T. Frye.

To really understand this stuff need to understand what a capacitor and an inductor are and how they behave with AC applied and what happens when you place them in series and in parallel. Then can move on to understanding resonance and how a Tank circuit works and how a signal applied to the grid of a transmitting vacuum tube can convert the DC HV supply to a RF signal and how that signal can be coupled to a load ie dummy load or antenna. Understanding transmission lines and how a dipole radiates is left for your reading. A fellow named Maxwell did some work here and displacement current and coulomb field will keep you busy. Way over my head and just accept it on faith!

Essentially the 6146 transmitting tubes pulse the HV DC supply at the rate of the RF signal applied to the control grids. These current pulses at the anode are of not much use. The Tank circuit thru its "flywheel" effect converts those pulses into form that is useful and can be coupled to the antenna. The Pi-network is a form of tank circuit. It is usually analyzed as back to back L-networks.

Basically a Pi-network has three functions:
1. Provide a return path back to the power supply for the HV DC component
2. Transform the relatively low antenna load impedance (approx 50 ohms) to the relatively high 6146 tube plate impedance (approx 2000 ohms)
3. Provide a low impedance path to ground for the harmonic content of the plate current. Especially 2nd harmonic.

The ARRL Handbook will tell you how to select values for the two capacitors and the inductor and how to optimize efficiency with a discussion of L/C ratios and loaded Q.

I will let you read up on all of this assuming this teaser piqued your interest.

By the way I have been at it over 50 years and read everyday and still learn and re-learn all the time.

Have Fun
Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "r_krohne@..." <r_krohne@...> wrote:
>
> Thanks for clarifying Terry. Obviously the only pi-network I am familiar with is apple,

cherry and pumpkin :-)
> Ralph (KB1ZYI)

43302. Re: [TS-520_820_530_830] Re: RF

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-09 19:16:11 UTC
From: Dave & Loraine
Topic: 43294 Message: 43302

Hi Terry,

A typo?
"Basically a Pi-network has three functions:
1. Provide a return path back to the power supply for the HV DC component"

73 Dave f4eyk

[Non-text portions of this message have been removed]

43303. 830 Balanced modulator

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-09 21:08:54 UTC
From: kf4ofi
Topic: 43303 Message: 43303

Does anyone know exactly where to tap in to do a direct balanced modulator audio feed on an 830.

Also, which filter does transmit audio pass, the 8.830 or the 455k, or both?

Thanks
Curt

43304. Re: [TS-520_820_530_830] 830 Balanced modulator

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-09 21:32:58 UTC
From: W5RKL
Topic: 43303 Message: 43304

The transmit signal goes through BOTH filters, same as the receive signal.

Why are you considering applying an audio signal to the BM?

Mike W5RKL

On 7/9/2013 4:08 PM, kf4ofi wrote:
>
> Does anyone know exactly where to tap in to do a direct balanced
> modulator audio feed on an 830.
>
> Also, which filter does transmit audio pass, the 8.830 or the 455k, or
> both?
>
> Thanks
> Curt
>
>

[Non-text portions of this message have been removed]

43305. Re: [TS-520_820_530_830] 830 Balanced modulator

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-09 21:37:34 UTC
From: W5RKL
Topic: 43303 Message: 43305

I left out something. Should have expanded my response.

The "AUDIO" itself doesn't go through either, the IF frequencies flow
through the IF filters. The speech amp audio is mixed with the CAR
signal in the BM and that "RF" signal is then processed through the IF
Unit filters and on to the RF unit. You can see this by studying the
830's IF Unit schematic.

Mike W5RKL

On 7/9/2013 4:32 PM, W5RKL wrote:
>
> The transmit signal goes through BOTH filters, same as the receive signal.
>
> Why are you considering applying an audio signal to the BM?
>
> Mike W5RKL
>
> On 7/9/2013 4:08 PM, kf4ofi wrote:
> >
> > Does anyone know exactly where to tap in to do a direct balanced
> > modulator audio feed on an 830.
> >
> > Also, which filter does transmit audio pass, the 8.830 or the 455k, or
> > both?
> >
> > Thanks
> > Curt
> >
> >
>
> [Non-text portions of this message have been removed]
>
>

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43306. Re: [TS-520_820_530_830] 830 Balanced modulator

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-09 21:51:04 UTC
From: W5RKL
Topic: 43303 Message: 43306

Transmit signal path in transmit on the IF Unit.

The speech amplifier audio and CAR signal is applied to the BM where they both mix together. The output of the BM is fed to Q22 and the output of Q22 is fed to L25. The output of L25 is fed to CF2 then to Q23. The output of Q23 is fed to Q28. The output of Q28 is fed to L28 then to and through XF1. The output of XF1 is fed through D42 to to Q29. The output of Q29 is the 8Mhz "TIF" signal, IF Plug 6 pin 3, that is fed to the RF Unit where it is mixed with the PLL Unit's VCO signal producing the transmit signal that's fed to the driver and ultimately the final amplifier.

The transmit signal path is "similar" to the receive signal path. If you don't have the 830's high resolution "color" schematic, check Gordon's website and download it and study the signal paths for both transmit and receive through the IF unit.

Mike W5RKL

On 7/9/2013 4:37 PM, W5RKL wrote:
>
> I left out something. Should have expanded my response.
>
> The "AUDIO" itself doesn't go through either, the IF frequencies flow
> through the IF filters. The speech amp audio is mixed with the CAR
> signal in the BM and that "RF" signal is then processed through the IF
> Unit filters and on to the RF unit. You can see this by studying the
> 830's IF Unit schematic.
>
> Mike W5RKL
>
> On 7/9/2013 4:32 PM, W5RKL wrote:
> >
> > The transmit signal goes through BOTH filters, same as the receive
> signal.
> >
> > Why are you considering applying an audio signal to the BM?
> >
> > Mike W5RKL
> >
> > On 7/9/2013 4:08 PM, kf4ofi wrote:
> > >
> > > Does anyone know exactly where to tap in to do a direct balanced
> > > modulator audio feed on an 830.
> > >
> > > Also, which filter does transmit audio pass, the 8.830 or the 455k, or

> > > both?
> > >
> > > Thanks
> > > Curt
> > >
> > >
> >
> > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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>

[Non-text portions of this message have been removed]

43307. Re: [TS-520_820_530_830] 830 Balanced modulator

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-09 21:52:23 UTC
From: <pmarkavage@...>
Topic: 43303 Message: 43307

If you're looking to apply external audio processing (ESSB type stuff) to the 830's balanced modulator, I wouldn't recommend it. Others have tried over the years, and it wasn't worth the time and effort.

Pete, wa2cwa

> > On 7/9/2013 4:08 PM, kf4ofi wrote:
> > >
> > > Does anyone know exactly where to tap in to do a direct
> balanced
> > > modulator audio feed on an 830.
> > >
> > > Also, which filter does transmit audio pass, the 8.830 or the
> 455k, or
> > > both?
> > >
> > > Thanks
> > > Curt

43308. Re: 830 Balanced modulator

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-09 22:22:37 UTC
From: kf4ofi
Topic: 43303 Message: 43308

Pete,

Yes this is what I was considering. Emphasis on considering. I run a few outboard pieces but nothing major. Doesn't look like something I want to tackle after all.

Mike,

Thanks for the write up on the BM. Much appreciated.

Curt
--- In TS-520_820_530_830@yahoogroups.com, <pmarkavage@...> wrote:
>
> If you're looking to apply external audio processing (ESSB type stuff) to
> the 830's balanced modulator, I wouldn't recommend it. Others have tried
> over the years, and it wasn't worth the time and effort.
>
> Pete, wa2cwa
>
> > > On 7/9/2013 4:08 PM, kf4ofi wrote:
> > > >
> > > > Does anyone know exactly where to tap in to do a direct
> > balanced
> > > > modulator audio feed on an 830.
> > > >
> > > > Also, which filter does transmit audio pass, the 8.830 or the
> > 455k, or
> > > > both?
> > > >
> > > > Thanks
> > > > Curt
>

43309. TS 820S Calibration Dial (VFO)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-09 22:17:50 UTC
From: Wm Marvin
Topic: 43309 Message: 43309

I have a near mint TS 820. The VFO is stable and smooth. My problem is when rotating the VFO at some points the calibration ring will rotate also causing the inner dial to lose calibration. Any suggestions??

Thanks inadvance & 73

Bill KB9IV

43310. Re: RF

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-10 00:27:43 UTC
From: Terry Wagoner
Topic: 43294 Message: 43310

Hi Dave:

No not a typo. A little difficult to see and understand how a tube converts the dc anode voltage to rf power.

I wont take the space here to write all that. Just follow along on the TS-830 schematic.

If you were to look at the spectral content of the Anode current you would see the DC component Fo, the Fundamental component F1, the 2nd Harmonic component F2, and so on for the odd and even harmonic components.

Initially the Anode Blocking/Coupling capacitor C7 will be dc charged by the 6146 HV power supply to 900vdc across the plates. This capacitor is charged and discharged at the RF rate.

Without having a dc return path thru L3 and L4 Tank inductor and thru safety choke L5 to chassis ground VC-1 Tank air variable capacitor and VC-2 Plate load air variable capacitor will be charged to the HV power supply voltage level across the plates. This dc voltage can result in arc over between the capacitor plates and/or arc over at the band switch contacts.

L5 is often described as a safety choke to blow the fuse if C7 is leaky or shorted and keep the anode voltage off your SO-239 connector. This is true, but it along with the Tank coil is the DC return path to keep C7 DC charge and discharge voltage off the Pi-network air variable capacitors. Absent this return path you would essentially have a 900vdc "bias voltage" standing across the air variable capacitors. Few people think about the importance of this dc return path that the Pi-network provides.

With our Pi-network we are using what is called Shunt feed by feeding the plate voltage thru the RF plate chokes (main and VHF chokes). In old days Series feed was used and the Plate voltage was fed thru the Tank circuit so the dc return path to the HV power supply was directly thru the tank inductor. The tube, tank circuit, and HV power supply were all in series. With Shunt feed we dont have that situation, but the Tank components still see the dc charge and discharge of the DC blocking capacitor to anode potential which must be addressed.

Thanks for taking the time to read my response to the newer folks and for asking for clarification. I probably could have phrased it differently.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Dave & Loraine" <dave.crooks@...> wrote:
>
> Hi Terry,
>
> A typo?
> "Basically a Pi-network has three functions:

> 1. Provide a return path back to the power supply for the HV DC component"
>
> 73 Dave f4eyk
>
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

43311. Re: [TS-520_820_530_830] Re: RF

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-10 00:42:20 UTC
From: Gregory Albers
Topic: 43294 Message: 43311

Terry
I don't know how much your explanations help anyone else, but they sure help me.
Thank's
73
Greg
KC9VVU

Sent from Greg Albers iPad

On Jul 9, 2013, at 8:27 PM, "Terry Wagoner" <wagstw46@...> wrote:

> Hi Dave:
>
> No not a typo. A little difficult to see and understand how a tube converts the dc anode voltage to rf power.
>
> I wont take the space here to write all that. Just follow along on the TS-830 schematic.
>
> If you were to look at the spectral content of the Anode current you would see the DC component Fo, the Fundamental component F1, the 2nd Harmonic component F2, and so on for the odd and even harmonic components.
>
> Initially the Anode Blocking/Coupling capacitor C7 will be dc charged by the 6146 HV power supply to 900vdc across the plates. This capacitor is charged and discharged at the RF rate.
>
> Without having a dc return path thru L3 and L4 Tank inductor and thru safety choke L5 to chassis ground VC-1 Tank air variable capacitor and VC-2 Plate load air variable capacitor will be charged to the HV power supply voltage level across the plates. This dc voltage can result in arc over between the capacitor plates and/or arc over at the band switch contacts.
>
> L5 is often described as a safety choke to blow the fuse if C7 is leaky or shorted and keep the anode voltage off your SO-239 connector. This is true, but it along with the Tank coil is the DC return path to keep C7 DC charge and discharge voltage off the Pi-network air variable capacitors. Absent this return path you would essentially have a 900vdc "bias voltage" standing across the air variable capacitors. Few people think about the importance of this dc return path that the Pi-network provides.
>
> With our Pi-network we are using what is called Shunt feed by feeding the plate voltage thru the RF plate chokes (main and VHF chokes). In old days Series feed was used and the Plate voltage was fed thru the Tank circuit so the dc return path to the HV power supply was directly thru the tank inductor. The tube, tank circuit, and HV power supply were all in series. With Shunt feed we dont have that situation, but the Tank components still see the dc charge and discharge of the DC blocking capacitor to anode potential which must be addressed.

>
> Thanks for taking the time to read my response to the newer folks and for asking for clarification. I probably could have phrased it differently.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "Dave & Loraine" <dave.crooks@...> wrote:
> >
> > Hi Terry,
> >
> > A typo?
> > "Basically a Pi-network has three functions:
> > 1. Provide a return path back to the power supply for the HV DC component"
> >
> > 73 Dave f4eyk
> >
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> >
> > [Non-text portions of this message have been removed]
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43312. Re: RF

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-10 00:49:57 UTC
From: Terry Wagoner
Topic: 43294 Message: 43312

OK Greg glad to be of some help.

Thanks for the feedback.
Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Gregory Albers <GEAgent21@...> wrote:
>
> Terry
> I don't know how much your explanations help anyone else, but they sure help me.
> Thank's
> 73
> Greg
> KC9VVU
>
> Sent from Greg Albers iPad
>
> On Jul 9, 2013, at 8:27 PM, "Terry Wagoner" <wagstw46@...> wrote:
>
> > Hi Dave:
> >
> > No not a typo. A little difficult to see and understand how a tube converts the dc anode voltage to rf power.
> >
> > I wont take the space here to write all that. Just follow along on the TS-830 schematic.
> >
> > If you were to look at the spectral content of the Anode current you would see the DC component Fo, the Fundamental component F1, the 2nd Harmonic component F2, and so on for the odd and even harmonic components.
> >
> > Initially the Anode Blocking/Coupling capacitor C7 will be dc charged by the 6146 HV power supply to 900vdc across the plates. This capacitor is charged and discharged at the RF rate.
> >
> > Without having a dc return path thru L3 and L4 Tank inductor and thru safety choke L5 to chassis ground VC-1 Tank air variable capacitor and VC-2 Plate load air variable capacitor will be charged to the HV power supply voltage level across the plates. This dc voltage can result in arc over between the capacitor plates and/or arc over at the band switch contacts.
> >
> > L5 is often described as a safety choke to blow the fuse if C7 is leaky or shorted and keep the anode voltage off your SO-239 connector. This is true, but it along with the Tank coil is the DC return path to keep C7 DC charge and discharge voltage off the Pi-network air variable capacitors. Absent this return path you would essentially have a 900vdc "bias voltage" standing across the air variable capacitors. Few people think about the importance

of this dc return path that the Pi-network provides.
> >
> > With our Pi-network we are using what is called Shunt feed by feeding the plate voltage thru the RF plate chokes (main and VHF chokes). In old days Series feed was used and the Plate voltage was fed thru the Tank circuit so the dc return path to the HV power supply was directly thru the tank inductor. The tube, tank circuit, and HV power supply were all in series. With Shunt feed we dont have that situation, but the Tank components still see the dc charge and discharge of the DC blocking capacitor to anode potential which must be addressed.
> >
> > Thanks for taking the time to read my response to the newer folks and for asking for clarification. I probably could have phrased it differently.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Dave & Loraine" <dave.crooks@> wrote:
> > >
> > > Hi Terry,
> > >
> > > A typo?
> > > "Basically a Pi-network has three functions:
> > > 1. Provide a return path back to the power supply for the HV DC component"
> > >
> > > 73 Dave f4eyk
> > >
> > >
> > >
> > >
> > >
> > >
> > > [Non-text portions of this message have been removed]
> > >
> >
> >
>
>
> [Non-text portions of this message have been removed]
>

43313. Re: [TS-520_820_530_830] TS 820S Calibration Dial (VFO)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-10 01:48:32 UTC
From: Joseph Stiles
Topic: 43309 Message: 43313

Bill,

The "calibration ring" which is right behind the main VFO knob should rotate when the main VFO knob is turned...just at a slower rate. The gear drive/reduction for the VFO dials are a marvel of engineering but, sometimes they get out of whack...especially if you just had it shipped. You should obtain a service manual. You will also need a small screwdriver set...regular and phillips to removed the various screws. Take pictures as you remove the main knob and the "calibration knob," and any other knobs/dials.
Take a close look at how the two inner dials operate. The outer most one has the "windows" in it, the inner one has grouping of numbers of 1,2,3, etc. There are many combinations..only one will be correct...it's really not difficult to get it right. There are two small set screws that hold the outer most dial in place on the shaft. Rotate the VFO shaft during disassembly to see if there is any binding...it's easier to feel withoutthe main tuning knob in place. I assume that the upper dial works ok.

I can assist you further...if given a more detailed description.

OH...by the way, the VFO does not have to be removed to do this!

73 Joe
WB7UQU

From: Wm Marvin <wmarvin2@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, July 9, 2013 3:17 PM
Subject: [TS-520_820_530_830] TS 820S Calibration Dial (VFO)

I have a near mint TS 820. The VFO is stable and smooth. My problem is when rotating the VFO at some points the calibration ring will rotate also causing the inner dial to lose calibration. Any suggestions??

Thanks inadvance & 73

Bill KB9IV

[Non-text portions of this message have been removed]

43314. Re: TS520 VOX board Q8 repeated failures

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-10 08:39:38 UTC
From: zl3ha
Topic: 43265 Message: 43314

Thanks Terry for your suggestion.
I'll give it a go and report back after a trial period. Just awaiting arrival of the diodes and transistors in the next few days.
73, Grant

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> It is good that you are replacing the back emf or flyback diode at same time. It appears the 1N4148 is not protecting your transistor.
>
> I wonder if you should try a 1N60 as opposed to the 1N4148. The germanium diode has lower turn on so will act faster and was the original diode speced by Kenwood.
>
> You could try a MOV or back to back zeners or a Transorb, but should not have to modify the design. Also, trying the more modern devices could affect the relay drop out time (make it faster)?
>
> I think I would go with a 1N60 and see what happens.
>
> Terry
> K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "zl3ha" <grant.rawstorn@> wrote:
> >
> > Hi all
> > Has anyone experienced repeated failures of Q8 on the VOX board which then prevents TX activating? I have replaced it twice with a NTE290A, and D8 with a 1N4148 and the rig works ok for a while (maybe 100 or so transmit cycles, more or less)and then it fails again for reasons unknown. Any ideas will be much appreciated - thank you
> > 73, Grant, ZL3HA
> >
>

43315. Re: [TS-520_820_530_830] Re: RF

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-10 08:56:14 UTC
From: Dave & Loraine
Topic: 43294 Message: 43315

Hi Terry,

I'm with you on L5.
My initial focus was limited to TS-820S manual VC1, L5/6 and VC2 pi.
I was seeing the plate RFC as the main DC return path but I do see the charging/discharging at RF rate.

Thanks for explaining
73 Dave f4eyk

[Non-text portions of this message have been removed]

43316. Re: RF

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-10 12:23:35 UTC
From: Terry Wagoner
Topic: 43294 Message: 43316

Dave:

You are correct with Shunt feed the 6146 tube dc current path is thru the plate RF choke so the tube, hv power supply, and choke are all in series.

L4 serves as the Blocking cap dc return path in your TS-820. Just drawn close to the RL-1 TR relay.

On reflection my statement about having standing 900vdc "bias" across the tank capacitor and loading capacitor absent L5 is not technically accurate. The Plate Loading capacitor VC-2 also has a low value load resistor shunted across it ie the dummy load or antenna so the dc voltage across it would be less.

So I should have said that absent Pi-network L5 to provide a dc return path for the blocking cap charge voltage there would be a standing DC voltage across the air variable caps and not tried to quantify it.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Dave & Loraine" <dave.crooks@...> wrote:
>
> Hi Terry,
>
> I'm with you on L5.
> My initial focus was limited to TS-820S manual VC1, L5/6 and VC2 pi.
> I was seeing the plate RFC as the main DC return path but I do see the
charging/discharging at RF rate.
>
> Thanks for explaining
> 73 Dave f4eyk
>
> [Non-text portions of this message have been removed]
>

43317. Need Non-working DG-5

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-10 14:44:07 UTC
From: tjb813
Topic: 43317 Message: 43317

I need a non-working DG-5 display for testing a replacement board prototype. Cosmetics are not a major issue but it needs to be complete with the case and display LEDs at least. Contact me off-list. Please state price. Thanks

Tim
KD8CN

43318. Getting closer on the 820 but still not transmitting

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-10 14:51:57 UTC
From: Barry
Topic: 43318 Message: 43318

I took the 820 apart last night, cleaned and blew out with air everything I could get to in an hour and a half, and I actually got the digital readout to work perfectly well now. That is a HUGE plus.

I was hoping some of that cleaning and reseating of connectors might get it to transmit, but still no go. Trying to go through the tune process still pegs the meter backward past 0 - there's nothing going out, and even into the MFJ tuner dummy load, nothing is showing on the meter when trying to flip the SEND/RECEIVE button or on the mic.

If I flip the SEND/RECEIVE button quickly up and down in succession, the ALC meter does want to rise a little.

I had posted a picture last week of a wire that was in one of the connectors but wasn't sure where it was connected inside. It is connected in the third pin on the connector and spliced/soldered to a blue wire as shown in this picture:

http://www.digcservices.com/ham/TS-820-Wire-Splice.jpg

Not sure if that is normal or not, but I figured I'd follow up on last week's post.

As always, thanks to you guys for your patience and your input.

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

43319. Re: [TS-520_820_530_830] Getting closer on the 820 but still not transmitting

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-10 19:41:16 UTC
From: Joseph Stiles
Topic: 43318 Message: 43319

Barry,

From your picture and, looking at the RF board schematic...this is CONNECTOR RF-3, PIN-3. This is the HEATER
power feed to the driver tube. The connectors used are known to break and cause problems...maybe that's why it appears to be bypassed.
May I suggest that you get out the voltmeter and check to see if you have approx 12-13 VAC on the heater circuit. If not,
this may be your problem. You may also want to be aware the the two pins to the left of pin 3,Pins 1 & 2, carry 210 & 300 VOLTS
respectively.

73 Joe
WB7UQU

From: Barry <bonnevilleblb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, July 10, 2013 7:51 AM
Subject: [TS-520_820_530_830] Getting closer on the 820 but still not transmitting

I took the 820 apart last night, cleaned and blew out with air everything I could get to in an hour and a half, and I actually got the digital readout to work perfectly well now. That is a HUGE plus.

I was hoping some of that cleaning and reseating of connectors might get it to transmit, but still no go. Trying to go through the tune process still pegs the meter backward past 0 - there's nothing going out, and even into the MFJ tuner dummy load, nothing is showing on the meter when trying to flip the SEND/RECEIVE button or on the mic.

If I flip the SEND/RECEIVE button quickly up and down in succession, the ALC meter does want to rise a little.

I had posted a picture last week of a wire that was in one of the connectors but wasn't sure where it was connected inside. It is connected in the third pin on the connector and spliced/soldered to a blue wire as shown in this picture:

http://www.digcservices.com/ham/TS-820-Wire-Splice.jpg

Not sure if that is normal or not, but I figured I'd follow up on last week's post.

As always, thanks to you guys for your patience and your input.

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

[Non-text portions of this message have been removed]

43320. Re: Getting closer on the 820 but still not transmitting

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-10 21:39:09 UTC
From: Terry Wagoner
Topic: 43318 Message: 43320

Hi Joe: Very good regards the caution. I wonder if choke L8 has burned open? I have never seen this "repair". Would be interesting to see where the other end of white wire goes.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Barry,
>
> Â From your picture and, looking at the RF board schematic...this is CONNECTOR RF-3, PIN-3. This is the HEATER
> power feed to the driver tube. The connectors used are known to break and cause problems...maybe that's why it appears to be bypassed.
> May I suggest that you get out the voltmeter and check to see if you have approx 12-13 VAC on the heater circuit. If not,
> this may be your problem. You may also want to be aware the the two pins to the left of pin 3,Pins 1 & 2, carry 210 & 300 VOLTS
> respectively.
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: Barry <bonnevilleblb@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, July 10, 2013 7:51 AM
> Subject: [TS-520_820_530_830] Getting closer on the 820 but still not transmitting
>
>
>
> Â
> I took the 820 apart last night, cleaned and blew out with air everything I could get to in an hour and a half, and I actually got the digital readout to work perfectly well now. That is a HUGE plus.
>
> I was hoping some of that cleaning and reseating of connectors might get it to transmit, but still no go. Trying to go through the tune process still pegs the meter backward past 0 - there's nothing going out, and even into the MFJ tuner dummy load, nothing is showing on the meter when trying to flip the SEND/RECEIVE button or on the mic.
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want to rise a little.
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> I had posted a picture last week of a wire that was in one of the connectors but wasn't sure where it was connected inside. It is connected in the third pin on the connector and spliced/soldered to a blue wire as shown in this picture:
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> http://www.digcservices.com/ham/TS-820-Wire-Splice.jpg
>
> Not sure if that is normal or not, but I figured I'd follow up on last week's post.
>
> As always, thanks to you guys for your patience and your input.
>
> Barry
> KK4RXN
> Jeremiah 29:11-13 / John 3:16
>
>
>
>
> [Non-text portions of this message have been removed]
>

43321. Neutralization of finals

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-10 20:04:17 UTC
From: skcfuller@att.net
Topic: 1143 Message: 43321

Ken, or others,
Is there a way to neutralize the finals without a scope etc. I got the carrier working/balanced by trial and error and ear. Now I want to neutralize the finals taken from my other radio and put in the 820.
Jack

43322. Re: Getting closer on the 820 but still not transmitting

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-10 20:30:35 UTC
From: Barry
Topic: 43318 Message: 43322

Okay, Joe. Thanks for that info. I know the tubes are glowing but maybe they're not heating like they should. They're the original 2001 tubes that have checked out to still be very good from the tube test last week.

I've contacted a guy locally that I hope will get back to me to see if he can help me out with checking it, and I'll tell him exactly what you've told me here.

I do appreciate it!

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Barry,
>
> Â From your picture and, looking at the RF board schematic...this is CONNECTOR RF-3, PIN-3. This is the HEATER
> power feed to the driver tube. The connectors used are known to break and cause problems...maybe that's why it appears to be bypassed.
> May I suggest that you get out the voltmeter and check to see if you have approx 12-13 VAC on the heater circuit. If not,
> this may be your problem. You may also want to be aware the the two pins to the left of pin 3,Pins 1 & 2, carry 210 & 300 VOLTS
> respectively.
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: Barry <bonnevilleblb@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, July 10, 2013 7:51 AM
> Subject: [TS-520_820_530_830] Getting closer on the 820 but still not transmitting
>
>
>
> Â
> I took the 820 apart last night, cleaned and blew out with air everything I could get to in an hour and a half, and I actually got the digital readout to work perfectly well now. That is a HUGE plus.

>
> I was hoping some of that cleaning and reseating of connectors might get it to transmit, but still no go. Trying to go through the tune process still pegs the meter backward past 0 - there's nothing going out, and even into the MFJ tuner dummy load, nothing is showing on the meter when trying to flip the SEND/RECEIVE button or on the mic.
>
> If I flip the SEND/RECEIVE button quickly up and down in succession, the ALC meter does want to rise a little.
>
> I had posted a picture last week of a wire that was in one of the connectors but wasn't sure where it was connected inside. It is connected in the third pin on the connector and spliced/soldered to a blue wire as shown in this picture:
>
> http://www.digcservices.com/ham/TS-820-Wire-Splice.jpg
>
> Not sure if that is normal or not, but I figured I'd follow up on last week's post.
>
> As always, thanks to you guys for your patience and your input.
>
> Barry
> KK4RXN
> Jeremiah 29:11-13 / John 3:16
>
>
>
>
> [Non-text portions of this message have been removed]
>

43323. Re: Neutralization of finals

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 00:09:51 UTC
From: Terry Wagoner
Topic: 1143 Message: 43323

If you are looking for a NO Test Equipment method here are a couple.

1. There is the old fashioned way of making small adjustments on the NC capacitor while trying to match plate current dip to maximum RF output. Even at reduced Car Level (30 to 50 watts output) it can be hard on final tubes and power supply as it takes many cycles to get it close. Also, this method is not precise as the maximum RF output does not always occur at minimum plate current. There is a technical reason why this occurs that takes too much typing here to fully address. Has to do with output rf voltage must be exactly 180 degrees out of phase with input drive signal voltage for true resonance. With Pi-Network tank circuits there is usually some phase angle difference. Also, we use RF feedback with these hybrids and want the feedback voltage to be at correct phase angle. What really happens is the plate current dip is occuring at tank circuit maximum impedance and not where the tank is purely resistive. I believe Yeasu describes it as their preferred method in the manual for the FT-101. In any event, I really do not recommend this method. I only mentioned it with this much detail in case you get a recommendation from an old timer to use it. Might work better with old Class C transmitters with link coupled tank and not a Class AB-1 Pi-network rig. Enough about that.

"Cold" neutralization with SG switch off is a better method.

2. Another method is to use another receiver tuned to same 10 meter frequency you are neutralizing at and set physically close with perhaps a short jumper wire for an antenna and adjust NC for a null on the S-meter and lowest audio from speaker. In this method you have SG switch off.

Make sure you use an insulated adjustment tool.

If you are going to own and maintain a Kenwood Hybrid suggest you invest in RF probe and VTVM for these kind of adjustments.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "skcfuller@..." <skcfuller@...> wrote:
>
> Ken, or others,
> Is there a way to neutralize the finals without a scope etc. I got the carrier working/balanced by trial and error and ear. Now I want to neutralize the finals taken from my other radio and put in the 820.
> Jack
>

43324. Re: [TS-520_820_530_830] Re: Neutralization of finals

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 00:17:05 UTC
From: Dale Parfitt
Topic: 1143 Message: 43324

Along the line of Terry's suggestion on an RF probe. I have a nice Eico probe that works well. For absolute readings you would only have to change out a resistor in the probe- depending on the input Z of your VTVM.

$18 shipped USPS.

73,
Dale W4OP
----- Original Message -----
From: Terry Wagoner
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, July 10, 2013 8:09 PM
Subject: [TS-520_820_530_830] Re: Neutralization of finals

If you are looking for a NO Test Equipment method here are a couple.

1. There is the old fashioned way of making small adjustments on the NC capacitor while trying to match plate current dip to maximum RF output. Even at reduced Car Level (30 to 50 watts output) it can be hard on final tubes and power supply as it takes many cycles to get it close. Also, this method is not precise as the maximum RF output does not always occur at minimum plate current. There is a technical reason why this occurs that takes too much typing here to fully address. Has to do with output rf voltage must be exactly 180 degrees out of phase with input drive signal voltage for true resonance. With Pi-Network tank circuits there is usually some phase angle difference. Also, we use RF feedback with these hybrids and want the feedback voltage to be at correct phase angle. What really happens is the plate current dip is occuring at tank circuit maximum impedance and not where the tank is purely resistive. I believe Yeasu describes it as their preferred method in the manual for the FT-101. In any event, I really do not recommend this method. I only mentioned it with this much detail in case you get a recommendation from an old timer to use it. Might work better with old Class C transmitters with link coupled tank and not a Class AB-1 Pi-network rig. Enough about that.

"Cold" neutralization with SG switch off is a better method.

2. Another method is to use another receiver tuned to same 10 meter frequency you are neutralizing at and set physically close with perhaps a short jumper wire for an antenna and adjust NC for a null on the S-meter and lowest audio from speaker. In this method you have SG switch off.

Make sure you use an insulated adjustment tool.

If you are going to own and maintain a Kenwood Hybrid suggest you invest in RF probe and VTVM for these kind of adjustments.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "skcfuller@..." <skcfuller@...> wrote:
>
> Ken, or others,
> Is there a way to neutralize the finals without a scope etc. I got the carrier working/balanced by trial and error and ear. Now I want to neutralize the finals taken from my other radio and put in the 820.
> Jack
>

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.2904 / Virus Database: 3204/6481 - Release Date: 07/10/13

[Non-text portions of this message have been removed]

43325. Re: Neutralization of finals

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 01:47:28 UTC
From: Terry Wagoner
Topic: 1143 Message: 43325

I forgot to mention you can get the LSB/USB Carrier Osc trimmer caps adjusted pretty close by using the Marker (25khz crystal calibrator) and the S-meter.

Richard Measures describes the method in the Maintenance section of the TS-830 Survival Guide. It works for all hybrids. Make sure you have the AGC set to Fast and rig on dummy load and light touch on the VFO knob as you approach zero beat.

Another easy method is to use Spectrogram audio spectrum analyzer software (older versions free on line) and a diode noise generator. Can use receiver background noise, but noise bridge is better. I placed a screen shot in the Files section. Very easy way to adjust and fun to see.

Just remember how it sounds in receive is how you will sound in transmit. Might want to listen to self using the Moni feature.

Probably the audio generator injection into mic line and rf wattmeter method is the best way to adjust, but absent that test gear the Marker/S-meter method works pretty well. Just listen to self on each sideband when done.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "skcfuller@..." <skcfuller@...> wrote:
>
> Ken, or others,
> Is there a way to neutralize the finals without a scope etc. I got the carrier working/balanced by trial and error and ear. Now I want to neutralize the finals taken from my other radio and put in the 820.
> Jack
>

43326. Re: [TS-520_820_530_830] 830 Balanced modulator

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 02:49:26 UTC
From: Jim Lamanteer
Topic: 43303 Message: 43326

From: W5RKL <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, July 9, 2013 5:32 PM
Subject: Re: [TS-520_820_530_830] 830 Balanced modulator

The transmit signal goes through BOTH filters, same as the receive signal.

Why are you considering applying an audio signal to the BM?

Mike W5RKL

On 7/9/2013 4:08 PM, kf4ofi wrote:
>
> Does anyone know exactly where to tap in to do a direct balanced
> modulator audio feed on an 830.
>
> Also, which filter does transmit audio pass, the 8.830 or the 455k, or
> both?
>
> Thanks
> Curt
>
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

43327. Re: [TS-520_820_530_830] Re: Getting closer on the 820 but still not transmitting

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 05:24:42 UTC
From: Joseph Stiles
Topic: 43318 Message: 43327

Barry,

Please also note that testing the finals in a tube tester will not guarantee that they will work correctly in the real RF environment(in the rig). The basic tube tester, tests for shorts,
"gassy" tubes and some other things...but will not test the RF functioning. I recommend, as other also, to keep a known good set of finals and a known good driver
tube around the shack. Good luck...keep us posted

73 Joe
WB7UQU

From: Barry <bonnevilleblb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, July 10, 2013 1:30 PM
Subject: [TS-520_820_530_830] Re: Getting closer on the 820 but still not transmitting

Okay, Joe. Thanks for that info. I know the tubes are glowing but maybe they're not heating like they should. They're the original 2001 tubes that have checked out to still be very good from the tube test last week.

I've contacted a guy locally that I hope will get back to me to see if he can help me out with checking it, and I'll tell him exactly what you've told me here.

I do appreciate it!

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Barry,
>
> Â From your picture and, looking at the RF board schematic...this is CONNECTOR RF-3, PIN-3. This is the HEATER
> power feed to the driver tube. The connectors used are known to break and cause problems...maybe that's why it appears to be bypassed.
> May I suggest that you get out the voltmeter and check to see if you have approx 12-13 VAC on the heater circuit. If not,
> this may be your problem. You may also want to be aware the the two pins to the left of pin 3,Pins 1 & 2, carry 210 & 300 VOLTS
> respectively.
>

>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: Barry <bonnevilleblb@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, July 10, 2013 7:51 AM
> Subject: [TS-520_820_530_830] Getting closer on the 820 but still not transmitting
>
>
>
> Â
> I took the 820 apart last night, cleaned and blew out with air everything I could get to in an hour and a half, and I actually got the digital readout to work perfectly well now. That is a HUGE plus.
>
> I was hoping some of that cleaning and reseating of connectors might get it to transmit, but still no go. Trying to go through the tune process still pegs the meter backward past 0 - there's nothing going out, and even into the MFJ tuner dummy load, nothing is showing on the meter when trying to flip the SEND/RECEIVE button or on the mic.
>
> If I flip the SEND/RECEIVE button quickly up and down in succession, the ALC meter does want to rise a little.
>
> I had posted a picture last week of a wire that was in one of the connectors but wasn't sure where it was connected inside. It is connected in the third pin on the connector and spliced/soldered to a blue wire as shown in this picture:
>
> http://www.digcservices.com/ham/TS-820-Wire-Splice.jpg
>
> Not sure if that is normal or not, but I figured I'd follow up on last week's post.
>
> As always, thanks to you guys for your patience and your input.
>
> Barry
> KK4RXN
> Jeremiah 29:11-13 / John 3:16
>
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

43328. Re: [TS-520_820_530_830] Re: Getting closer on the 820 but still not transmitting

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 05:37:46 UTC
From: Joseph Stiles
Topic: 43318 Message: 43328

Hey Terry,

    It looks to me(anyway) that one end of the" white wire" is tied into the "blue wire" that is normally feeding that connection and soldered on the other side of the board....the white wire looks pretty hefty...for this "repair"..but sometimes ya gotta use what ya got. I agree that L8 may have opened...or how about the nasty cracked/cold solder joints on the driver tube socket? I think that Barry may not be familiar with doing the checks himself...which is fine.
 I have seen 2 similar "repairs" but the the ones I've seen.. the blue wire was removed from the connector and soldered to L8 on the foil side. Worked, just not pretty...so... I had to return them back to factory specs/appearance :}

Hope you are feeling FB!

73 Joe
WB7UQU

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, July 10, 2013 2:39 PM
Subject: [TS-520_820_530_830] Re: Getting closer on the 820 but still not transmitting

Hi Joe: Very good regards the caution. I wonder if choke L8 has burned open? I have never seen this "repair". Would be interesting to see where the other end of white wire goes.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Barry,
>
> Â From your picture and, looking at the RF board schematic...this is CONNECTOR RF-3, PIN-3. This is the HEATER
> power feed to the driver tube. The connectors used are known to break and cause problems...maybe that's why it appears to be bypassed.
> May I suggest that you get out the voltmeter and check to see if you have approx 12-13 VAC on the heater circuit. If not,
> this may be your problem. You may also want to be aware the the two pins to the left of pin 3,Pins 1 & 2, carry 210 & 300 VOLTS
> respectively.
>
>
> Â

> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: Barry <bonnevilleblb@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, July 10, 2013 7:51 AM
> Subject: [TS-520_820_530_830] Getting closer on the 820 but still not transmitting
>
>
>
> Â
> I took the 820 apart last night, cleaned and blew out with air everything I could get to in an hour and a half, and I actually got the digital readout to work perfectly well now. That is a HUGE plus.
>
> I was hoping some of that cleaning and reseating of connectors might get it to transmit, but still no go. Trying to go through the tune process still pegs the meter backward past 0 - there's nothing going out, and even into the MFJ tuner dummy load, nothing is showing on the meter when trying to flip the SEND/RECEIVE button or on the mic.
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> If I flip the SEND/RECEIVE button quickly up and down in succession, the ALC meter does want to rise a little.
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> I had posted a picture last week of a wire that was in one of the connectors but wasn't sure where it was connected inside. It is connected in the third pin on the connector and spliced/soldered to a blue wire as shown in this picture:
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> http://www.digcservices.com/ham/TS-820-Wire-Splice.jpg
>
> Not sure if that is normal or not, but I figured I'd follow up on last week's post.
>
> As always, thanks to you guys for your patience and your input.
>
> Barry
> KK4RXN
> Jeremiah 29:11-13 / John 3:16
>
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

43329. TS-520 Smoked

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 01:48:30 UTC
From: dllewiszz
Topic: 43329 Message: 43329

My early model TS-520 was hit by an AC power surge this evening during an unexpected pop-up thunderstorm. The fuse blew and I looked around for any visible after-effects and saw none. I put a slightly larger fuse in so I could give it a short burst of AC, and noticed the power XFMR smoked a bit during the brief hit of AC. During that time, it lit up and I had good audio through the speaker. Checking the diodes and caps, all look good on the ohmmeter, so I put the AC (and DC) meter on it and gave it short bursts of AC as I checked various XFMR outputs. The HV is fine on the AC and DC side, but the lower ACs are a good bit less than normal. When it's on for more than 3 seconds the XFMR heats up, so I'm very cautious with that. The DC outputs are also low, but with good caps and diodes (and speaker audio) I don't see any shorts that would be dragging down the power supply.

Is it possible the surge shorted some windings in the XFMR? Is that a common occurrence on this rig? Are there other usual suspects I should check out? I've done stuff such as removing the tubes, etc. I don't have a Variac and don't want to wipe it out if it's not already. If the XFMR is shot, does this become a Parts Radio?

73, Dave WA4FXT

43330. Re: [TS-520_820_530_830] TS-520 Smoked

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 10:28:47 UTC
From: ravi sumith
Topic: 43329 Message: 43330

Dave: What I usually do when I suspect XFMR short is, put a 100W incandescent light bulb in series with AC mains going into the rig.The bulb will glow bright if there is a short but get dimmer if short is cleared.This keeps you from frying a good transformer while troubleshooting. Do not operate with this. This is for testing only. 73's de 4s6rav(Ravi)

From: dllewiszz <dllewiszz@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, 11 July 2013 7:18 AM
Subject: [TS-520_820_530_830] TS-520 Smoked

My early model TS-520 was hit by an AC power surge this evening during an unexpected pop-up thunderstorm. The fuse blew and I looked around for any visible after-effects and saw none. I put a slightly larger fuse in so I could give it a short burst of AC, and noticed the power XFMR smoked a bit during the brief hit of AC. During that time, it lit up and I had good audio through the speaker. Checking the diodes and caps, all look good on the ohmmeter, so I put the AC (and DC) meter on it and gave it short bursts of AC as I checked various XFMR outputs. The HV is fine on the AC and DC side, but the lower ACs are a good bit less than normal. When it's on for more than 3 seconds the XFMR heats up, so I'm very cautious with that. The DC outputs are also low, but with good caps and diodes (and speaker audio) I don't see any shorts that would be dragging down the power supply.

Is it possible the surge shorted some windings in the XFMR? Is that a common occurrence on this rig? Are there other usual suspects I should check out? I've done stuff such as removing the tubes, etc. I don't have a Variac and don't want to wipe it out if it's not already. If the XFMR is shot, does this become a Parts Radio?

73, Dave WA4FXT

[Non-text portions of this message have been removed]

43331. Re: Neutralization of finals

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 12:23:04 UTC
From: Terry Wagoner
Topic: 1143 Message: 43331

This would make a fine RF probe for Kenwood hybrid work. Not likely to get a Heathkit 309C or PK-3 on Ebay for this price. Take out shipping cost and about the price of buying all the parts to make a nice professional looking probe (depends on what kind of junk box you have).

I would not worry too much about the scaling resistor as majority of the readings you will need to take will not require high accuracy.

If you have a FET Analog meter or DMM it is likely a 10meg Z meter so the scaling resistor required would be 0.414 X 10Meg = 4.14Meg ohm. Not a standard value resistor.

You can use couple of resistors in series if you want more precision. For your 10meg meters (this assumes they really are 10Meg) you could use 3.9meg and a 220k resistors in series. Available from Mouser..

I suspect the resistor in this Eico probe is a 4.7meg same as in the Heathkit probes and most home made probes to be used with 11Meg VTVMs.

Even this value of resistor is not technically correct. 0.414 x 11Meg = 4.55meg. Again a non-standard resistor value. Heath supplied a 4.7meg resistor in all their RF probes instead of 4.55meg as it is the closest standard value 5% resistor.

As a reminder the only place you cannot use Dales probe in your Kenwood hybrid is at the Plate of the Driver tube and at the Control grids of the 6146 tubes. Maximum RF voltage for single germanium diode probe will be approx 35v.

You may have to change out the end connector, but if you do not have an RF probe would not hesitate to buy based on being configured for a 11Meg VTVM. Of course you should know by now my feelings about why the VTVM should be on your bench along with your DMM.

Just wanted to make sure you didnt pass on this probe if you are concerned about it not being designed for your 10meg meter. A non-issue and/or an easy change.

I will take 10% Dale!

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Dale Parfitt" <parinc1@...> wrote:
>
> Along the line of Terry's suggestion on an RF probe. I have a nice Eico probe that works well. For absolute readings you would only have to change out a resistor in the probe- depending on the input Z of your VTVM.
>
> $18 shipped USPS.
>
> 73,
> Dale W4OP

>
> [Non-text portions of this message have been removed]
>

43332. Re: [TS-520_820_530_830] TS-520 Smoked

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 12:39:16 UTC
From: Mike
Topic: 43329 Message: 43332

Dave,

You either have a shorted filter capacitor or a shorted secondary winding.

Which 'Low AC" voltages are you referring to?

1. 12.6VAC filament
2. 14VAC for the 14VDC supply
3.100VAC for the -C bias supply
4. 210 for the 210A/B supply
5. 300 for the 300A/B supply

Mike W5RKL

On 7/10/2013 8:48 PM, dllewiszz wrote:
>
> My early model TS-520 was hit by an AC power surge this evening during
> an unexpected pop-up thunderstorm. The fuse blew and I looked around
> for any visible after-effects and saw none. I put a slightly larger
> fuse in so I could give it a short burst of AC, and noticed the power
> XFMR smoked a bit during the brief hit of AC. During that time, it lit
> up and I had good audio through the speaker. Checking the diodes and
> caps, all look good on the ohmmeter, so I put the AC (and DC) meter on
> it and gave it short bursts of AC as I checked various XFMR outputs.
> The HV is fine on the AC and DC side, but the lower ACs are a good bit
> less than normal. When it's on for more than 3 seconds the XFMR heats
> up, so I'm very cautious with that. The DC outputs are also low, but
> with good caps and diodes (and speaker audio) I don't see any shorts
> that would be dragging down the power supply.
>
> Is it possible the surge shorted some windings in the XFMR? Is that a
> common occurrence on this rig? Are there other usual suspects I should
> check out? I've done stuff such as removing the tubes, etc. I don't
> have a Variac and don't want to wipe it out if it's not already. If
> the XFMR is shot, does this become a Parts Radio?
>
> 73, Dave WA4FXT
>
>

[Non-text portions of this message have been removed]

43333. Re: TS520 VOX board Q8 repeated failures

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 13:46:13 UTC
From: Daniel TOESCA
Topic: 43265 Message: 43333

I'll better use a 1N4001 - higher PIV, higher amps (rated at 1 A).

Just my two cents (for the diode, hi !)

73 - Daniel, ON5PY

[Non-text portions of this message have been removed]

43334. Re: 830 Balanced modulator

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 14:20:09 UTC
From: audiodoctor2000
Topic: 43303 Message: 43334

--- In TS-520_820_530_830@yahoogroups.com, "kf4ofi" <kf4ofi@...> wrote:
>
> Does anyone know exactly where to tap in to do a direct balanced modulator audio feed on an 830.
>
> Also, which filter does transmit audio pass, the 8.830 or the 455k, or both?
>
> Thanks
> Curt
>
Hi Curt. I have sucessfully applied ESSB audio thru the mic jack of my TS 530. I also swapped the stock 8.830 2.4 kc filter to an Inrad 2.8 kc filter. My -6db points are 100 hz -2.9 khz with outboard gear. I've found that the mic circuits in the hybrids are pretty wide without much work. There is a single cap change that will pass a few more highs. Do a search for that mod. Good luck.

43335. Re: Getting closer on the 820 but still not transmitting

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 12:46:41 UTC
From: Barry
Topic: 43318 Message: 43335

Joe's right, Terry - this white wire is soldered directly into the blue wire in the photo.

Just curious - where's the best place to get economical replacement tubes?

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Hi Joe: Very good regards the caution. I wonder if choke L8 has burned open? I have never seen this "repair". Would be interesting to see where the other end of white wire goes.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@> wrote:
> >
> > Barry,
> >
> > Â From your picture and, looking at the RF board schematic...this is CONNECTOR RF-3, PIN-3. This is the HEATER
> > power feed to the driver tube. The connectors used are known to break and cause problems...maybe that's why it appears to be bypassed.
> > May I suggest that you get out the voltmeter and check to see if you have approx 12-13 VAC on the heater circuit. If not,
> > this may be your problem. You may also want to be aware the the two pins to the left of pin 3,Pins 1 & 2, carry 210 & 300 VOLTS
> > respectively.
> >
> >
> > Â
> > 73Â Joe
> > WB7UQU
> >
> >
> >
> > _____
> > From: Barry <bonnevilleblb@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Wednesday, July 10, 2013 7:51 AM
> > Subject: [TS-520_820_530_830] Getting closer on the 820 but still not transmitting
> >
> >
> >
> > Â
> > I took the 820 apart last night, cleaned and blew out with air everything I could get

to in an hour and a half, and I actually got the digital readout to work perfectly well now. That is a HUGE plus.
> >
> > I was hoping some of that cleaning and reseating of connectors might get it to transmit, but still no go. Trying to go through the tune process still pegs the meter backward past 0 - there's nothing going out, and even into the MFJ tuner dummy load, nothing is showing on the meter when trying to flip the SEND/RECEIVE button or on the mic.
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> > If I flip the SEND/RECEIVE button quickly up and down in succession, the ALC meter does want to rise a little.
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> > I had posted a picture last week of a wire that was in one of the connectors but wasn't sure where it was connected inside. It is connected in the third pin on the connector and spliced/soldered to a blue wire as shown in this picture:
> >
> > http://www.digcservices.com/ham/TS-820-Wire-Splice.jpg
> >
> > Not sure if that is normal or not, but I figured I'd follow up on last week's post.
> >
> > As always, thanks to you guys for your patience and your input.
> >
> > Barry
> > KK4RXN
> > Jeremiah 29:11-13 / John 3:16
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

43336. Re: TS-820 PLL

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 14:28:18 UTC
From: coyoteinventor@ymail.com
Topic: 43222 Message: 43336

Thank you for your advice Mike (W5RKL).

I am in the process of removing all the boards, one at a time, cleaning all connectors and contacts (sanding/filing a little and using deoxit), and tightening well all screws that connect the grounds to the chassis.

I was not clear on what you meant by cleaning the "VFO shaft to frame connection"; are you referring to the metal piece at the top that has 2 screws to hold it to the frame? I think that's the only piece that touches the frame.

I'm also going to open the VFO and clean it inside. I'm not sure how to clean between the fins though. Last time I just submerged that piece of the VFO in warm water several times. Also, looking at some instructions online, I was not clear what is meant by the "rear wiper" which I am supposed to use deoxit on.

I hope to be able to finish this cleaning process this weekend so I can test the radio again.

Thanks again for your help so far. I hope this yields good results! ;-)

--Cesar-- K1TNT

--- In TS-520_820_530_830@yahoogroups.com, W5RKL <w5rkl@...> wrote:
>
> The answer to your question about replacing the caps to fix a PLL
> problem is no. This is a common misunderstanding that caps are the
> source of most problems which is not true. There are problems associated
> with capacitors but those are few.
>
> Your problem appears to be, based on your statements, dirty contacts in
> the VFO variable capacitor shaft to frame connection and the band switch
> wafers. If the VFO signal is disrupted, lost, for any reason, can result
> in the PLL going into UNLOCK. I recommend you clean the VFO shaft to
> frame connection with contact cleaner. Your problem can also be caused
> by dirty internal contacts in the PLL module (there are 2 boards inside
> the PLL module that interconnect with internal fixed pins). If these
> pins get dirty/corroded then instability in the PLL system can result in
> intermittent LOCK/UNLOCK states occurring.
>
> Also try loosening the PC board mounting screws 1 full turn then
> tighten. Over time the screws become lose and dirt/corrosion occurs
> between the board and the ground which can cause problems. So clean the
> 820 then test. Be careful when removing the individual plugs on the
> modules. Use straight up pulling with very little rocking to remove the
> plug. Do NOT pull the plug wires to remove the plug. A pair of needle
> nose pliers will work, grasp the plug in the middle and pull straight up.
>

> If you don't have the 820 service manual then download, you can't work
> on the 820 without it. There are screws that hold the module to the
> chassis, they must be removed after the plugs have been removed. Make
> note of how and where the plugs are plugged into the boards. If
> necessary, take a picture with your cell phone or digital camera BEFORE
> you remove anything! Don't assume you will remember how and where the
> plugs go, you can assume wrong!!
>
> 73
> Mike W5RKL
>
> On 7/3/2013 12:08 PM, coyoteinventor@... wrote:
> >
> > I have a general question. Will replacing all caps on my TS-820
> > improve the reliability of the PLL (or at least the caps ones on that
> > board)? Or not really?
> >
> > My PLL locks when it wants to, and then it unlocks and goes crazy for
> > a while. Switching bands usually helps. Other times it works great for
> > a long time. I had a fellow ham radio tune it a couple of weeks ago
> > and it worked well for a little while, but it's unlocking sometimes
> > again and jumping around.
> >
> > Thanks.
> >
> > --Cesar-- K1TNT
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

43337. Re: TS-520 Smoked

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 15:02:16 UTC
From: Bob
Topic: 43329 Message: 43337

I have the power transformer for the TS-520, sell them for $50 plus $13 to ship...
Bob
****

--- In TS-520_820_530_830@yahoogroups.com, ravi sumith <mindover2003@...> wrote:
>
> Dave: What I usually do when I suspect XFMR short is, put a 100W incandescent light bulb in series with AC mains going into the rig.The bulb will glow bright if there is a short but get dimmer if short is cleared.This keeps you from frying a good transformer while troubleshooting. Do not operate with this. This is for testing only. 73's de 4s6rav(Ravi)
>
>
>
>
> _____
> From: dllewiszz <dllewiszz@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, 11 July 2013 7:18 AM
> Subject: [TS-520_820_530_830] TS-520 Smoked
>
>
>
> Â
> My early model TS-520 was hit by an AC power surge this evening during an unexpected pop-up thunderstorm. The fuse blew and I looked around for any visible after-effects and saw none. I put a slightly larger fuse in so I could give it a short burst of AC, and noticed the power XFMR smoked a bit during the brief hit of AC. During that time, it lit up and I had good audio through the speaker. Checking the diodes and caps, all look good on the ohmmeter, so I put the AC (and DC) meter on it and gave it short bursts of AC as I checked various XFMR outputs. The HV is fine on the AC and DC side, but the lower ACs are a good bit less than normal. When it's on for more than 3 seconds the XFMR heats up, so I'm very cautious with that. The DC outputs are also low, but with good caps and diodes (and speaker audio) I don't see any shorts that would be dragging down the power supply.
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> Is it possible the surge shorted some windings in the XFMR? Is that a common occurrence on this rig? Are there other usual suspects I should check out? I've done stuff such as removing the tubes, etc. I don't have a Variac and don't want to wipe it out if it's not already. If the XFMR is shot, does this become a Parts Radio?
>
> 73, Dave WA4FXT
>
>
>
>
> [Non-text portions of this message have been removed]

>

43338. Re: TS520 VOX board Q8 repeated failures

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 15:23:03 UTC
From: Terry Wagoner
Topic: 43265 Message: 43338

Using a diode with low forward turn on voltage is more important than one with high amps capacity in this small control relay application.

You are dealing with counter emf and decay time. If you use a silicon diode instead of -300v you will see something on the order of -1.0v or greater. If you use a Germanium then approx -.40v and a Schottky -.25v. Switching times will be faster with the germanium signal diode and Schottky diodes. The time for dissipation can be in milliseconds. In all due respect, you can use a 100amp silicon power diode and it wont affect the back emf voltage level over a lower current diode. It is really about forward voltage and switching times.

The counter emf voltage level is a function of how long the relay coil de-energization takes. The faster the switch off occurs the higher the induced reverse voltage level will be. Maybe the substitute 2SA562Y transistor switches state faster? If going back to a 1N60 diode does not solve the repeated transistor failure I would be inclined to evaluate the transistor sub that is being used.

All snubber devices in shunt across the relay coil are intended to reduce the speed of the coil current decay time. Therefore they have to act quickly to switch state and provide an alternate path. A silicon power diode will act quickly but quick is a relative term.

Why is it that so many people think that the Kenwood design engineers just willy nilly picked components. There is a design basis behind specing components for every function and application. Yes engineers copy designs. No sense in re-inventing the wheel if someone else has done the calcs and proven it in the field. There is technical basis why they speced a 1N60 diode.

As I mentioned adding a series resistor to the diode, using zener diodes, movs, and transorbs are all snubber methods, but would require some trial to ensure drop out time is not adversely affected. A mod should not be required and that includes changing from a germanium flywheel diode to a silicon power rectifier.

How many TS-520 radios are in service daily that have not required changing the original flyback diode to a silicon power rectifier or any other snubber network? My guess is the vast majority.

In my opinion it is generally best to go back to original design as your first attempt to fix unless that design has proven to be flawed.

By the way 2SA562Y transistors can be had on Ebay.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Daniel TOESCA <ON5PY1967@...> wrote:
>
> I'll better use a 1N4001 - higher PIV, higher amps (rated at 1 A).
>
> Just my two cents (for the diode, hi !)

>
> 73 - Daniel, ON5PY
>
>
> [Non-text portions of this message have been removed]
>

43339. Re: [TS-520_820_530_830] TS-520 Smoked

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 15:25:13 UTC
From: John Davidson
Topic: 43329 Message: 43339

It's more likely one or more of the diodes in the HV circuits shorted. You may have to unsolder one lead of the diodes one -by-one until you see a shorted one.

From: dllewiszz <dllewiszz@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, July 10, 2013 9:48 PM
Subject: [TS-520_820_530_830] TS-520 Smoked

My early model TS-520 was hit by an AC power surge this evening during an unexpected pop-up thunderstorm. The fuse blew and I looked around for any visible after-effects and saw none. I put a slightly larger fuse in so I could give it a short burst of AC, and noticed the power XFMR smoked a bit during the brief hit of AC. During that time, it lit up and I had good audio through the speaker. Checking the diodes and caps, all look good on the ohmmeter, so I put the AC (and DC) meter on it and gave it short bursts of AC as I checked various XFMR outputs. The HV is fine on the AC and DC side, but the lower ACs are a good bit less than normal. When it's on for more than 3 seconds the XFMR heats up, so I'm very cautious with that. The DC outputs are also low, but with good caps and diodes (and speaker audio) I don't see any shorts that would be dragging down the power supply.

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73, Dave WA4FXT

[Non-text portions of this message have been removed]

43340. Re: Getting closer on the 820 but still not transmitting

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 15:25:48 UTC
From: Terry Wagoner
Topic: 43318 Message: 43340

I can see that. That is not the question. Where does the other end go? Is it tacked to L8, is it wrapped around the filament pin on the driver tube, is it tacked to the tube socket pin, etc.

Terry

--- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@...> wrote:
>
>
>
> Joe's right, Terry - this white wire is soldered directly into the blue wire in the photo.
>
> Just curious - where's the best place to get economical replacement tubes?
>
> Barry
> KK4RXN
> Jeremiah 29:11-13 / John 3:16
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Hi Joe: Very good regards the caution. I wonder if choke L8 has burned open? I have never seen this "repair". Would be interesting to see where the other end of white wire goes.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@> wrote:
> > >
> > > Barry,
> > >
> > > Â From your picture and, looking at the RF board schematic...this is CONNECTOR RF-3, PIN-3. This is the HEATER
> > > power feed to the driver tube. The connectors used are known to break and cause problems...maybe that's why it appears to be bypassed.
> > > May I suggest that you get out the voltmeter and check to see if you have approx 12-13 VAC on the heater circuit. If not,
> > > this may be your problem. You may also want to be aware the the two pins to the left of pin 3,Pins 1 & 2, carry 210 & 300 VOLTS
> > > respectively.
> > >
> > >
> > > Â
> > > 73Â Joe
> > > WB7UQU

> > >
> > >
> > >
> > > _____
> > > From: Barry <bonnevilleblb@>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Wednesday, July 10, 2013 7:51 AM
> > > Subject: [TS-520_820_530_830] Getting closer on the 820 but still not transmitting
> > >
> > >
> > >
> > > Â
> > > I took the 820 apart last night, cleaned and blew out with air everything I could get to in an hour and a half, and I actually got the digital readout to work perfectly well now. That is a HUGE plus.
> > >
> > > I was hoping some of that cleaning and reseating of connectors might get it to transmit, but still no go. Trying to go through the tune process still pegs the meter backward past 0 - there's nothing going out, and even into the MFJ tuner dummy load, nothing is showing on the meter when trying to flip the SEND/RECEIVE button or on the mic.
> > >
> > > If I flip the SEND/RECEIVE button quickly up and down in succession, the ALC meter does want to rise a little.
> > >
> > > I had posted a picture last week of a wire that was in one of the connectors but wasn't sure where it was connected inside. It is connected in the third pin on the connector and spliced/soldered to a blue wire as shown in this picture:
> > >
> > > http://www.digcservices.com/ham/TS-820-Wire-Splice.jpg
> > >
> > > Not sure if that is normal or not, but I figured I'd follow up on last week's post.
> > >
> > > As always, thanks to you guys for your patience and your input.
> > >
> > > Barry
> > > KK4RXN
> > > Jeremiah 29:11-13 / John 3:16
> > >
> > >
> > >
> > >
> > > [Non-text portions of this message have been removed]
> > >
> >
>

43341. TS 820S Display Error

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 15:38:09 UTC
From: Wm Marvin
Topic: 43341 Message: 43341

Upon power on the Digital Display is correct. After 5 minutes the 2nd Digit (Mhz) goes to 9 and the remaining digits are correct, then 10 min later back to mormal. The receive functions correctly and is stable dispite the 2nd Digit.....i.e 7.250 reads 9.250.

Any idea's?

Bill KB9IV

43342. Re: [TS-520_820_530_830] TS-520 Smoked

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 16:08:25 UTC
From: W5RKL
Topic: 43329 Message: 43342

John, a shorted diode in the HV? I don't think so! Did you read the entire post especially where Don said he checked the HV AC and DC voltages and they appear to be fine? It appears you did not read all of the post.

Dave, you should NEVER, repeat "NEVER" replace an original "correct" rated blown fuse with one with a higher current rating!!! Why on earth would you do such a thing? Doing that harms the transformer more then if you replaced the fuse with the correct rated fuse!!! I just do not understand why people continue to do these ridiculously WRONG things when we have stated many times on the group to NEVER do that!!

As for the diodes "looking good", did you come to this conclusion by simply visually inspecting the diodes? If that's how you came to the conclusion the diodes are "okay" then you did it wrong! You cant tell whether a diode is good by simply visually inspecting it. You have to use an ohm meter to tell.

You said the "lower AC/s are a good bit less than normal". How did you come that conclusion? Did you disconnect the AC windings from the Rectifier Unit then measure the winding's AC voltage or did you measure the AC voltage with the circuit connected? If there's a shorted capacitor, the AC voltage WILL be low because all the AC voltage is dropping across the shorted capacitor but before that happens, more than likely any diode would have blown "open" resulting in loss of that supply's DC voltage. What AC voltage is lower than normal, 12.6VAC filament, 14VAC for the 14VDC supply, the 100 for the bias -C supply, the 210 and 300 AC voltages? Which one? We can't help you if you don't give the right voltages.

Can a power transformer fail due to a surge? Yes it can. If the transformer is shorted, regardless which winding is shorted, you can have it rewound using "Transformer Rewind Service"

http://members.tripod.com/tubes_tubes_tubes/transformerrewindingservice/id32.html

or find a parts 520 power transformer, there's one on eBay right now.

Mike W5RKL

On 7/11/2013 10:25 AM, John Davidson wrote:
>
> It's more likely one or more of the diodes in the HV circuits shorted.
> You may have to unsolder one lead of the diodes one -by-one until you
> see a shorted one.
>
>

> _____
> From: dllewiszz <dllewiszz@... <mailto:dllewiszz%40hotmail.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Wednesday, July 10, 2013 9:48 PM
> Subject: [TS-520_820_530_830] TS-520 Smoked
>
>
>
> My early model TS-520 was hit by an AC power surge this evening during
> an unexpected pop-up thunderstorm. The fuse blew and I looked around
> for any visible after-effects and saw none. I put a slightly larger
> fuse in so I could give it a short burst of AC, and noticed the power
> XFMR smoked a bit during the brief hit of AC. During that time, it lit
> up and I had good audio through the speaker. Checking the diodes and
> caps, all look good on the ohmmeter, so I put the AC (and DC) meter on
> it and gave it short bursts of AC as I checked various XFMR outputs.
> The HV is fine on the AC and DC side, but the lower ACs are a good bit
> less than normal. When it's on for more than 3 seconds the XFMR heats
> up, so I'm very cautious with that. The DC outputs are also low, but
> with good caps and diodes (and speaker audio) I don't see any shorts
> that would be dragging down the power supply.
>
> Is it possible the surge shorted some windings in the XFMR? Is that a
> common occurrence on this rig? Are there other usual suspects I should
> check out? I've done stuff such as removing the tubes, etc. I don't
> have a Variac and don't want to wipe it out if it's not already. If
> the XFMR is shot, does this become a Parts Radio?
>
> 73, Dave WA4FXT
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

43343. Re: [TS-520_820_530_830] TS-520 Smoked/HUmor/520's for Sale

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 16:39:17 UTC
From: Joe - W7RKN
Topic: 43343 Message: 43343

EXCUSE ME?? I *ALWAYS* replace the factory rated fuse with one that is at least 100% higher in value...Makes it *real* easy to find the defective part/circuit! LOL!!!

(Before anyone starts getting high and mighty here...that was meant to be humorous!)

BTW..I have a couple of 520's I may want to sell (With original factory manuals!)...1 is an "S", but I have never used it. The TS-520 has been on the air numerous times...forget what the output is...around 125, if memory serves..may be higher. The radio *does* need a good tweaking...hasn't been done for at least..OH...since it was new. I also have a VFO520..it drifts a bit until the temp stabilizes. (Hope whoever gets it, has a good pair of legs to keep up with it until it settles down! <<GRIN>> (Will not sell the VFO individually...it will go with one of the 520's) Absolutely will *not* ship..these puppies are just too heavy to play the shipping nightmare with..As you can see below...I am in Reno, Nevada. If you are interested, contact me OFF GROUP. Email address is in the header.

Joe - W7RKN
Reno, Nevada

----- Original Message -----
From: "W5RKL" <w5rkl@...>
Subject: Re: [TS-520_820_530_830] TS-520 Smoked

> Dave, you should NEVER, repeat "NEVER" replace an original "correct"
> rated blown fuse with one with a higher current rating!!! Why on earth
> would you do such a thing? Doing that harms the transformer more then if
> you replaced the fuse with the correct rated fuse!!! I just do not
> understand why people continue to do these ridiculously WRONG things
> when we have stated many times on the group to NEVER do that!!

43344. Re: [TS-520_820_530_830] TS-520 Smoked

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 17:07:20 UTC
From: Ken Winterling
Topic: 43329 Message: 43344

Dave,

Now is a good time to suggest that you build a "dim bulb tester" or "transformer saver" before you go much further. Check the group's web site or google "dim bulb tester". The simple device will prevent blowing (the correct size) fuses and save your transformer (and other components).

Good luck with the repair.

Ken
WA2LBI

On Thu, Jul 11, 2013 at 12:08 PM, W5RKL <w5rkl@...> wrote:

> **
>
>
> John, a shorted diode in the HV? I don't think so! Did you read the
> entire post especially where Don said he checked the HV AC and DC
> voltages and they appear to be fine? It appears you did not read all of
> the post.
>
> Dave, you should NEVER, repeat "NEVER" replace an original "correct"
> rated blown fuse with one with a higher current rating!!! Why on earth
> would you do such a thing? Doing that harms the transformer more then if
> you replaced the fuse with the correct rated fuse!!! I just do not
> understand why people continue to do these ridiculously WRONG things
> when we have stated many times on the group to NEVER do that!!
>
> As for the diodes "looking good", did you come to this conclusion by
> simply visually inspecting the diodes? If that's how you came to the
> conclusion the diodes are "okay" then you did it wrong! You cant tell
> whether a diode is good by simply visually inspecting it. You have to
> use an ohm meter to tell.
>
> You said the "lower AC/s are a good bit less than normal". How did you
> come that conclusion? Did you disconnect the AC windings from the
> Rectifier Unit then measure the winding's AC voltage or did you measure
> the AC voltage with the circuit connected? If there's a shorted
> capacitor, the AC voltage WILL be low because all the AC voltage is
> dropping across the shorted capacitor but before that happens, more than
> likely any diode would have blown "open" resulting in loss of that
> supply's DC voltage. What AC voltage is lower than normal, 12.6VAC
> filament, 14VAC for the 14VDC supply, the 100 for the bias -C supply,
> the 210 and 300 AC voltages? Which one? We can't help you if you don't
> give the right voltages.

>
> Can a power transformer fail due to a surge? Yes it can. If the
> transformer is shorted, regardless which winding is shorted, you can
> have it rewound using "Transformer Rewind Service"
>
>
> http://members.tripod.com/tubes_tubes_tubes/transformerrewindingservice/id32.html
>
> or find a parts 520 power transformer, there's one on eBay right now.
>
> Mike W5RKL
>
>
> On 7/11/2013 10:25 AM, John Davidson wrote:
> >
> > It's more likely one or more of the diodes in the HV circuits shorted.
> > You may have to unsolder one lead of the diodes one -by-one until you
> > see a shorted one.
> >
> >
> > _____
> > From: dllewiszz <dllewiszz@... <mailto:dllewiszz%40hotmail.com>>
> > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
>
> > Sent: Wednesday, July 10, 2013 9:48 PM
> > Subject: [TS-520_820_530_830] TS-520 Smoked
> >
> >
> >
> > My early model TS-520 was hit by an AC power surge this evening during
> > an unexpected pop-up thunderstorm. The fuse blew and I looked around
> > for any visible after-effects and saw none. I put a slightly larger
> > fuse in so I could give it a short burst of AC, and noticed the power
> > XFMR smoked a bit during the brief hit of AC. During that time, it lit
> > up and I had good audio through the speaker. Checking the diodes and
> > caps, all look good on the ohmmeter, so I put the AC (and DC) meter on
> > it and gave it short bursts of AC as I checked various XFMR outputs.
> > The HV is fine on the AC and DC side, but the lower ACs are a good bit
> > less than normal. When it's on for more than 3 seconds the XFMR heats
> > up, so I'm very cautious with that. The DC outputs are also low, but
> > with good caps and diodes (and speaker audio) I don't see any shorts
> > that would be dragging down the power supply.
> >
> > Is it possible the surge shorted some windings in the XFMR? Is that a
> > common occurrence on this rig? Are there other usual suspects I should
> > check out? I've done stuff such as removing the tubes, etc. I don't
> > have a Variac and don't want to wipe it out if it's not already. If
> > the XFMR is shot, does this become a Parts Radio?
> >

> > 73, Dave WA4FXT
> >
> > [Non-text portions of this message have been removed]
> >
> >
>
> [Non-text portions of this message have been removed]
>
>
>

[Non-text portions of this message have been removed]

43345. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 17:21:28 UTC
From: Don
Topic: 43023 Message: 43345

Hi Terry
Hope all is well
Well back from holidays and i think my radio enjoyed the holiday too as it's working as it should in the load up procedure.
In Rf meter position i am now able to back the carrier from 250 ma's right down to zero now.
In IP position when i back it down,it goes to 60ma as it should
Maybe when i cleaned the pots i did not let them dry enough.
There is no more arching,as it might have been that PL259 you told me to clean.

I just have to do the carrier balance as LSB band works ok,but i have to turn the mic up higher compared to the USB.
Will go over the reply's you have me and and have a go at it when i get back to normal,what ever normal is
Thanks Again.
Don/Ve2ud

On 07/07/2013 7:36 AM, Terry Wagoner wrote:
>
> Don:
>
> Do I understand that while loading the rig if you turn the Carrier
> Level Pot full CCW with rig keyed you see 100ma on the IP meter???
>
> Also why would you think it should be 225 ma? We can talk about that
> off the list if you like.
>
> In Tune mode the meter should be in ALC position and Car Level Pot
> increased to get decent indication on meter to allow you to peak the
> Drive control. At this step NONE of the meter scales are being read or
> mean anything. It is just a relative indication to allow you to adjust
> the drive stage tune circuits to resonance. Use enough Car Level to
> give your self something on the meter to work with. Nothing less than
> far right hand end of the Black ALC box on meter face. What you are
> really looking at on the meter is the ALC bus voltage going down due
> to small amount of positive grid current flowing on the peak of the rf
> drive envelope being applied to the 6146 control grids. When the ALC
> bus voltage goes down it drives the meter up scale same as it does for
> AGC bus action in receive mode. After peaking this relative meter
> indication with Drive control then go to Ip and adjust the Plate
> Tuning capacitor to get your initial plate current dip.Now you are
> measuring final tube plate current on the Ip ma meter scale. Now it is
> safe to go to CW mode and load the rig. This initial step just makes
> sure your Tank capacitor is not so far off resonance that you have 300

> plus ma plate current taxing the finals while rig is keyed.
>
> If my question above is true then I suggest you check the Balanced
> Modulator carrier suppression. I would also measure CV terminal at
> Conn 8 on the IF board. With Car Pot full CCW you should have ZERO dc
> volts at CV. Not likely you have any voltage, but a quick check would
> be good.
>
> The Balanced Modulator produces a 455khz double side band suppressed
> carrier output (DSBSC) which becomes your Transmit IF (TIF) signal and
> leaves the IF board and goes to RF board as input for your Transmit
> Mixer to produce the actual transmit frequency RF drive.
>
> The only time you should have any output from the Balanced Modulator
> when loading the rig is when the Car Level pot is advanced off full
> CCW position. This supplies from approx 0 to 0.6vdc at the junction of
> D29/D32 to forward bias the ring diodes and unbalance the modulator
> and produce the 455khz dsbcc output. The other time is in SSB mode
> when you have Mic audio at input of the Balanced Modulator.
>
> If you are seeing 100ma of Ip while trying to load the rig with Car
> Level pot at full CCW then you either have voltage from Car Level pot
> at its full CCW position or the Carrier Suppression has not been
> adjusted properly (can also have a failure in the BM but lets address
> carrier suppression first as it is the most likely cause).
>
> Couple of ways to adjust Carrier Suppression. I have a PL-259 with two
> 100 ohm 1/2 watt resistors soldered from the center pin to the shell.
> Screw that on to the SO-239 and now have a 1 watt 50 ohm dummy load
> with resistor lead length that allows me to read the voltage across
> the resistors. Can use a RF probe/VTVM/DMM or O-scope, or RF millivolt
> meter to monitor the voltage while I adjust VR-4 Trimmer pot and TC-3
> Trimmer cap at Balanced Mod on the IF board. Adjust these trimmers for
> a minimum or null in voltage across the dummy load in CW mode. Then go
> to LSB and USB modes and go back and forth until you get the null
> balanced between them. This is touchy and wont be perfectly equal. Do
> this Carrier Suppression adjustments with the SG Switch off or your
> little dummy load wont like it.
>
> Another way that works well is to use another receiver set near your
> TS-830 tuned to the frequency you will be nulling at. May need to
> place a short piece of wire in the receiver SO-239 and bring it near
> the TS830 so you can hear the Carrier. Now adjust VR-4 and TC-3 until
> you cant hear the Carrier in speaker or headphones. May not be able to
> get a complete null but should be able to get it very low.
>
> With experience you will learn how VR-4 reacts vs how TC-3 reacts and
> the interaction between them.
>
> After performing the Carrier Suppression go back and re-adjust the

> resting plate current for an Ip indication of 60ma in SSB mode.
>
> Terry
> K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> >
> > Ok here goes
> > I turned the carrier down fully counter clockwise and i get 100
> > ma's
>
>

[Non-text portions of this message have been removed]

43346. Re: TS-520 Smoked/HUmor/520's for Sale

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 17:59:40 UTC
From: Terry Wagoner
Topic: 43343 Message: 43346

In the electrical power world I have used Hi-pot Burners and Thumpers (capacitor discharge) on HV underground cables and the Stator windings of large motors. Here you are intentionally causing damage as an aural and visual means of locating the fault.

In old days with 19.9kv URD in residential subdivisions pretty common for a line crew to close in on fault many times by re-fusing the cutout at the riser and repeated opening of the loop at pad mount transformers until faulted section of cable was isolated. Not a good practice especially if the fault is at the base of the pole where you are standing banging in 100amp fuses at 19.9kv. Today they have more modern TDR type test gear.

I have however never intentionally put a "penny" in the fuse panel to find a fault in any Hybrid! Sounds like Bob Mansker may have a customer.

Very easy to build a dim bulb tester. Even just go to hardware and buy a lamp socket with pig tails and a cheap extension cord and place lamp socket in one leg. Cant get easier than that. Can make as fancy as you want. My "good" one is on a pine board with On-Off switch and porcelain socket. I usually start with a 40 watt bulb, then 60 watt then 100 watt.

Not dissing or flaming or ranting or making fun of this member. Like Mike scratching my head. Just hope he can understand why it is not a good practice to up the size of the fuse and try again. Fuses do get tired and sometimes blow for no apparent reason.

Probably most of us who do not have dim bulb tester have re-fused and tried one more time after a good visual inspection, but if fuse blows again time to start troubleshooting.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Joe - W7RKN <w7rkn.7@...> wrote:
>
> EXCUSE ME?? I *ALWAYS* replace the factory rated fuse with one that is at
> least 100% higher in value...Makes it *real* easy to find the defective
> part/circuit! LOL!!!
>
> (Before anyone starts getting high and mighty here...that was meant to be
> humorous!)
>
> BTW..I have a couple of 520's I may want to sell (With original factory
> manuals!)...1 is an "S", but I have never used it. The TS-520 has been on
> the air numerous times...forget what the output is...around 125, if memory
> serves..may be higher. The radio *does* need a good tweaking...hasn't been
> done for at least..OH...since it was new. I also have a VFO520..it drifts a
> bit until the temp stabilizes. (Hope whoever gets it, has a good pair of
> legs to keep up with it until it settles down! <<GRIN>> (Will not sell the
> VFO individually...it will go with one of the 520's) Absolutely will *not*
> ship..these puppies are just too heavy to play the shipping nightmare
> with..As you can see below...I am in Reno, Nevada. If you are interested,
> contact me OFF GROUP. Email address is in the header.

>
> Joe - W7RKN
> Reno, Nevada
>
> ----- Original Message -----
> From: "W5RKL" <w5rkl@...>
> Subject: Re: [TS-520_820_530_830] TS-520 Smoked
>
>
> > Dave, you should NEVER, repeat "NEVER" replace an original "correct"
> > rated blown fuse with one with a higher current rating!!! Why on earth
> > would you do such a thing? Doing that harms the transformer more then if
> > you replaced the fuse with the correct rated fuse!!! I just do not
> > understand why people continue to do these ridiculously WRONG things
> > when we have stated many times on the group to NEVER do that!!
>

43347. Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 18:14:54 UTC
From: Terry Wagoner
Topic: 43023 Message: 43347

Well Don you reported -60vdc operating bias on the 6146 control grids in TX mode. I specifically asked you about this. If your bias voltage pot was dirty, bad, or intermittent after cleaning no way to have proper bias voltage in TX mode. Unless you were just measuring it when it was there to spec and at that time you should have noticed that you did not have high IP.

You reported 100ma plus IP with Car Level Pot full CCW with rig keyed in CW mode. Only two ways for that to occur. 1. Did not have -60vdc on control grids or 2. Balanced Mod carrier was not nulled.

Assuming you have not adjusted the Bal Mod carrier null then at the moment you had this high level of IP you did not have the correct operating bias voltage on your finals.

I do not remember if you reported that Aux relay on Audio board has been replaced or not?

I guess it shall remain a mystery. Although your bias voltage was not "stuck" as JD proposed I will give Round 1 to him!

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Hi Terry
> Hope all is well
> Well back from holidays and i think my radio enjoyed the holiday too as
> it's working as it should in the load up procedure.
> In Rf meter position i am now able to back the carrier from 250 ma's
> right down to zero now.
> In IP position when i back it down,it goes to 60ma as it should
> Maybe when i cleaned the pots i did not let them dry enough.
> There is no more arching,as it might have been that PL259 you told me to
> clean.
>
> I just have to do the carrier balance as LSB band works ok,but i have to
> turn the mic up higher compared to the USB.
> Will go over the reply's you have me and and have a go at it when i get
> back to normal,what ever normal is
> Thanks Again.
> Don/Ve2ud
>
>
>
>
>
>
> On 07/07/2013 7:36 AM, Terry Wagoner wrote:

> >
> > Don:
> >
> > Do I understand that while loading the rig if you turn the Carrier
> > Level Pot full CCW with rig keyed you see 100ma on the IP meter???
> >
> > Also why would you think it should be 225 ma? We can talk about that
> > off the list if you like.
> >
> > In Tune mode the meter should be in ALC position and Car Level Pot
> > increased to get decent indication on meter to allow you to peak the
> > Drive control. At this step NONE of the meter scales are being read or
> > mean anything. It is just a relative indication to allow you to adjust
> > the drive stage tune circuits to resonance. Use enough Car Level to
> > give your self something on the meter to work with. Nothing less than
> > far right hand end of the Black ALC box on meter face. What you are
> > really looking at on the meter is the ALC bus voltage going down due
> > to small amount of positive grid current flowing on the peak of the rf
> > drive envelope being applied to the 6146 control grids. When the ALC
> > bus voltage goes down it drives the meter up scale same as it does for
> > AGC bus action in receive mode. After peaking this relative meter
> > indication with Drive control then go to Ip and adjust the Plate
> > Tuning capacitor to get your initial plate current dip.Now you are
> > measuring final tube plate current on the Ip ma meter scale. Now it is
> > safe to go to CW mode and load the rig. This initial step just makes
> > sure your Tank capacitor is not so far off resonance that you have 300
> > plus ma plate current taxing the finals while rig is keyed.
> >
> > If my question above is true then I suggest you check the Balanced
> > Modulator carrier suppression. I would also measure CV terminal at
> > Conn 8 on the IF board. With Car Pot full CCW you should have ZERO dc
> > volts at CV. Not likely you have any voltage, but a quick check would
> > be good.
> >
> > The Balanced Modulator produces a 455khz double side band suppressed
> > carrier output (DSBSC) which becomes your Transmit IF (TIF) signal and
> > leaves the IF board and goes to RF board as input for your Transmit
> > Mixer to produce the actual transmit frequency RF drive.
> >
> > The only time you should have any output from the Balanced Modulator
> > when loading the rig is when the Car Level pot is advanced off full
> > CCW position. This supplies from approx 0 to 0.6vdc at the junction of
> > D29/D32 to forward bias the ring diodes and unbalance the modulator
> > and produce the 455khz dsbcc output. The other time is in SSB mode
> > when you have Mic audio at input of the Balanced Modulator.
> >
> > If you are seeing 100ma of Ip while trying to load the rig with Car
> > Level pot at full CCW then you either have voltage from Car Level pot
> > at its full CCW position or the Carrier Suppression has not been
> > adjusted properly (can also have a failure in the BM but lets address

> > carrier suppression first as it is the most likely cause).
> >
> > Couple of ways to adjust Carrier Suppression. I have a PL-259 with two
> > 100 ohm 1/2 watt resistors soldered from the center pin to the shell.
> > Screw that on to the SO-239 and now have a 1 watt 50 ohm dummy load
> > with resistor lead length that allows me to read the voltage across
> > the resistors. Can use a RF probe/VTVM/DMM or O-scope, or RF millivolt
> > meter to monitor the voltage while I adjust VR-4 Trimmer pot and TC-3
> > Trimmer cap at Balanced Mod on the IF board. Adjust these trimmers for
> > a minimum or null in voltage across the dummy load in CW mode. Then go
> > to LSB and USB modes and go back and forth until you get the null
> > balanced between them. This is touchy and wont be perfectly equal. Do
> > this Carrier Suppression adjustments with the SG Switch off or your
> > little dummy load wont like it.
> >
> > Another way that works well is to use another receiver set near your
> > TS-830 tuned to the frequency you will be nulling at. May need to
> > place a short piece of wire in the receiver SO-239 and bring it near
> > the TS830 so you can hear the Carrier. Now adjust VR-4 and TC-3 until
> > you cant hear the Carrier in speaker or headphones. May not be able to
> > get a complete null but should be able to get it very low.
> >
> > With experience you will learn how VR-4 reacts vs how TC-3 reacts and
> > the interaction between them.
> >
> > After performing the Carrier Suppression go back and re-adjust the
> > resting plate current for an Ip indication of 60ma in SSB mode.
> >
> > Terry
> > K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > >
> > >
> > > Ok here goes
> > > I turned the carrier down fully counter clockwise and i get 100
> > > ma's
> > >
> > >
>
>
>
> [Non-text portions of this message have been removed]
>

43348. Re: [TS-520_820_530_830] TS 820S Display Error

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 22:07:08 UTC
From: Joseph Stiles
Topic: 43341 Message: 43348

Bill,

If I may hazard a guess...you have a possible intermittent (thermal) problem with the counter/counter mix unit...that's the box
on the left side that is connected to the digital display(on top) with another multi-pin connector on the underside of the chassis.
There are numerous "posts" in the "files section" of this board, dealing with this unit. I would recommend that: with the power off..
AND rig unplugged...that you FIRST removed the multi-pin connector connector on the top...the one that goes to the display...clean with
your choice of cleaners...re-attach/detach connector several times...blow off with "canned air"....check for proper operation. If this does not
help, removal and a cleaning/inspection of the "DG-1 unit" board connector pins may be in order. Start with the simple part first...let us know your results

73 Joe
WB7UQU

From: Wm Marvin <wmarvin2@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, July 11, 2013 8:38 AM
Subject: [TS-520_820_530_830] TS 820S Display Error

Upon power on the Digital Display is correct. After 5 minutes the 2nd Digit (Mhz) goes to 9 and the remaining digits are correct, then 10 min later back to mormal. The receive functions correctly and is stable dispite the 2nd Digit.....i.e 7.250 reads 9.250.

Any idea's?

Bill KB9IV

[Non-text portions of this message have been removed]

43349. Re: TS-520 Smoked

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 23:01:08 UTC
From: dllewiszz
Topic: 43329 Message: 43349

Well, I expected the firestorm and got it. I didn't put a penny (figuratively) in the fuse holder - only a slightly larger fuse. If it had blown, I'd stop right there. But yes, the incandescent lamp is something I've used in the past when a VariAC wasn't handy. I obviously didn't take the time to put one together for this test, but it does look like the problem is the XFMR. The middle group of AC voltages are the ones that were about 60% of normal readings, while the HV was fine and the 14VAC was fine. When I say the diodes and filter caps look fine, I'm not talking about a visual inspection (although I do that first): I checked them properly. I have now removed all the secondary connections to the XFMR and it still heats up after a few seconds. Sure seems like an internal short. (Unless there's something going on with the DC converter ..... heck, we used to use vibrators to convert DC to AC for mobile use -- what's with all this transistorized stuff?)

I'll either use this as an excuse/opportunity to buy a later model rig (with digital readout even!) and part this one out - or I'll go ahead and round up a replacement XFMR and carefully bring up the AC and check for any other problems.

Thanks for the comments and responses. I deserve the handslap for the unprofessional troubleshooting.

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> Dave,
>
> You either have a shorted filter capacitor or a shorted secondary winding.
>
> Which 'Low AC" voltages are you referring to?
>
> 1. 12.6VAC filament
> 2. 14VAC for the 14VDC supply
> 3.100VAC for the -C bias supply
> 4. 210 for the 210A/B supply
> 5. 300 for the 300A/B supply
>
> Mike W5RKL
>
>
> On 7/10/2013 8:48 PM, dllewiszz wrote:
> >
> > My early model TS-520 was hit by an AC power surge this evening during
> > an unexpected pop-up thunderstorm. The fuse blew and I looked around
> > for any visible after-effects and saw none. I put a slightly larger
> > fuse in so I could give it a short burst of AC, and noticed the power
> > XFMR smoked a bit during the brief hit of AC. During that time, it lit
> > up and I had good audio through the speaker. Checking the diodes and
> > caps, all look good on the ohmmeter, so I put the AC (and DC) meter on
> > it and gave it short bursts of AC as I checked various XFMR outputs.

> > The HV is fine on the AC and DC side, but the lower ACs are a good bit
> > less than normal. When it's on for more than 3 seconds the XFMR heats
> > up, so I'm very cautious with that. The DC outputs are also low, but
> > with good caps and diodes (and speaker audio) I don't see any shorts
> > that would be dragging down the power supply.
> >
> > Is it possible the surge shorted some windings in the XFMR? Is that a
> > common occurrence on this rig? Are there other usual suspects I should
> > check out? I've done stuff such as removing the tubes, etc. I don't
> > have a Variac and don't want to wipe it out if it's not already. If
> > the XFMR is shot, does this become a Parts Radio?
> >
> > 73, Dave WA4FXT
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

43350. Re: [TS-520_820_530_830] Re: TS-820 PLL

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 23:24:39 UTC
From: Mike
Topic: 43222 Message: 43350

Cesar,

No, when I say "variable capacitor shaft to frame connection", I am referring to the connection point at the rear of the variable capacitor shaft where the thin brass fork makes connection with the variable capacitor shaft and the capacitor's frame. This connection pointget dirty/corroded over time especially when the transceiver sits not being used, sitting idling on a shelf, for a long period of time. When this connection point gets dirty/corroded, that results in disruption in the shaft to frame connection, the VFO variable capacitor's capacitance value changes dramatically and rapidly when the VFO knob is rotated. This results ina significant change in the VFO's output frequency, even to the point the VFO no longer oscillates. This can cause instability in the digital display, such as the digital displays appears to be changing on its own, and also to complete loss of VFO signal, the VFO stops oscillating, which results in the PLL changing to an "Unlock" state, the digital display turns darkand loss of both receive and transmit.

If you remove the right sidepanelon the VFO enclosure, held to the enclosure by 2 phillips head screws, you will see the variable capacitor "shaft" with plates attached to the shaft. These are the "variable" or "movable plates"that "move intoand out of the fixed plates". When the variable platesmove into and out of the fixed platesthe capacitor's capacitance value changes resulting in the oscillator's tank circuit resonant frequency changing. That's how an "analog" VFO, variable capacitor and variable inductor, work. Drake uses fixed capacitance with a variable inductor while Kenwood used both variable inductance and variable capacitance. The variable inductor is adjusted during VFO alignment ONLY. The variable capacitor, attached to the front panel VFO knob, rotates when ever you change frequencies. This point on the VFO's variable capacitor shaft to frame connection should be cleanedwith contact cleanerand the VFO rotated throughout it's range several timesthen test for proper operation. If the problem still exist, maybe not at all points, then repeat the cleaning until the problem is not longer there. Follow all cleaning with contact cleaner with generous use of canned air or compressed air to remove any/all contact cleaner. Follow all cleaner warnings on the can. Some contact cleaners are flammable and it only takes a small spark to ignite the cleaner.

MikeW5RKL

On 7/11/2013 9:28 AM, coyoteinventor@... wrote:
>
> Thank you for your advice Mike (W5RKL).
>
> I am in the process of removing all the boards, one at a time,

> cleaning all connectors and contacts (sanding/filing a little and
> using deoxit), and tightening well all screws that connect the grounds
> to the chassis.
>
> I was not clear on what you meant by cleaning the "VFO shaft to frame
> connection"; are you referring to the metal piece at the top that has
> 2 screws to hold it to the frame? I think that's the only piece that
> touches the frame.
>
> I'm also going to open the VFO and clean it inside. I'm not sure how
> to clean between the fins though. Last time I just submerged that
> piece of the VFO in warm water several times. Also, looking at some
> instructions online, I was not clear what is meant by the "rear wiper"
> which I am supposed to use deoxit on.
>
> I hope to be able to finish this cleaning process this weekend so I
> can test the radio again.
>
> Thanks again for your help so far. I hope this yields good results! ;-)
>
> --Cesar-- K1TNT
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, W5RKL <w5rkl@...> wrote:
> >
> > The answer to your question about replacing the caps to fix a PLL
> > problem is no. This is a common misunderstanding that caps are the
> > source of most problems which is not true. There are problems
> associated
> > with capacitors but those are few.
> >
> > Your problem appears to be, based on your statements, dirty contacts in
> > the VFO variable capacitor shaft to frame connection and the band
> switch
> > wafers. If the VFO signal is disrupted, lost, for any reason, can
> result
> > in the PLL going into UNLOCK. I recommend you clean the VFO shaft to
> > frame connection with contact cleaner. Your problem can also be caused
> > by dirty internal contacts in the PLL module (there are 2 boards inside
> > the PLL module that interconnect with internal fixed pins). If these
> > pins get dirty/corroded then instability in the PLL system can
> result in
> > intermittent LOCK/UNLOCK states occurring.
> >
> > Also try loosening the PC board mounting screws 1 full turn then
> > tighten. Over time the screws become lose and dirt/corrosion occurs
> > between the board and the ground which can cause problems. So clean the
> > 820 then test. Be careful when removing the individual plugs on the
> > modules. Use straight up pulling with very little rocking to remove the
> > plug. Do NOT pull the plug wires to remove the plug. A pair of needle

> > nose pliers will work, grasp the plug in the middle and pull
> straight up.
> >
> > If you don't have the 820 service manual then download, you can't work
> > on the 820 without it. There are screws that hold the module to the
> > chassis, they must be removed after the plugs have been removed. Make
> > note of how and where the plugs are plugged into the boards. If
> > necessary, take a picture with your cell phone or digital camera BEFORE
> > you remove anything! Don't assume you will remember how and where the
> > plugs go, you can assume wrong!!
> >
> > 73
> > Mike W5RKL
> >
> > On 7/3/2013 12:08 PM, coyoteinventor@... wrote:
> > >
> > > I have a general question. Will replacing all caps on my TS-820
> > > improve the reliability of the PLL (or at least the caps ones on that
> > > board)? Or not really?
> > >
> > > My PLL locks when it wants to, and then it unlocks and goes crazy for
> > > a while. Switching bands usually helps. Other times it works great
> for
> > > a long time. I had a fellow ham radio tune it a couple of weeks ago
> > > and it worked well for a little while, but it's unlocking sometimes
> > > again and jumping around.
> > >
> > > Thanks.
> > >
> > > --Cesar-- K1TNT
> > >
> > >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
>

[Non-text portions of this message have been removed]

43351. Re: TS-520 Smoked/HUmor/520's for Sale

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 23:13:19 UTC
From: dllewiszz
Topic: 43343 Message: 43351

Y'all be sure and read my follow-up post in the original thread.
Have any of you ever said these words to a kid? "Do as I say, not as I do." I'm the first guy who'd say never do what I did as a test, but I know/knew the risks and was willing to take them in this particular situation. But I appreciate the reminder, and am open to accept the flaming. It's OK, and deserved.

Terry, I sure wish my local power utility would fix the problem on my line. The fuse blows every couple of weeks on one phase, and they come out and close it up and get 15 houses back in business. Of course, when they come out they always send a different crew who aren't familiar with the way the lines are run, so it takes some time to figure it out unless I'm home and run out to tell them where the fuse is located. Of course, no follow-up ever occurs, and the chronic problems keep the guys busy and employed.

73, Dave WA4FXT

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> In the electrical power world I have used Hi-pot Burners and Thumpers (capacitor discharge) on HV underground cables and the Stator windings of large motors. Here you are intentionally causing damage as an aural and visual means of locating the fault.
>
> In old days with 19.9kv URD in residential subdivisions pretty common for a line crew to close in on fault many times by re-fusing the cutout at the riser and repeated opening of the loop at pad mount transformers until faulted section of cable was isolated. Not a good practice especially if the fault is at the base of the pole where you are standing banging in 100amp fuses at 19.9kv. Today they have more modern TDR type test gear.
>
> I have however never intentionally put a "penny" in the fuse panel to find a fault in any Hybrid! Sounds like Bob Mansker may have a customer.
>
> Very easy to build a dim bulb tester. Even just go to hardware and buy a lamp socket with pig tails and a cheap extension cord and place lamp socket in one leg. Cant get easier than that. Can make as fancy as you want. My "good" one is on a pine board with On-Off switch and porcelain socket. I usually start with a 40 watt bulb, then 60 watt then 100 watt.
>
> Not dissing or flaming or ranting or making fun of this member. Like Mike scratching my head. Just hope he can understand why it is not a good practice to up the size of the fuse and try again. Fuses do get tired and sometimes blow for no apparent reason.
>
> Probably most of us who do not have dim bulb tester have re-fused and tried one more time after a good visual inspection, but if fuse blows again time to start troubleshooting.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, Joe - W7RKN <w7rkn.7@> wrote:
> >

> > EXCUSE ME?? I *ALWAYS* replace the factory rated fuse with one that is at
> > least 100% higher in value...Makes it *real* easy to find the defective
> > part/circuit! LOL!!!
> >
> > (Before anyone starts getting high and mighty here...that was meant to be
> > humorous!)
> >
> > BTW..I have a couple of 520's I may want to sell (With original factory
> > manuals!)...1 is an "S", but I have never used it. The TS-520 has been on
> > the air numerous times...forget what the output is...around 125, if memory
> > serves..may be higher. The radio *does* need a good tweaking...hasn't been
> > done for at least..OH...since it was new. I also have a VFO520..it drifts a
> > bit until the temp stabilizes. (Hope whoever gets it, has a good pair of
> > legs to keep up with it until it settles down! <<GRIN>> (Will not sell the
> > VFO individually...it will go with one of the 520's) Absolutely will *not*
> > ship..these puppies are just too heavy to play the shipping nightmare
> > with..As you can see below...I am in Reno, Nevada. If you are interested,
> > contact me OFF GROUP. Email address is in the header.
> >
> > Joe - W7RKN
> > Reno, Nevada
> >
> > ----- Original Message -----
> > From: "W5RKL" <w5rkl@>
> > Subject: Re: [TS-520_820_530_830] TS-520 Smoked
> >
> >
> > > Dave, you should NEVER, repeat "NEVER" replace an original "correct"
> > > rated blown fuse with one with a higher current rating!!! Why on earth
> > > would you do such a thing? Doing that harms the transformer more then if
> > > you replaced the fuse with the correct rated fuse!!! I just do not
> > > understand why people continue to do these ridiculously WRONG things
> > > when we have stated many times on the group to NEVER do that!!
> >
>

43352. Re: [TS-520_820_530_830] Re: TS-520 Smoked

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 23:27:26 UTC
From: Mike
Topic: 43329 Message: 43352

Dave, from what you are saying, it does appear the transformer is shorted internally.

I believe there's a 520 power transformer up for sale on eBay. If not you can get the transformer rewound at the link I included in my last response.

73
Mike W5RKL

On 7/11/2013 6:01 PM, dllewiszz wrote:
>
> Well, I expected the firestorm and got it. I didn't put a penny
> (figuratively) in the fuse holder - only a slightly larger fuse. If it
> had blown, I'd stop right there. But yes, the incandescent lamp is
> something I've used in the past when a VariAC wasn't handy. I
> obviously didn't take the time to put one together for this test, but
> it does look like the problem is the XFMR. The middle group of AC
> voltages are the ones that were about 60% of normal readings, while
> the HV was fine and the 14VAC was fine. When I say the diodes and
> filter caps look fine, I'm not talking about a visual inspection
> (although I do that first): I checked them properly. I have now
> removed all the secondary connections to the XFMR and it still heats
> up after a few seconds. Sure seems like an internal short. (Unless
> there's something going on with the DC converter ..... heck, we used
> to use vibrators to convert DC to AC for mobile use -- what's with all
> this transistorized stuff?)
>
> I'll either use this as an excuse/opportunity to buy a later model rig
> (with digital readout even!) and part this one out - or I'll go ahead
> and round up a replacement XFMR and carefully bring up the AC and
> check for any other problems.
>
> Thanks for the comments and responses. I deserve the handslap for the
> unprofessional troubleshooting.
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@...> wrote:
> >
> > Dave,
> >
> > You either have a shorted filter capacitor or a shorted secondary
> winding.
> >
> > Which 'Low AC" voltages are you referring to?
> >

> > 1. 12.6VAC filament
> > 2. 14VAC for the 14VDC supply
> > 3.100VAC for the -C bias supply
> > 4. 210 for the 210A/B supply
> > 5. 300 for the 300A/B supply
> >
> > Mike W5RKL
> >
> >
> > On 7/10/2013 8:48 PM, dllewiszz wrote:
> > >
> > > My early model TS-520 was hit by an AC power surge this evening
> during
> > > an unexpected pop-up thunderstorm. The fuse blew and I looked around
> > > for any visible after-effects and saw none. I put a slightly larger
> > > fuse in so I could give it a short burst of AC, and noticed the power
> > > XFMR smoked a bit during the brief hit of AC. During that time, it
> lit
> > > up and I had good audio through the speaker. Checking the diodes and
> > > caps, all look good on the ohmmeter, so I put the AC (and DC)
> meter on
> > > it and gave it short bursts of AC as I checked various XFMR outputs.
> > > The HV is fine on the AC and DC side, but the lower ACs are a good
> bit
> > > less than normal. When it's on for more than 3 seconds the XFMR heats
> > > up, so I'm very cautious with that. The DC outputs are also low, but
> > > with good caps and diodes (and speaker audio) I don't see any shorts
> > > that would be dragging down the power supply.
> > >
> > > Is it possible the surge shorted some windings in the XFMR? Is that a
> > > common occurrence on this rig? Are there other usual suspects I
> should
> > > check out? I've done stuff such as removing the tubes, etc. I don't
> > > have a Variac and don't want to wipe it out if it's not already. If
> > > the XFMR is shot, does this become a Parts Radio?
> > >
> > > 73, Dave WA4FXT
> > >
> > >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
>

[Non-text portions of this message have been removed]

43353. Re: TS-520 Smoked

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-11 23:49:45 UTC
From: Bob
Topic: 43329 Message: 43353

As I posted earlier I have a nice clean (no smell) transformer for the 520.... You can contact me off board...
Bob
ke5ftf
****

--- In TS-520_820_530_830@yahoogroups.com, Mike <w5rkl@...> wrote:
>
> Dave, from what you are saying, it does appear the transformer is
> shorted internally.
>
> I believe there's a 520 power transformer up for sale on eBay. If not
> you can get the transformer rewound at the link I included in my last
> response.
>
> 73
> Mike W5RKL
>
> On 7/11/2013 6:01 PM, dllewiszz wrote:
> >
> > Well, I expected the firestorm and got it. I didn't put a penny
> > (figuratively) in the fuse holder - only a slightly larger fuse. If it
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> > I'll either use this as an excuse/opportunity to buy a later model rig
> > (with digital readout even!) and part this one out - or I'll go ahead
> > and round up a replacement XFMR and carefully bring up the AC and
> > check for any other problems.
> >
> > Thanks for the comments and responses. I deserve the handslap for the
> > unprofessional troubleshooting.
> >
> > --- In TS-520_820_530_830@yahoogroups.com

> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Mike <w5rkl@> wrote:
> > >
> > > Dave,
> > >
> > > You either have a shorted filter capacitor or a shorted secondary
> > winding.
> > >
> > > Which 'Low AC" voltages are you referring to?
> > >
> > > 1. 12.6VAC filament
> > > 2. 14VAC for the 14VDC supply
> > > 3.100VAC for the -C bias supply
> > > 4. 210 for the 210A/B supply
> > > 5. 300 for the 300A/B supply
> > >
> > > Mike W5RKL
> > >
> > >
> > > On 7/10/2013 8:48 PM, dllewiszz wrote:
> > > >
> > > > My early model TS-520 was hit by an AC power surge this evening
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> > > > an unexpected pop-up thunderstorm. The fuse blew and I looked around
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> > > > it and gave it short bursts of AC as I checked various XFMR outputs.
> > > > The HV is fine on the AC and DC side, but the lower ACs are a good
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> > > > less than normal. When it's on for more than 3 seconds the XFMR heats
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> > > > with good caps and diodes (and speaker audio) I don't see any shorts
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> > > > the XFMR is shot, does this become a Parts Radio?
> > > >
> > > > 73, Dave WA4FXT
> > > >
> > > >
> > > >
> > >

> > >
> > > [Non-text portions of this message have been removed]
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>
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> [Non-text portions of this message have been removed]
>

43354. Re: TS-520 Smoked/HUmor/520's for Sale

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-12 00:09:44 UTC
From: Terry Wagoner
Topic: 43343 Message: 43354

Dave:

Crew should carry pole and phase maps on trucks and if a lateral with only 15 houses you walk it down to make sure no tree limbs on it or line is not down and then re-fuse and close in on it. Should not be a big deal. Big deal is calling out a crew if no longer have a servicer or troubleman on duty.

Unfortunately utilities have ended up doing like all other businesses. I spent almost 40 years with American Electric Power. I never thought I would see the day we would "down size" or "right size" but it happened and on black Friday many people were walked out the door. Some hung on and were offered "early out" packages. The knowledge and experience base that went out the door was astonishing. It was good for me as I came back under contract on my own terms until I had a heart attack and decided life was more important than money.

With Line Departments it is not uncommon now to rely heavily on contract help. Service area specific knowledge and experience is lacking and response time can be longer. Old time trouble men who knew the system like back of hand and took the service truck home and were dispatched from home are pretty much gone.

In house tree trimming has been eliminated and contract trimming budgets greatly reduced. Distribution system maintenance and upgrade budgets slashed. Probably years since fusing and co-ordination studies have been done. I dont know the age or physical state of your system. If it is 12kv it is probably quite old.

All I can suggest is you keep after them. If you are lucky you might get a trouble man who is a ham, but he is limited in what he can do. His hands are tied and he has to work within their work control system. Keep track of your outage frequency and duration and if storm related. Send a letter to your utility president and local manager informing them of the poor quality of service and make an appeal for action. Dont let them hide behind the system being at the mercy of the elements if outages are not storm related. I would say be persistent and if cant get response then maybe bring to attention of your local news organizations. Some communities have Action Lines for these kind of things.

I was once on the hot seat when ordinary citizen, taxpayer and customer (old fashioned notion) made a street light outage study and sent it to utility president. The city was paying the light bill and not getting what they paid for and public safety was being jeopardized. Local news picked up on it and street light repair became a very high priority.

OK back to Hybrids.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "dllewiszz" <dllewiszz@...> wrote:

>
> Terry, I sure wish my local power utility would fix the problem on my line. The fuse

blows every couple of weeks on one phase, and they come out and close it up and get 15 houses back in business. Of course, when they come out they always send a different crew who aren't familiar with the way the lines are run, so it takes some time to figure it out unless I'm home and run out to tell them where the fuse is located. Of course, no follow-up ever occurs, and the chronic problems keep the guys busy and employed.
>
> 73, Dave WA4FXT
>
>

43355. DS-2 DC-DC Converter

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-12 02:22:17 UTC
From: Don D
Topic: 43355 Message: 43355

Looking for a DS-2 DC-DC Converter for my ts830s

Don/Ve2ud

43356. Economical tubes for an 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-12 12:29:52 UTC
From: Barry
Topic: 43356 Message: 43356

Where is a great place to order economical tube replacements for my 820? And how much should each run?

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

43357. Re: Economical tubes for an 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-12 16:08:11 UTC
From: james27613
Topic: 43356 Message: 43357

hi Barry,

GE USA Made military tubes JAN circa 1987 new in box

6146W $22 (you do not need matched pair in this application)
12BY7a $10 (you do not need to replace driver if replacing finals)

http://www.surplussales.com/Tubes-Sock-Acc/TubeSpecials.html

72 james ke4drn

43358. Re: Economical tubes for an 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-12 17:07:25 UTC
From: Barry
Topic: 43356 Message: 43358

Those look like pretty decent prices, James. Thanks. Any warranty with them?

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, "james27613" <james27613@...> wrote:
>
> hi Barry,
>
> GE USA Made military tubes JAN circa 1987 new in box
>
> 6146W $22 (you do not need matched pair in this application)
> 12BY7a $10 (you do not need to replace driver if replacing finals)
>
> http://www.surplussales.com/Tubes-Sock-Acc/TubeSpecials.html
>
> 72 james ke4drn
>

43359. Re: Economical tubes for an 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-12 17:08:40 UTC
From: Barry
Topic: 43356 Message: 43359

Anybody have any experience with RFParts.com as well?

http://www.rfparts.com/old_site/6146w.html#w

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, "james27613" <james27613@...> wrote:
>
> hi Barry,
>
> GE USA Made military tubes JAN circa 1987 new in box
>
> 6146W $22 (you do not need matched pair in this application)
> 12BY7a $10 (you do not need to replace driver if replacing finals)
>
> http://www.surplussales.com/Tubes-Sock-Acc/TubeSpecials.html
>
> 72 james ke4drn
>

43360. Icom 7600 and Alpha 8410 for sale.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-12 20:28:40 UTC
From: groups
Topic: 43360 Message: 43360

>> I am moving soon and need to lighten the load. I have my Icom 7600 for
>> sale at
>>
>>
http://hambidz.com/auction_details.php?name=mint-icom-7600-wps125&auction_id=100155
>>
>> Thanks
>>
>> Frank N6AQ

--
Cheapest Ham Gear Auction Fee's on the Internet!

http://hambidz.com

43361. Re: [TS-520_820_530_830] Icom 7600 and Alpha 8410 for sale.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-13 00:54:31 UTC
From: KB1TCD
Topic: 43360 Message: 43361

Confused...
What's that got to do with Kenwood hybrids?
I have an antique Glenwood stove for sale...

73

Jose Douglas KB1TCD

On 7/12/2013 4:28 PM, groups wrote:
> >> I am moving soon and need to lighten the load. I have my Icom 7600 for
> >> sale at
> >>
> >>
> http://hambidz.com/auction_details.php?name=mint-icom-7600-wps125&auction_id=100155
> >>
> >> Thanks
> >>
> >> Frank N6AQ

43362. Re: [TS-520_820_530_830] Icom 7600 and Alpha 8410 for sale.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-13 03:09:06 UTC
From: groups
Topic: 43360 Message: 43362

Its ham gear for sale, I also happen to own a 820s but thought someone
might be interested. I can see your confusion, that comes with a 1 call
I am guessing. How much for your stove and does it work?

N6AQ

On 7/12/2013 7:54 PM, KB1TCD wrote:
>
> Confused...
> What's that got to do with Kenwood hybrids?
> I have an antique Glenwood stove for sale...
>
> 73
>
> Jose Douglas KB1TCD
>
> On 7/12/2013 4:28 PM, groups wrote:
> > >> I am moving soon and need to lighten the load. I have my Icom
> 7600 for
> > >> sale at
> > >>
> > >>
> > >
> http://hambidz.com/auction_details.php?name=mint-icom-7600-wps125&auction_id=100155
> > >>
> > >> Thanks
> > >>
> > >> Frank N6AQ
>
>

--
Cheapest Ham Gear Auction Fee's on the Internet!

http://hambidz.com

[Non-text portions of this message have been removed]

43363. TS 820 Display Error

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-13 18:43:16 UTC
From: Wm Marvin
Topic: 43363 Message: 43363

I have had no luck correcting the display error (9)for the MHZ digit.....i.e 9.150 for 7.150. My 820 front panel looks brand new because someone has reworked everything on and behind the panel.

The Service manual does not show the Counter Unit views but the PLL board is shown. I suspect either the Counter Unit or PLL,maybe, as the receive function is not affected by this display error.

Last night I treated every edge connector and plug-in connector their is and all circuit board mounting screw(s) and was surprized at the overall receive performance increase.....WoW.

I corrected the VFO sticking calibration ring and now the the VFO rotates with little effort using the KB-1 know that was supplied.

Any ideas for the Mhz digit error would be welcome.

Best DX....Bill KB9IV

43364. Re: TS 820 Display Error

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-13 18:55:06 UTC
From: n6wk_skcc3
Topic: 43363 Message: 43364

Check the Band Switch contacts. I have seen the 9 MHZ error before and it almost always came back to being the Band switch.

73,
Gordon
N6WK

--- In TS-520_820_530_830@yahoogroups.com, "Wm Marvin" <wmarvin2@...> wrote:
>
> I have had no luck correcting the display error (9)for the MHZ digit.....i.e 9.150 for 7.150. My 820 front panel looks brand new because someone has reworked everything on and behind the panel.
>
> The Service manual does not show the Counter Unit views but the PLL board is shown. I suspect either the Counter Unit or PLL,maybe, as the receive function is not affected by this display error.
>
> Last night I treated every edge connector and plug-in connector their is and all circuit board mounting screw(s) and was surprized at the overall receive performance increase.....WoW.
>
> I corrected the VFO sticking calibration ring and now the the VFO rotates with little effort using the KB-1 know that was supplied.
>
> Any ideas for the Mhz digit error would be welcome.
>
> Best DX....Bill KB9IV
>

43365. Re: [TS-520_820_530_830] TS 820 Display Error

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-13 19:06:30 UTC
From: Mark Gilger
Topic: 43363 Message: 43365

Have you soldered all of the feed through holes
on the two PCB's inside of the counter unit? Service Bulletin #26 covers this.

Mark

At 02:43 PM 7/13/2013, Wm Marvin wrote:
>
>
>I have had no luck correcting the display error
>(9)for the MHZ digit.....i.e 9.150 for 7.150. My
>820 front panel looks brand new because someone
>has reworked everything on and behind the panel.
>
>The Service manual does not show the Counter
>Unit views but the PLL board is shown. I suspect
>either the Counter Unit or PLL,maybe, as the
>receive function is not affected by this display error.
>
>Last night I treated every edge connector and
>plug-in connector their is and all circuit board
>mounting screw(s) and was surprized at the
>overall receive performance increase.....WoW.
>
>I corrected the VFO sticking calibration ring
>and now the the VFO rotates with little effort
>using the KB-1 know that was supplied.
>
>Any ideas for the Mhz digit error would be welcome.
>
>Best DX....Bill KB9IV
>
>

[Non-text portions of this message have been removed]

43366. Nicely refurbished TS-530S for sale

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-13 19:54:56 UTC
From: Craig Roberts
Topic: 43363 Message: 43366

Hi y'all,

I have finished my TS-530S refurb project and am ready to part with it (I have another 530 and an 830 as "keepers").

Besides now looking near new, this beautiful radio has:

* Kenwood 500 Hz CW filter installed

* "huff n' puff" VFO stabilizer (for negligible freq drift)

* full output on all bands, (including 100 watts out on 10 meters)

* "beautiful" transmitted audio (not my description, but that of many contacts)

* new HV caps

* cleaned (DeoxIT'd) switches and pots, including band switch (which showed no problems)

* nicely and accurately repainted cabinet (full re-paint, not just touch up)

* new cabinet feet, hardware and carrying handle

* cleaned and detailed front panel and knobs

There is one remaining glitch: the VOX is VERY sensitive and trips too easily unless headphones are used. The anti-vox appears to be at fault.

$475.00 plus shipping from Zip Code 20902

Please contact off-list, if interested. I can ship Tuesday.

Many thanks and 73,

Craig
W3CRR

crgrbrts@...

[Non-text portions of this message have been removed]

43367. TS-830s Service Manual typos and revisions

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-14 13:20:48 UTC
From: r_krohne@sbcglobal.net
Topic: 43367 Message: 43367

Group,

Reading through the posts here and elsewhere I have often seen mention of typos in the service manual. Does anyone have a list of the typos and/or their page numbers? The service manual that I have run across for download has "revised addition" on the front page. One manual I have seen for purchase on hybridrestore.com lists a Third Edition service manual. Which manual is the most current and presumably the most accurate?

Thanks,
Ralph (KB1ZYI)

43368. TS-820s display and associated issues

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-14 15:48:31 UTC
From: n4eyz
Topic: 43368 Message: 43368

I'm a relatively new owner of a TS-820s. Been licensed since 1978 and wanted an 820 back then but with a new growing family the money just wasn't there for such a rig. Built a HW-101 and never regretted that move. But still always wanted a Kenwood. I also have a 706MKIIG. Anyway found this 820 last year and just within the past week finally got it on the air. All seems well except a small vfo issue. I'm a little familiar with the display issues that plague the 820s. Mine is pretty stable until I tune below 14.200, then it starts to flicker and blank out. On other bands it will behave somewhat the same especially if I tune very fast. Is this pretty much the same as what most of them do concerning the display problems?

I'm not at all afraid to delve into the rig, but want to be sure this is the same problem. I have basic troubleshooting skills and some equipment. I repaired more stuff my accident than intentional! :)

Wayne
n4eyz

43369. Re: [TS-520_820_530_830] TS-820s display and associated issues

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-14 16:40:09 UTC
From: W5RKL
Topic: 43368 Message: 43369

Wayne,

The key here is the same symptoms are occurring on ALL bands at the same dial setting.

The problem, based on your comments, is not a "display problem" that many hams tend to believe. As you said when the VFO is tuned to the same dial setting on ALL bands the same symptoms occur. That tells you the problem is not caused by the display but rather the VFO. The problem is corrosion/dirt build up inside the 820's VFO at the connection between the VFO's variable capacitor shaft and the variable capacitor's frame. This connection is made by a brass "fork" that slides between the capacitor's shaft and frame. I refer to this connection as the Variable capacitors shaft to frame connection.

Do NOT attempt the following cleaning process with the 820 plugged into AC mains. ALWAYS disconnect the equipment from the wall outlet BEFORE attempting any cleaning of the 820. When removing the top cover, use care to ensure you do not break the connection to the internal speaker. The speaker cable is plugged into the speaker bracket, so carefully pull the plug the orient the cable so it's out of your way then lay the top cover aside. Repeat this process in reverse when testing. Do NOT power up the 820 without the speaker connected or an external speaker connected (external speaker plugged into the rear panel ext spkr socket)

Remove the 820's top cover, orient the 820 so the front panel is facing you, the VFO is the square metal enclosure that's in the middle and closest to the front panel. Look on the right side of the VFO enclosure you will see a small cover plate held to the enclosure by 2 small phillips head screws. Loosen the rear screw then remove the other screw. Rotate the cover plate so you can see inside the VFO. You will see the variable capacitor shaft with plates attached. Look to the rear of the capacitor shaft and you will see the fork connection that needs to be cleaned. Apply contact cleaner to this connection then rotate the VFO knob throughout it's travel in both directions, several times. Use canned air (available at Walmart) or compressed air and blow out the cleaner residue while rotating the VFO know "again". Let the 820 sit for 5 minutes or so then power up the 820 to see if the symptoms are still there. Rotate the VFO knob throughout its travel in both directions to be sure. If you still see the symptoms, repeat the cleaning process. This may take you several cleaning attempts to get this connection point cleaned. Once the symptoms are gone, close up the side panel and replace the top cover. Always follow the cleaner's warnings printed on the can. Use generous amounts of canned air or compressed air to remove any/all cleaner residue after cleaning before testing. Always let the equipment sit for a least 5 minutes (see warnings on the cleaner can) before

applying power! Some cleaners are flammable and it only takes a small spark to ignite the cleaner. Never turn canned air UPSIDE DOWN!! Doing so will allow the propellent to escape and if you get it on your fingers, it can cause frostbite burns (the cleaner propellent is very cold!!!). Do NOT use WD-40 as a cleaning agent!!! I hear/read where some hams have been using WD-40 to clean but I do not recommend it!! By the way, WD-40 is "Flammable"!!! DeoXit F5 is a Fader control that cleans and lubricates. It too is Flammable. Craig products such as DeoXit D5 and F5 cleaners, have non-flammable products so check their website. I use DeoXit D5 for cleaning switches and switch shaft bearing detents (does wonders to free up stiff shaft bearing detentes). I follow with light weight lubricating oil applied with a clean Q Tip pressed hard against the bear detente where the shaft protrudes. This allows the light weight lubricant to flow into the bearing detent lubricating the detente. I don't spray the lubricant, the Q Tip pressed against the shaft and bearing detente assembly works best. After applying the lubricant I rotate the shaft several times throughout its travel to allow the lubricant to apply itself to the bearing and detente. Wipe up any excess that may flow on the shaft and outer part of the bearing assembly with a clean cloth.

73
Mike W5RKL

On 7/14/2013 10:48 AM, n4eyz wrote:
>
> I'm a relatively new owner of a TS-820s. Been licensed since 1978 and
> wanted an 820 back then but with a new growing family the money just
> wasn't there for such a rig. Built a HW-101 and never regretted that
> move. But still always wanted a Kenwood. I also have a 706MKIIG.
> Anyway found this 820 last year and just within the past week finally
> got it on the air. All seems well except a small vfo issue. I'm a
> little familiar with the display issues that plague the 820s. Mine is
> pretty stable until I tune below 14.200, then it starts to flicker and
> blank out. On other bands it will behave somewhat the same especially
> if I tune very fast. Is this pretty much the same as what most of them
> do concerning the display problems?
>
> I'm not at all afraid to delve into the rig, but want to be sure this
> is the same problem. I have basic troubleshooting skills and some
> equipment. I repaired more stuff my accident than intentional! :)
>
> Wayne
> n4eyz
>
>

[Non-text portions of this message have been removed]

43370. Re: TS-830s Service Manual typos and revisions

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-14 16:23:19 UTC
From: r_krohne@sbcglobal.net
Topic: 43367 Message: 43370

Even I make typos,"edition"

--- In TS-520_820_530_830@yahoogroups.com, "r_krohne@..." <r_krohne@...> wrote:
>
> Group,
>
> Reading through the posts here and elsewhere I have often seen mention of typos in the service manual. Does anyone have a list of the typos and/or their page numbers? The service manual that I have run across for download has "revised addition" on the front page. One manual I have seen for purchase on hybridrestore.com lists a Third Edition service manual. Which manual is the most current and presumably the most accurate?
>
> Thanks,
> Ralph (KB1ZYI)
>

43371. Question on TS-830S IF Board

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-14 16:24:52 UTC
From: Don Allen
Topic: 43368 Message: 43371

I'm a new group member, and recently acquired a TS-830S. I've owned other Kenwood gear since the mid-70s, but never an 830.

As with any used gear, you "pay your money, and take your chances." Overall, this 830 is in excellent shape, except it has one mod which I would like to address here. If anyone has any ideas what this may be for, please let me know. As you know, the 830 has two IF outputs on the back panel. However, the previous owner has added another RCA jack on the back panel, and the RG-174 coax goes beneath the IF board to a point very near Q19 on the board. The coax center lead is soldered to a pad on the board through a 100K resistor. I haven't removed the board to determine exactly where the tie-point is, as this observation is through visual inspection only from the chassis side of the IF board.

Any ideas what this added jack and mod might be used for? I remember adding such a mod to my TS-520S in the late '70s for an IF output to drive the BS-5 in my SM-220. However, isn't this what the IF Out 1 (low-level) and IF Out 2 (high-level) jacks are used for on the 830?

Tnx,
Don W9CW

43372. Re: WTB, Kenwood twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-14 16:33:24 UTC
From: nb9g73
Topic: 43240 Message: 43372

Here is a pair for sale.(not mine !!)

http://forums.qrz.com/showthread.php?398176-Kenwood-Twins-T-599-amp-R-599

43373. Re: WTB, Kenwood twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-14 16:37:39 UTC
From: nb9g73
Topic: 43240 Message: 43373

--- In TS-520_820_530_830@yahoogroups.com, "kf5wbs" <kf5wbs@...> wrote:
>
> I have returned to ham radio after a very long (career long) absence and would like to set up my old shack. I would like to find a set of "minty" Kenwood twins with cables. If you have a set that needs a new home please contact me.
>
> Thanks so much
>
> Tom
> KF5WBS
>
Find a pair here. Sorry if this is a double post. P/S This is not my add or my twins.

http://forums.qrz.com/showthread.php?398176-Kenwood-Twins-T-599-amp-R-599

43374. Re: [TS-520_820_530_830] Question on TS-830S IF Board

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-14 16:56:17 UTC
From: W5RKL
Topic: 43368 Message: 43374

Tom,

Although I am not positive, that added connection and socket could have been made to connect the SM-220 with the BS-8 Pan Adapter or possibly an adapter for other purposes a previous owner may have been using.

I suspect you could remove the cable and resistor from the IF board without resulting in any problem(s). However, having said that, if the 830 is operating fine the way it is then simply leave the cable and resistor connection to the rear RCA socket in place. The less movement/dismounting and pulling of plugs from the board, the less chance there is of creating additional intermittent problems such as creating breaks/cracks in PC board foil runs. So, again, if the 830's operating fine then leave it alone!

73
Mike W5RKL

On 7/14/2013 11:24 AM, Don Allen wrote:
>
> I'm a new group member, and recently acquired a TS-830S. I've owned
> other Kenwood gear since the mid-70s, but never an 830.
>
> As with any used gear, you "pay your money, and take your chances."
> Overall, this 830 is in excellent shape, except it has one mod which I
> would like to address here. If anyone has any ideas what this may be
> for, please let me know. As you know, the 830 has two IF outputs on the
> back panel. However, the previous owner has added another RCA jack on
> the back panel, and the RG-174 coax goes beneath the IF board to a point
> very near Q19 on the board. The coax center lead is soldered to a pad
> on the board through a 100K resistor. I haven't removed the board to
> determine exactly where the tie-point is, as this observation is through
> visual inspection only from the chassis side of the IF board.
>
> Any ideas what this added jack and mod might be used for? I remember
> adding such a mod to my TS-520S in the late '70s for an IF output to
> drive the BS-5 in my SM-220. However, isn't this what the IF Out 1
> (low-level) and IF Out 2 (high-level) jacks are used for on the 830?
>
> Tnx,
> Don W9CW
>
>

[Non-text portions of this message have been removed]

43375. Re: [TS-520_820_530_830] Question on TS-830S IF Board

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-14 17:02:49 UTC
From: W5RKL
Topic: 43368 Message: 43375

I misspoke. The rear panel RCA socket, RG-174 coax cable and resistor that may be connecting to Q19 on the IF board is NOT an SM-220 BS-8 adapter as I first thought. Looking at the 830's IF board schematic, it appears that cable and rear panel RCA socket is for connecting external audio processing equipment, something I would not recommend. You can leave the cable in place.

73
Mike W5RKL

On 7/14/2013 11:56 AM, W5RKL wrote:
>
> Tom,
>
> Although I am not positive, that added connection and socket could have
> been made to connect the SM-220 with the BS-8 Pan Adapter or possibly an
> adapter for other purposes a previous owner may have been using.
>
> I suspect you could remove the cable and resistor from the IF board
> without resulting in any problem(s). However, having said that, if the
> 830 is operating fine the way it is then simply leave the cable and
> resistor connection to the rear RCA socket in place. The less
> movement/dismounting and pulling of plugs from the board, the less
> chance there is of creating additional intermittent problems such as
> creating breaks/cracks in PC board foil runs. So, again, if the 830's
> operating fine then leave it alone!
>
> 73
> Mike W5RKL
>
> On 7/14/2013 11:24 AM, Don Allen wrote:
> >
> > I'm a new group member, and recently acquired a TS-830S. I've owned
> > other Kenwood gear since the mid-70s, but never an 830.
> >
> > As with any used gear, you "pay your money, and take your chances."
> > Overall, this 830 is in excellent shape, except it has one mod which I
> > would like to address here. If anyone has any ideas what this may be
> > for, please let me know. As you know, the 830 has two IF outputs on the
> > back panel. However, the previous owner has added another RCA jack on
> > the back panel, and the RG-174 coax goes beneath the IF board to a point
> > very near Q19 on the board. The coax center lead is soldered to a pad
> > on the board through a 100K resistor. I haven't removed the board to
> > determine exactly where the tie-point is, as this observation is through
> > visual inspection only from the chassis side of the IF board.

> >
> > Any ideas what this added jack and mod might be used for? I remember
> > adding such a mod to my TS-520S in the late '70s for an IF output to
> > drive the BS-5 in my SM-220. However, isn't this what the IF Out 1
> > (low-level) and IF Out 2 (high-level) jacks are used for on the 830?
> >
> > Tnx,
> > Don W9CW
> >
> >
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

43376. Re: [TS-520_820_530_830] Question on TS-830S IF Board

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-14 17:24:03 UTC
From: Don Allen
Topic: 43368 Message: 43376

Mike,

That's what I considered, as the two stock IF outputs can be used to drive a SM-220/BS-8. I didn't think of the audio processing possibility, but did think that it may be a mod for use with a Telepost LP-PAN panadaptor for example.

I will just leave it alone.

73
Don W9CW

On 7/14/2013 12:02 PM, W5RKL wrote:
>
> I misspoke. The rear panel RCA socket, RG-174 coax cable and resistor
> that may be connecting to Q19 on the IF board is NOT an SM-220 BS-8
> adapter as I first thought. Looking at the 830's IF board schematic, it
> appears that cable and rear panel RCA socket is for connecting external
> audio processing equipment, something I would not recommend. You can
> leave the cable in place.
>
> 73
> Mike W5RKL
>
> On 7/14/2013 11:56 AM, W5RKL wrote:
> >
> > Tom,
> >
> > Although I am not positive, that added connection and socket could have
> > been made to connect the SM-220 with the BS-8 Pan Adapter or possibly an
> > adapter for other purposes a previous owner may have been using.
> >
> > I suspect you could remove the cable and resistor from the IF board
> > without resulting in any problem(s). However, having said that, if the
> > 830 is operating fine the way it is then simply leave the cable and
> > resistor connection to the rear RCA socket in place. The less
> > movement/dismounting and pulling of plugs from the board, the less
> > chance there is of creating additional intermittent problems such as
> > creating breaks/cracks in PC board foil runs. So, again, if the 830's
> > operating fine then leave it alone!
> >
> > 73
> > Mike W5RKL
> >
> > On 7/14/2013 11:24 AM, Don Allen wrote:
> > >

> > > I'm a new group member, and recently acquired a TS-830S. I've owned
> > > other Kenwood gear since the mid-70s, but never an 830.
> > >
> > > As with any used gear, you "pay your money, and take your chances."
> > > Overall, this 830 is in excellent shape, except it has one mod which I
> > > would like to address here. If anyone has any ideas what this may be
> > > for, please let me know. As you know, the 830 has two IF outputs
> on the
> > > back panel. However, the previous owner has added another RCA jack on
> > > the back panel, and the RG-174 coax goes beneath the IF board to a
> point
> > > very near Q19 on the board. The coax center lead is soldered to a pad
> > > on the board through a 100K resistor. I haven't removed the board to
> > > determine exactly where the tie-point is, as this observation is
> through
> > > visual inspection only from the chassis side of the IF board.
> > >
> > > Any ideas what this added jack and mod might be used for? I remember
> > > adding such a mod to my TS-520S in the late '70s for an IF output to
> > > drive the BS-5 in my SM-220. However, isn't this what the IF Out 1
> > > (low-level) and IF Out 2 (high-level) jacks are used for on the 830?
> > >
> > > Tnx,
> > > Don W9CW
> > >
> > >
> >
> > [Non-text portions of this message have been removed]
> >
> >
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

43377. Re: TS-820s display and associated issues

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-14 17:43:57 UTC
From: Terry Wagoner
Topic: 43368 Message: 43377

If I might add to Mikes advice regards WD-40.

DO NOT lubricate the rotor shaft wiper contact with any kind of lubricant.

This can defeat the purpose of this contact by insulating it from its mating machined contact area on the end of the rotor shaft. The whole idea is you want a very high conductive rotary contact for RF currents to flow from the rotary plates to the capacitor frame. This is why they do not rely on the ball bearings and ball race at the shaft end for the RF path. The ball bearings and race is where you want some light lubricant(typically grease and not oil) not at the contact wiper end of the shaft.

The rotor shaft contact wiper is made of Phosphor Bronze and heat treated to give it just the correct spring tension to apply on the machined face of the rotor shaft. Over time especially if the VFO does not get much exercise or is limited in its travel this contact area can oxidize (dark discolored and perhaps greenish color).

Also, you do not know what previous owners have sprayed here. If a lubricant it can be attracting dust. So it is best to follow Mikes good advice and clean with DeOxit and blow out with canned air and DO NOT lubricate. As Mike notes this may take more than one cleaning cycle.

Also, never reach in with a screw driver or other tool and attempt to press on the wiper. You could bend it and/or change its contact pressure. I actually saw this advice on another forum and have heard it recommended on the air. Very poor advice.

Lastly, DO NOT apply any conductive grease to the rotor shaft wiper contact. Some people recommend using a silver or carbon impregnated grease to lube this contact. I dont like the idea of a conductive grease applied inside the VFO where I cannot control possible migration.

In short clean, exercise, and blow out with canned air and then use your radio. This applies to all the Hybrid air variable tuning capacitors.

OK for you real old timers yes Cardwell use to sell a special grease in a small tube. I once had a tube, but do not remember what it was for. I do not know what the composition was and my guess is that it was for the front ball bearing race and not the rotor shaft wiper contact. If anyone has a tube maybe can see if any instructions are on it. I looked at a 1940s Cardwell catalog and did not see the grease listed.

My 3 cents worth.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, W5RKL <w5rkl@...> wrote:
>
> Wayne,
>
> The key here is the same symptoms are occurring on ALL bands at the same

> dial setting.
>
> The problem, based on your comments, is not a "display problem" that
> many hams tend to believe. As you said when the VFO is tuned to the same
> dial setting on ALL bands the same symptoms occur. That tells you the
> problem is not caused by the display but rather the VFO. The problem is
> corrosion/dirt build up inside the 820's VFO at the connection between
> the VFO's variable capacitor shaft and the variable capacitor's frame.
> This connection is made by a brass "fork" that slides between the
> capacitor's shaft and frame. I refer to this connection as the Variable
> capacitors shaft to frame connection.
>
> Do NOT attempt the following cleaning process with the 820 plugged into
> AC mains. ALWAYS disconnect the equipment from the wall outlet BEFORE
> attempting any cleaning of the 820. When removing the top cover, use
> care to ensure you do not break the connection to the internal speaker.
> The speaker cable is plugged into the speaker bracket, so carefully pull
> the plug the orient the cable so it's out of your way then lay the top
> cover aside. Repeat this process in reverse when testing. Do NOT power
> up the 820 without the speaker connected or an external speaker
> connected (external speaker plugged into the rear panel ext spkr socket)
>
> Remove the 820's top cover, orient the 820 so the front panel is facing
> you, the VFO is the square metal enclosure that's in the middle and
> closest to the front panel. Look on the right side of the VFO enclosure
> you will see a small cover plate held to the enclosure by 2 small
> phillips head screws. Loosen the rear screw then remove the other
> screw. Rotate the cover plate so you can see inside the VFO. You will
> see the variable capacitor shaft with plates attached. Look to the rear
> of the capacitor shaft and you will see the fork connection that needs
> to be cleaned. Apply contact cleaner to this connection then rotate the
> VFO knob throughout it's travel in both directions, several times. Use
> canned air (available at Walmart) or compressed air and blow out the
> cleaner residue while rotating the VFO know "again". Let the 820 sit for
> 5 minutes or so then power up the 820 to see if the symptoms are still
> there. Rotate the VFO knob throughout its travel in both directions to
> be sure. If you still see the symptoms, repeat the cleaning process.
> This may take you several cleaning attempts to get this connection point
> cleaned. Once the symptoms are gone, close up the side panel and replace
> the top cover. Always follow the cleaner's warnings printed on the can.
> Use generous amounts of canned air or compressed air to remove any/all
> cleaner residue after cleaning before testing. Always let the equipment
> sit for a least 5 minutes (see warnings on the cleaner can) before
> applying power! Some cleaners are flammable and it only takes a small
> spark to ignite the cleaner. Never turn canned air UPSIDE DOWN!! Doing
> so will allow the propellent to escape and if you get it on your
> fingers, it can cause frostbite burns (the cleaner propellent is very
> cold!!!). Do NOT use WD-40 as a cleaning agent!!! I hear/read where some
> hams have been using WD-40 to clean but I do not recommend it!! By the
> way, WD-40 is "Flammable"!!! DeoXit F5 is a Fader control that cleans

> and lubricates. It too is Flammable. Craig products such as DeoXit D5
> and F5 cleaners, have non-flammable products so check their website. I
> use DeoXit D5 for cleaning switches and switch shaft bearing detents
> (does wonders to free up stiff shaft bearing detentes). I follow with
> light weight lubricating oil applied with a clean Q Tip pressed hard
> against the bear detente where the shaft protrudes. This allows the
> light weight lubricant to flow into the bearing detent lubricating the
> detente. I don't spray the lubricant, the Q Tip pressed against the
> shaft and bearing detente assembly works best. After applying the
> lubricant I rotate the shaft several times throughout its travel to
> allow the lubricant to apply itself to the bearing and detente. Wipe up
> any excess that may flow on the shaft and outer part of the bearing
> assembly with a clean cloth.
>
> 73
> Mike W5RKL
>
>
>
> On 7/14/2013 10:48 AM, n4eyz wrote:
> >
> > I'm a relatively new owner of a TS-820s. Been licensed since 1978 and
> > wanted an 820 back then but with a new growing family the money just
> > wasn't there for such a rig. Built a HW-101 and never regretted that
> > move. But still always wanted a Kenwood. I also have a 706MKIIG.
> > Anyway found this 820 last year and just within the past week finally
> > got it on the air. All seems well except a small vfo issue. I'm a
> > little familiar with the display issues that plague the 820s. Mine is
> > pretty stable until I tune below 14.200, then it starts to flicker and
> > blank out. On other bands it will behave somewhat the same especially
> > if I tune very fast. Is this pretty much the same as what most of them
> > do concerning the display problems?
> >
> > I'm not at all afraid to delve into the rig, but want to be sure this
> > is the same problem. I have basic troubleshooting skills and some
> > equipment. I repaired more stuff my accident than intentional! :)
> >
> > Wayne
> > n4eyz
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

43378. Re: Question on TS-830S IF Board

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-14 18:17:31 UTC
From: Terry Wagoner
Topic: 43368 Message: 43378

This sounds like a Phone Patch input. See page 26 of your instruction manual. A factory approved Mod.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don Allen <w9cw@...> wrote:
>
> I'm a new group member, and recently acquired a TS-830S. I've owned
> other Kenwood gear since the mid-70s, but never an 830.
>
> As with any used gear, you "pay your money, and take your chances."
> Overall, this 830 is in excellent shape, except it has one mod which I
> would like to address here. If anyone has any ideas what this may be
> for, please let me know. As you know, the 830 has two IF outputs on the
> back panel. However, the previous owner has added another RCA jack on
> the back panel, and the RG-174 coax goes beneath the IF board to a point
> very near Q19 on the board. The coax center lead is soldered to a pad
> on the board through a 100K resistor. I haven't removed the board to
> determine exactly where the tie-point is, as this observation is through
> visual inspection only from the chassis side of the IF board.
>
> Any ideas what this added jack and mod might be used for? I remember
> adding such a mod to my TS-520S in the late '70s for an IF output to
> drive the BS-5 in my SM-220. However, isn't this what the IF Out 1
> (low-level) and IF Out 2 (high-level) jacks are used for on the 830?
>
> Tnx,
> Don W9CW
>

43379. Re: [TS-520_820_530_830] Re: Question on TS-830S IF Board

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-14 18:34:38 UTC
From: Don Allen
Topic: 43368 Message: 43379

Terry,

You are correct, that's exactly what it is! I must have missed that in
the manual. I've noted there are at least a couple of versions of
instruction manuals for the 830.

73
Don W9CW

On 7/14/2013 1:17 PM, Terry Wagoner wrote:
>
> This sounds like a Phone Patch input. See page 26 of your instruction
> manual. A factory approved Mod.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don Allen <w9cw@...> wrote:
> >
> > I'm a new group member, and recently acquired a TS-830S. I've owned
> > other Kenwood gear since the mid-70s, but never an 830.
> >
> > As with any used gear, you "pay your money, and take your chances."
> > Overall, this 830 is in excellent shape, except it has one mod which I
> > would like to address here. If anyone has any ideas what this may be
> > for, please let me know. As you know, the 830 has two IF outputs on the
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> > the back panel, and the RG-174 coax goes beneath the IF board to a
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> > very near Q19 on the board. The coax center lead is soldered to a pad
> > on the board through a 100K resistor. I haven't removed the board to
> > determine exactly where the tie-point is, as this observation is
> through
> > visual inspection only from the chassis side of the IF board.
> >
> > Any ideas what this added jack and mod might be used for? I remember
> > adding such a mod to my TS-520S in the late '70s for an IF output to
> > drive the BS-5 in my SM-220. However, isn't this what the IF Out 1
> > (low-level) and IF Out 2 (high-level) jacks are used for on the 830?
> >
> > Tnx,
> > Don W9CW
> >
>
>

[Non-text portions of this message have been removed]

43380. Re: TS-830s Service Manual typos and revisions

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-14 19:19:44 UTC
From: Terry Wagoner
Topic: 43367 Message: 43380

The TS-830 Instruction Manual and Service manuals are pretty good. They do contain typos that are just that and perhaps translation issues, but generally no where near the number of serious errors that the TS-820 documentation contains.

I call a serious error calling out the wrong test point, the wrong adjustment point, and the wrong acceptance criteria.

Examples of typos would be adjust the Carrier "Contr-L" or the Noise "Blankes". These are of no consequence.

A serious example is on Page 28 of the Instruction Manual Sect 6 Maintenance Section which tells you to adjust TC-2 Trimmer to balance the Carrier and the correct Trimmer is TC-3. TC-2 is the VBT carrier osc frequency adjust. Now what will you do if you have already adjusted TC-2 and didnt get any change in carrier null? How will you get TC-2 reset? Not the end of the world but not what you needed.

To avoid this kind of thing dont just adjust the pot or trimmer cap that is called out. Look at the schematic and see if what you are being directed to do makes sense to you. In the above example you would have located the Balanced Modulator ring diodes and seen that TC-3 is the proper trimmer cap and not TC-2. If you had gone to TC-2 on the board you would have noticed a crystal sitting next to it and no ring diodes. Warning bells should go off as should be no crystal associated with the Balanced Modulator and trimmer cap and diodes should be in close physical proximity.

An additional concern is that there are errors on the schematics and on the silk screen labeling on the boards. It depends on what generation board you have installed. Boards are commonly swapped out. There are definite differences especially on the AF and IF boards.

Examples include R199 on the IF board that feeds the AGC bus line may be labeled as R149. There may be two R149 labels on the IF board. The 2nd and correct resistor is at the Speech processor Limiter IC.

There are several electrolytic capacitors that are installed reverse polarity (plus lead to chassis ground) and the silk screen and schematic shows them mounted with Negative lead to ground. They are installed correctly and the schematic and board labels are wrong. If you find a cap installed reverse of the schematic or board labeling do not assume that the as built configuration is wrong. Study the circuit or come back and ask before you change it to match the schematic.

Also there are errors on most of the schematics. Some minor and others not so minor. Look at the SG relay contact on the HV rectifier board and the SG switch and see if the contact is shown correctly for the SG off. Should it be a NC or NO contact? The schematic is supposed to reflect the rig in RX mode with no signal at antenna input. So is SG switch shown correctly?

Step 2 of the Service manual tells you to adjust the "Base" current and it means Bias current. It is a typo, but should say adjust the Bias Voltage to obtain a Plate Idling

current of 60ma. You dont adjust Bias Current.

The acceptance waveform for VBT adjustment in Step 23 of the Service Manual is reversed. The correct waveforms are shown in Step 22.

RF detector voltage divider resistor is mislabeled. Called out as 10 ohms and is 10K.

There are others. I do not have what I would consider a complete list compiled that I can send you. I just mark up my documentation as I find them.

As far as I know the 3rd Edition of the Service manual is the latest.

Sorry so long.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "r_krohne@..." <r_krohne@...> wrote:
>
> Group,
>
> Reading through the posts here and elsewhere I have often seen mention of typos in the service manual. Does anyone have a list of the typos and/or their page numbers? The service manual that I have run across for download has "revised addition" on the front page. One manual I have seen for purchase on hybridrestore.com lists a Third Edition service manual. Which manual is the most current and presumably the most accurate?
>
> Thanks,
> Ralph (KB1ZYI)
>

43381. Re: [TS-520_820_530_830] Re: Question on TS-830S IF Board

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-14 19:32:02 UTC
From: W5RKL
Topic: 43368 Message: 43381

I agree but it's not connected to Q32 as the manual states but rather
Q19. R111, C103 and C104 are no where near to nor do they connect to the
input of Q32.

73
Mike W5RKL

On 7/14/2013 1:17 PM, Terry Wagoner wrote:
>
> This sounds like a Phone Patch input. See page 26 of your instruction
> manual. A factory approved Mod.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don Allen <w9cw@...> wrote:
> >
> > I'm a new group member, and recently acquired a TS-830S. I've owned
> > other Kenwood gear since the mid-70s, but never an 830.
> >
> > As with any used gear, you "pay your money, and take your chances."
> > Overall, this 830 is in excellent shape, except it has one mod which I
> > would like to address here. If anyone has any ideas what this may be
> > for, please let me know. As you know, the 830 has two IF outputs on the
> > back panel. However, the previous owner has added another RCA jack on
> > the back panel, and the RG-174 coax goes beneath the IF board to a
> point
> > very near Q19 on the board. The coax center lead is soldered to a pad
> > on the board through a 100K resistor. I haven't removed the board to
> > determine exactly where the tie-point is, as this observation is
> through
> > visual inspection only from the chassis side of the IF board.
> >
> > Any ideas what this added jack and mod might be used for? I remember
> > adding such a mod to my TS-520S in the late '70s for an IF output to
> > drive the BS-5 in my SM-220. However, isn't this what the IF Out 1
> > (low-level) and IF Out 2 (high-level) jacks are used for on the 830?
> >
> > Tnx,
> > Don W9CW
> >
>
>

[Non-text portions of this message have been removed]

43382. Re: [TS-520_820_530_830] Re: Question on TS-830S IF Board

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-14 19:52:42 UTC
From: Don Allen
Topic: 43368 Message: 43382

In my original post, I stated Q19. And, that's the transistor specified on Page 26 (upper-left hand side) in my instruction manual. Here's the paragraph in question verbatim:

"For those operators who desire a Patch input similar to the TS-520S or TS-820S, an input connection and terminal must be added at the Mic input preamp circuit. Use a 100k Ohm resistor in series, with a 10k Ohm to ground on the input side of teh 100k Ohm resistor. Use shielded line, and connect as follows:

On the IF unit X48-1290-00 install the fixed divider at the junction of R111 10k Ohm, C103 100pf, and C104 1uF (input of Q19). Add an RCA jack at one of the predrilled hole on the rear panel for input."

Q32 is not referred to in my manual within this subject area... I wonder how many instruction manual revisions exist?

This instruction manual is 25312 B50-2738-00 (G) (K)

73
Don W9CW

On 7/14/2013 2:32 PM, W5RKL wrote:
>
> I agree but it's not connected to Q32 as the manual states but rather
> Q19. R111, C103 and C104 are no where near to nor do they connect to the
> input of Q32.
>
> 73
> Mike W5RKL
>

> On 7/14/2013 1:17 PM, Terry Wagoner wrote:
> >
> > This sounds like a Phone Patch input. See page 26 of your instruction
> > manual. A factory approved Mod.
> >
> > Terry K9TW
>

[Non-text portions of this message have been removed]

43383. Re: [TS-520_820_530_830] Re: Question on TS-830S IF Board

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-14 20:35:02 UTC
From: W5RKL
Topic: 43368 Message: 43383

As Terry said, there are mistakes in the manuals. The 830 pdf operator's manual I have says "Q32". The following is what's stated on page "25" in the pdf copy of the 830 manual I have:

"On the IF unit X48-1290-00 install the fixed divider at the junction of R111 10K, C103 100pfd and C104 1ufd (nput of Q32). Add an RCA jack on one of the predrilled hole on the rear panel for input"

Mike W5RKL

On 7/14/2013 2:52 PM, Don Allen wrote:
>
> In my original post, I stated Q19. And, that's the transistor specified
> on Page 26 (upper-left hand side) in my instruction manual. Here's the
> paragraph in question verbatim:
>
> "For those operators who desire a Patch input similar to the TS-520S or
> TS-820S, an input connection and terminal must be added at the Mic input
> preamp circuit. Use a 100k Ohm resistor in series, with a 10k Ohm to
> ground on the input side of teh 100k Ohm resistor. Use shielded line,
> and connect as follows:
>
> On the IF unit X48-1290-00 install the fixed divider at the junction of
> R111 10k Ohm, C103 100pf, and C104 1uF (input of Q19). Add an RCA jack
> at one of the predrilled hole on the rear panel for input."
>
> Q32 is not referred to in my manual within this subject area... I
> wonder how many instruction manual revisions exist?
>
> This instruction manual is 25312 B50-2738-00 (G) (K)
>
> 73
> Don W9CW
>
> On 7/14/2013 2:32 PM, W5RKL wrote:
> >
> > I agree but it's not connected to Q32 as the manual states but rather
> > Q19. R111, C103 and C104 are no where near to nor do they connect to the
> > input of Q32.
> >
> > 73
> > Mike W5RKL
> >
>
> > On 7/14/2013 1:17 PM, Terry Wagoner wrote:
> > >

> > > This sounds like a Phone Patch input. See page 26 of your instruction
> > > manual. A factory approved Mod.
> > >
> > > Terry K9TW
> >
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

43384. Re: TS-820s display and associated issues

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-14 21:53:51 UTC
From: n4eyz
Topic: 43368 Message: 43384

Mike,

Many thanks for the repair instructions. I will do exactly as you have said. I remember reading probably on this board concerning that connection problem. That's what I'll do. Thanks again!

Wayne
n4eyz

--- In TS-520_820_530_830@yahoogroups.com, W5RKL <w5rkl@...> wrote:
>
> Wayne,
>
> The key here is the same symptoms are occurring on ALL bands at the same
> dial setting.
>
> The problem, based on your comments, is not a "display problem" that
> many hams tend to believe. As you said when the VFO is tuned to the same
> dial setting on ALL bands the same symptoms occur. That tells you the
> problem is not caused by the display but rather the VFO. The problem is
> corrosion/dirt build up inside the 820's VFO at the connection between
> the VFO's variable capacitor shaft and the variable capacitor's frame.
> This connection is made by a brass "fork" that slides between the
> capacitor's shaft and frame. I refer to this connection as the Variable
> capacitors shaft to frame connection.
>
> Do NOT attempt the following cleaning process with the 820 plugged into
> AC mains. ALWAYS disconnect the equipment from the wall outlet BEFORE
> attempting any cleaning of the 820. When removing the top cover, use
> care to ensure you do not break the connection to the internal speaker.
> The speaker cable is plugged into the speaker bracket, so carefully pull
> the plug the orient the cable so it's out of your way then lay the top
> cover aside. Repeat this process in reverse when testing. Do NOT power
> up the 820 without the speaker connected or an external speaker
> connected (external speaker plugged into the rear panel ext spkr socket)
>
> Remove the 820's top cover, orient the 820 so the front panel is facing
> you, the VFO is the square metal enclosure that's in the middle and
> closest to the front panel. Look on the right side of the VFO enclosure
> you will see a small cover plate held to the enclosure by 2 small
> phillips head screws. Loosen the rear screw then remove the other
> screw. Rotate the cover plate so you can see inside the VFO. You will
> see the variable capacitor shaft with plates attached. Look to the rear
> of the capacitor shaft and you will see the fork connection that needs
> to be cleaned. Apply contact cleaner to this connection then rotate the
> VFO knob throughout it's travel in both directions, several times. Use

> canned air (available at Walmart) or compressed air and blow out the
> cleaner residue while rotating the VFO know "again". Let the 820 sit for
> 5 minutes or so then power up the 820 to see if the symptoms are still
> there. Rotate the VFO knob throughout its travel in both directions to
> be sure. If you still see the symptoms, repeat the cleaning process.
> This may take you several cleaning attempts to get this connection point
> cleaned. Once the symptoms are gone, close up the side panel and replace
> the top cover. Always follow the cleaner's warnings printed on the can.
> Use generous amounts of canned air or compressed air to remove any/all
> cleaner residue after cleaning before testing. Always let the equipment
> sit for a least 5 minutes (see warnings on the cleaner can) before
> applying power! Some cleaners are flammable and it only takes a small
> spark to ignite the cleaner. Never turn canned air UPSIDE DOWN!! Doing
> so will allow the propellent to escape and if you get it on your
> fingers, it can cause frostbite burns (the cleaner propellent is very
> cold!!!). Do NOT use WD-40 as a cleaning agent!!! I hear/read where some
> hams have been using WD-40 to clean but I do not recommend it!! By the
> way, WD-40 is "Flammable"!!! DeoXit F5 is a Fader control that cleans
> and lubricates. It too is Flammable. Craig products such as DeoXit D5
> and F5 cleaners, have non-flammable products so check their website. I
> use DeoXit D5 for cleaning switches and switch shaft bearing detents
> (does wonders to free up stiff shaft bearing detentes). I follow with
> light weight lubricating oil applied with a clean Q Tip pressed hard
> against the bear detente where the shaft protrudes. This allows the
> light weight lubricant to flow into the bearing detent lubricating the
> detente. I don't spray the lubricant, the Q Tip pressed against the
> shaft and bearing detente assembly works best. After applying the
> lubricant I rotate the shaft several times throughout its travel to
> allow the lubricant to apply itself to the bearing and detente. Wipe up
> any excess that may flow on the shaft and outer part of the bearing
> assembly with a clean cloth.
>
> 73
> Mike W5RKL
>
>
>
> On 7/14/2013 10:48 AM, n4eyz wrote:
> >
> > I'm a relatively new owner of a TS-820s. Been licensed since 1978 and
> > wanted an 820 back then but with a new growing family the money just
> > wasn't there for such a rig. Built a HW-101 and never regretted that
> > move. But still always wanted a Kenwood. I also have a 706MKIIG.
> > Anyway found this 820 last year and just within the past week finally
> > got it on the air. All seems well except a small vfo issue. I'm a
> > little familiar with the display issues that plague the 820s. Mine is
> > pretty stable until I tune below 14.200, then it starts to flicker and
> > blank out. On other bands it will behave somewhat the same especially
> > if I tune very fast. Is this pretty much the same as what most of them
> > do concerning the display problems?

> >
> > I'm not at all afraid to delve into the rig, but want to be sure this
> > is the same problem. I have basic troubleshooting skills and some
> > equipment. I repaired more stuff my accident than intentional! :)
> >
> > Wayne
> > n4eyz
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

43385. Kenwood SM 220 Repair

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-14 22:18:47 UTC
From: michmlbrn
Topic: 43385 Message: 43385

Who would be good to contact regarding the repair of an SM 220 station monitor. I've got one here that has me stumped. Thanks, Mike

43386. Re: Question on TS-830S IF Board

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-14 23:00:33 UTC
From: Terry Wagoner
Topic: 43368 Message: 43386

Mike:

Take a look at the manuals on Dick Housdens W0NTA website. He tries to get latest revs and uses some means to enhance the quality and brighten them up. I have more than one hard copy of the TS-830 instruction and service manuals, but I also downloaded PDF copies off Dicks site as well.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, W5RKL <w5rkl@...> wrote:
>
> As Terry said, there are mistakes in the manuals. The 830 pdf operator's
> manual I have says "Q32". The following is what's stated on page "25" in
> the pdf copy of the 830 manual I have:
>
> "On the IF unit X48-1290-00 install the fixed divider at the junction of
> R111 10K, C103 100pfd and C104 1ufd (nput of Q32). Add an RCA jack on
> one of the predrilled hole on the rear panel for input"
>
> Mike W5RKL
>
> On 7/14/2013 2:52 PM, Don Allen wrote:
> >
> > In my original post, I stated Q19. And, that's the transistor specified
> > on Page 26 (upper-left hand side) in my instruction manual. Here's the
> > paragraph in question verbatim:
> >
> > "For those operators who desire a Patch input similar to the TS-520S or
> > TS-820S, an input connection and terminal must be added at the Mic input
> > preamp circuit. Use a 100k Ohm resistor in series, with a 10k Ohm to
> > ground on the input side of teh 100k Ohm resistor. Use shielded line,
> > and connect as follows:
> >
> > On the IF unit X48-1290-00 install the fixed divider at the junction of
> > R111 10k Ohm, C103 100pf, and C104 1uF (input of Q19). Add an RCA jack
> > at one of the predrilled hole on the rear panel for input."
> >
> > Q32 is not referred to in my manual within this subject area... I
> > wonder how many instruction manual revisions exist?
> >
> > This instruction manual is 25312 B50-2738-00 (G) (K)
> >
> > 73
> > Don W9CW
> >
> > On 7/14/2013 2:32 PM, W5RKL wrote:

> > >
> > > I agree but it's not connected to Q32 as the manual states but rather
> > > Q19. R111, C103 and C104 are no where near to nor do they connect to the
> > > input of Q32.
> > >
> > > 73
> > > Mike W5RKL
> > >
> >
> > > On 7/14/2013 1:17 PM, Terry Wagoner wrote:
> > > >
> > > > This sounds like a Phone Patch input. See page 26 of your instruction
> > > > manual. A factory approved Mod.
> > > >
> > > > Terry K9TW
> > >
> >
> > [Non-text portions of this message have been removed]
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

43387. Re: Kenwood SM 220 Repair

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-14 23:45:25 UTC
From: Terry Wagoner
Topic: 43385 Message: 43387

This forum is the place. What is the problem?

Lots of SM220 owners here. Gordon N6WK has repaired his share and Dave VK5PDL has experience with them. I have repaired power supplies (HV diodes and caps do fail).

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "michmlbrn" <michmlbrn@...> wrote:
>
> Who would be good to contact regarding the repair of an SM 220 station monitor. I've got one here that has me stumped. Thanks, Mike
>

43388. Re: [TS-520_820_530_830] Re: Kenwood SM 220 Repair

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-15 01:04:54 UTC
From: michmlbrn@...
Topic: 43385 Message: 43388

Well, this unit was in storage for about 10 years. I decided to set the station back up and the SM 220 was the last item to go back online. It worked fine for a while, now it has little or no display on the screen.

-----Original Message-----
From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com>
Sent: Sun, Jul 14, 2013 7:45 pm
Subject: [TS-520_820_530_830] Re: Kenwood SM 220 Repair

This forum is the place. What is the problem?

Lots of SM220 owners here. Gordon N6WK has repaired his share and Dave VK5PDL has experience with them. I have repaired power supplies (HV diodes and caps do fail).

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "michmlbrn" <michmlbrn@...> wrote:
>
> Who would be good to contact regarding the repair of an SM 220 station monitor. I've got one here that has me stumped. Thanks, Mike
>

[Non-text portions of this message have been removed]

43389. Re: [TS-520_820_530_830] Re: Kenwood SM 220 Repair

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-15 01:51:09 UTC
From: Don Allen
Topic: 43385 Message: 43389

Terry's last sentence is the logical starting place for
troubleshooting... HV power supply for the horizontal sweep circuit.

Don W9CW

On 7/14/2013 8:04 PM, michmlbrn@... wrote:
>
>
> Well, this unit was in storage for about 10 years. I decided to set
> the station back up and the SM 220 was the last item to go back
> online. It worked fine for a while, now it has little or no display on
> the screen.
>
> -----Original Message-----
> From: Terry Wagoner <wagstw46@... <mailto:wagstw46%40yahoo.com>>
> To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>>
> Sent: Sun, Jul 14, 2013 7:45 pm
> Subject: [TS-520_820_530_830] Re: Kenwood SM 220 Repair
>
> This forum is the place. What is the problem?
>
> Lots of SM220 owners here. Gordon N6WK has repaired his share and Dave
> VK5PDL has experience with them. I have repaired power supplies (HV
> diodes and caps do fail).
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "michmlbrn"
> <michmlbrn@...> wrote:
> >
> > Who would be good to contact regarding the repair of an SM 220
> station monitor. I've got one here that has me stumped. Thanks, Mike
> >
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

43390. Getting close with the 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-15 02:15:31 UTC
From: Barry
Topic: 43390 Message: 43390

A friend in our ham group did a great job yesterday getting my 820 transmitting after spraying some contact cleaner into the Load and Drive areas. I figured I would open it up today and clean more of it.

I pulled several connectors and cleaned them. Plugging it back in the display came up showing 9.000, so it looks like I'll be opening it back up tomorrow to see what's not together tightly.

Is there anything in particular I should look for?

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

43391. Re: Kenwood SM 220 Repair

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-15 02:28:14 UTC
From: Terry Wagoner
Topic: 43385 Message: 43391

If you have Dim display it sounds like you have problem with the -1300HV supply. It provides Intensity and Focus potential for the CRT. Do you have a meter that can measure this level?

If the voltage is low or missing the common failure is the HV filter caps and diodes. Look on the schematic and you will see D112 and D113 doubler rectifiers. Need to test them. Also most likely have bad filter caps C139 and C140 .1 uf at 1KV wvdc. Will have to use subs for the diodes. Can place regular silicon rectifier diodes in series if you cannot locate suitable subs. TV flyback diodes will work.

If you cannot measure the voltage then just test the diodes and caps and replace. If you cant test then just replace as the caps have some age on them.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, michmlbrn@... wrote:
>
>
> Well, this unit was in storage for about 10 years. I decided to set the station back up and the SM 220 was the last item to go back online. It worked fine for a while, now it has little or no display on the screen.
>
>
> -----Original Message-----
> From: Terry Wagoner <wagstw46@...>
> To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com>
> Sent: Sun, Jul 14, 2013 7:45 pm
> Subject: [TS-520_820_530_830] Re: Kenwood SM 220 Repair
>
>
>
>
>
>
>
> This forum is the place. What is the problem?
>
> Lots of SM220 owners here. Gordon N6WK has repaired his share and Dave VK5PDL has experience with them. I have repaired power supplies (HV diodes and caps do fail).
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "michmlbrn" <michmlbrn@> wrote:
> >
> > Who would be good to contact regarding the repair of an SM 220 station monitor. I've got one here that has me stumped. Thanks, Mike
> >

>
>
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>
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>
> [Non-text portions of this message have been removed]
>

43392. Re: Kenwood SM 220 Repair

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-15 02:42:09 UTC
From: Terry Wagoner
Topic: 43385 Message: 43392

NTE-525 2000 piv fast recovery diodes will work, but pricey. Radio Shack on Ebay has them listed at $7.60 each. Use Poly Film caps. Mouser should have them.

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> If you have Dim display it sounds like you have problem with the -1300HV supply. It provides Intensity and Focus potential for the CRT. Do you have a meter that can measure this level?
>
> If the voltage is low or missing the common failure is the HV filter caps and diodes. Look on the schematic and you will see D112 and D113 doubler rectifiers. Need to test them. Also most likely have bad filter caps C139 and C140 .1 uf at 1KV wvdc. Will have to use subs for the diodes. Can place regular silicon rectifier diodes in series if you cannot locate suitable subs. TV flyback diodes will work.
>
> If you cannot measure the voltage then just test the diodes and caps and replace. If you cant test then just replace as the caps have some age on them.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, michmlbrn@ wrote:
> >
> >
> > Well, this unit was in storage for about 10 years. I decided to set the station back up and the SM 220 was the last item to go back online. It worked fine for a while, now it has little or no display on the screen.
> >
> >
> > -----Original Message-----
> > From: Terry Wagoner <wagstw46@>
> > To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com>
> > Sent: Sun, Jul 14, 2013 7:45 pm
> > Subject: [TS-520_820_530_830] Re: Kenwood SM 220 Repair
> >
> >
> >
> >
> >
> >
> >
> > This forum is the place. What is the problem?
> >
> > Lots of SM220 owners here. Gordon N6WK has repaired his share and Dave VK5PDL has experience with them. I have repaired power supplies (HV diodes and caps do fail).
> >
> > Terry K9TW

> >
> > --- In TS-520_820_530_830@yahoogroups.com, "michmlbrn" <michmlbrn@> wrote:
> > >
> > > Who would be good to contact regarding the repair of an SM 220 station monitor. I've got one here that has me stumped. Thanks, Mike
> > >
> >
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> >
> > [Non-text portions of this message have been removed]
> >
>

43393. Re: Kenwood SM 220 Repair

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-15 11:30:13 UTC
From: Terry Wagoner
Topic: 43385 Message: 43393

I see that there are NTE-638 TV flyback damper diodes rated at 1600PIV @2.5A listed on Ebay (Radio Shack) for $2.06 each with free shipping.

As I mentioned in first post OK to put two common 1000piv silicon diodes in series in each leg, but a single diode is a cleaner installation.

Terry K9TW

>
>

43394. RE: [TS-520_820_530_830] Re: Kenwood SM 220 Repair

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-15 11:45:01 UTC
From: fpath fpath
Topic: 43385 Message: 43394

HI Michael,

You will most probably find it is the HV PIO caps, these tend to leak or dry out I have repaired a number of these, but it could also be the diodes or bad solder joints in the HV area. I have tracked down NOS PIO 1kv and 2KV caps in the past from EBAY and replaced them all, so far no apparent issues after 2 years. The PIO caps when they leak are pretty dangerous and usually are a carcinogenetic substance. I have seen where people have replaced the PIO caps with polyester caps, they seem to work OK. I'd suggest replacing all the HV PIO caps with same values and voltages. But most importantly make sure you discharge the HV before touching that circuit, it stings quite a lot! Let us know how you go and we can help you out.

73s

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: michmlbrn@...
Date: Sun, 14 Jul 2013 21:04:54 -0400
Subject: Re: [TS-520_820_530_830] Re: Kenwood SM 220 Repair

Well, this unit was in storage for about 10 years. I decided to set the station back up and the SM 220 was the last item to go back online. It worked fine for a while, now it has little or no display on the screen.

-----Original Message-----
From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com>
Sent: Sun, Jul 14, 2013 7:45 pm
Subject: [TS-520_820_530_830] Re: Kenwood SM 220 Repair

This forum is the place. What is the problem?

Lots of SM220 owners here. Gordon N6WK has repaired his share and Dave VK5PDL has experience with them. I have repaired power supplies (HV diodes and caps do fail).

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "michmlbrn" <michmlbrn@...> wrote:
>
> Who would be good to contact regarding the repair of an SM 220 station monitor. I've got one here that has me stumped. Thanks, Mike
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

43395. RE: [TS-520_820_530_830] Re: Kenwood SM 220 Repair

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-15 11:56:33 UTC
From: fpath fpath
Topic: 43385 Message: 43395

Michael,

When you first power on do you see a trace? If you do and then it starts to fade it will be C139 1KV, C140 1KV, C137 2KV, C138 2KV or C135 2KV every one I have repaired with this symptom it has always been one of theses caps, I always replace all three. If you do have a trace and it starts to fade you can use a can of freeze spray on the centre of the HV and give it a short blast, usually the trace will come back and then fade again.

Dave

VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: michmlbrn@...
Date: Sun, 14 Jul 2013 21:04:54 -0400
Subject: Re: [TS-520_820_530_830] Re: Kenwood SM 220 Repair

Well, this unit was in storage for about 10 years. I decided to set the station back up and the SM 220 was the last item to go back online. It worked fine for a while, now it has little or no display on the screen.

-----Original Message-----
From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com>
Sent: Sun, Jul 14, 2013 7:45 pm
Subject: [TS-520_820_530_830] Re: Kenwood SM 220 Repair

This forum is the place. What is the problem?

Lots of SM220 owners here. Gordon N6WK has repaired his share and Dave VK5PDL has experience with them. I have repaired power supplies (HV diodes and caps do fail).

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "michmlbrn" <michmlbrn@...> wrote:
>
> Who would be good to contact regarding the repair of an SM 220 station monitor. I've got one here that has me stumped. Thanks, Mike
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

43396. Re: [TS-520_820_530_830] Re: Question on TS-830S IF Board

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-15 14:50:44 UTC
From: Mike
Topic: 43368 Message: 43396

Terry and others,

I checked W0NTA's website for manuals. I downloaded the 830 and 820 manuals to compare to the ones I have. I must say W0NTA's manuals are much better, cleaner, better fold out pages, especially the 820 service manual! I plan on comparing all of W0TNA's manuals against the manuals I have.

While comparing the difference in manuals, I also see where page 25 in the W0NTA 830 manual shows the phone patch mod is connected to the input of Q19, NOT Q32 as it is in the 830 phone patch mod mentioned in the 830 manual I had. I am not surprised at the difference in the manuals since I've had to reference manuals over the years and have noticed quite a few errors in manuals, whether service, operator, and/or assembly manuals. The key is to have a good understanding of what the mod does. For example, in the case of the phone patch mod in the 830 manual that provides a similar phone patch connection that's in the 520, the incorrect 830 manual says to connect to the input of Q32 on the IF Unit board. If one looks at Q32 on the IF Unit board schematic one will notice it has nothing to do with "audio"in the speech amplifier's signal path to the BM (Balanced Modulator). Q19, on the other hand, is in the speech amplifier's signal path to the balance modulator and when one compares the 830 mod to the factory phone patch circuit in the TS-520andknowing what a phone patch actually does, one would see the mistake made in the 830 manual where it references connecting the 830 phone patch mod to the input of Q32 and that the input to Q32 has nothing to do with phone patch audio.

73
Mike W5RKL

On 7/14/2013 6:00 PM, Terry Wagoner wrote:
>
> Mike:
>
> Take a look at the manuals on Dick Housdens W0NTA website. He tries to
> get latest revs and uses some means to enhance the quality and
> brighten them up. I have more than one hard copy of the TS-830
> instruction and service manuals, but I also downloaded PDF copies off
> Dicks site as well.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, W5RKL <w5rkl@...> wrote:
> >

> > As Terry said, there are mistakes in the manuals. The 830 pdf
> operator's
> > manual I have says "Q32". The following is what's stated on page
> "25" in
> > the pdf copy of the 830 manual I have:
> >
> > "On the IF unit X48-1290-00 install the fixed divider at the
> junction of
> > R111 10K, C103 100pfd and C104 1ufd (nput of Q32). Add an RCA jack on
> > one of the predrilled hole on the rear panel for input"
> >
> > Mike W5RKL
> >
> > On 7/14/2013 2:52 PM, Don Allen wrote:
> > >
> > > In my original post, I stated Q19. And, that's the transistor
> specified
> > > on Page 26 (upper-left hand side) in my instruction manual. Here's the
> > > paragraph in question verbatim:
> > >
> > > "For those operators who desire a Patch input similar to the
> TS-520S or
> > > TS-820S, an input connection and terminal must be added at the Mic
> input
> > > preamp circuit. Use a 100k Ohm resistor in series, with a 10k Ohm to
> > > ground on the input side of teh 100k Ohm resistor. Use shielded line,
> > > and connect as follows:
> > >
> > > On the IF unit X48-1290-00 install the fixed divider at the
> junction of
> > > R111 10k Ohm, C103 100pf, and C104 1uF (input of Q19). Add an RCA jack
> > > at one of the predrilled hole on the rear panel for input."
> > >
> > > Q32 is not referred to in my manual within this subject area... I
> > > wonder how many instruction manual revisions exist?
> > >
> > > This instruction manual is 25312 B50-2738-00 (G) (K)
> > >
> > > 73
> > > Don W9CW
> > >
> > > On 7/14/2013 2:32 PM, W5RKL wrote:
> > > >
> > > > I agree but it's not connected to Q32 as the manual states but
> rather
> > > > Q19. R111, C103 and C104 are no where near to nor do they
> connect to the
> > > > input of Q32.
> > > >
> > > > 73

> > > > Mike W5RKL
> > > >
> > >
> > > > On 7/14/2013 1:17 PM, Terry Wagoner wrote:
> > > > >
> > > > > This sounds like a Phone Patch input. See page 26 of your
> instruction
> > > > > manual. A factory approved Mod.
> > > > >
> > > > > Terry K9TW
> > > >
> > >
> > > [Non-text portions of this message have been removed]
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> > [Non-text portions of this message have been removed]
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43397. Re: [TS-520_820_530_830] Re: Kenwood SM 220 Repair

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-15 09:53:50 UTC
From: michmlbrn@...
Topic: 43385 Message: 43397

Well, If someone would be so kind as to look at this, I would be quite grateful....

-----Original Message-----
From: Terry Wagoner <wagstw46@yahoo.com>
To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com>
Sent: Sun, Jul 14, 2013 7:45 pm
Subject: [TS-520_820_530_830] Re: Kenwood SM 220 Repair

This forum is the place. What is the problem?

Lots of SM220 owners here. Gordon N6WK has repaired his share and Dave VK5PDL has experience with them. I have repaired power supplies (HV diodes and caps do fail).

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "michmlbrn" <michmlbrn@...> wrote:
>
> Who would be good to contact regarding the repair of an SM 220 station monitor. I've got one here that has me stumped. Thanks, Mike
>

[Non-text portions of this message have been removed]

43398. Re: Question on TS-830S IF Board

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-15 19:46:26 UTC
From: Terry Wagoner
Topic: 43368 Message: 43398

Mike:

Yes not to knock what Gordon has done for all of us in the free manual area, however, Dicks manuals are top shelf. I think he and Mark Gilger have collaborated on these?

Yes Q32 is the Moni buffer amp and takes a very low level sample of the modulated 8.830Mhz TIF amp output and demodulates it. Cant imagine why any mod would want to inject anything at input of Q32 and certainly not audio. Of course have seen some pretty strange mods. By the way I know you understand this Mike but for those who may not just a reminder if you are going to use the Moni feature that you must have the Heaters on and the Drive Control peaked so you can get ALC action at Gate 2 of the TIF amp. Otherwise the audio you will hear in your headphones will not be the quality level you want to hear.

Yes I always tell people never just blindly do what any of the Kenwood (or any other manufacturer) manuals directs you to do. Need to ask yourself what is the intention of the step? What is the expected outcome? Does the Test Point make sense? Does the Adjustment Point make sense? Does the Acceptance Criteria make sense? This last one takes some level of experience. For example, you have to know that Carrier Osc level or LO levels are not typically 50mv. Also helps if you can recognize a Balanced Mod or Product Detector configuration when you see it on the schematic and on the IF board. Just takes time.

If you have not downloaded the high res TS-820 schematics from Ken K4EAA site should do that as well. I have them on my desk top.

73s
Terry K9TW

43399. Re: Kenwood SM 220 Repair

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-15 19:48:56 UTC
From: Terry Wagoner
Topic: 43385 Message: 43399

Mike:

Are you asking someone to repair it for you?

If so, contact me off the forum regards billing rates,packing, shipping etc.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, michmlbrn@... wrote:
>
>
> Well, If someone would be so kind as to look at this, I would be quite grateful....
>
>
> -----Original Message-----
> From: Terry Wagoner <wagstw46@...>
> To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com>
> Sent: Sun, Jul 14, 2013 7:45 pm
> Subject: [TS-520_820_530_830] Re: Kenwood SM 220 Repair
>
>
>
>
>
>
>
> This forum is the place. What is the problem?
>
> Lots of SM220 owners here. Gordon N6WK has repaired his share and Dave VK5PDL has experience with them. I have repaired power supplies (HV diodes and caps do fail).
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "michmlbrn" <michmlbrn@> wrote:
> >
> > Who would be good to contact regarding the repair of an SM 220 station monitor. I've got one here that has me stumped. Thanks, Mike
> >
>
>
>
>
>
>
>
>
>
> [Non-text portions of this message have been removed]

>

43400. Re: [TS-520_820_530_830] Re: Question on TS-830S IF Board

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-15 21:22:56 UTC
From: W5RKL
Topic: 43368 Message: 43400

Terry, I have the high res TS-830 schematic, in color. That's the best schematic to use when identifying components and for troubleshooting an 830. Anyone who has not yet downloaded this schematic yet intends on servicing their 830, they should download and study it.

Gordon has provided an excellent free manual service on his website, I still have a lot of manuals from his website and I intend on keeping them. The ones I will discard are the ones that I got from other websites that are difficult to read, fuzzy, and incomplete.

73
Mike W5RKL

On 7/15/2013 2:46 PM, Terry Wagoner wrote:
>
> Mike:
>
> Yes not to knock what Gordon has done for all of us in the free manual
> area, however, Dicks manuals are top shelf. I think he and Mark Gilger
> have collaborated on these?
>
> Yes Q32 is the Moni buffer amp and takes a very low level sample of
> the modulated 8.830Mhz TIF amp output and demodulates it. Cant imagine
> why any mod would want to inject anything at input of Q32 and
> certainly not audio. Of course have seen some pretty strange mods. By
> the way I know you understand this Mike but for those who may not just
> a reminder if you are going to use the Moni feature that you must have
> the Heaters on and the Drive Control peaked so you can get ALC action
> at Gate 2 of the TIF amp. Otherwise the audio you will hear in your
> headphones will not be the quality level you want to hear.
>
> Yes I always tell people never just blindly do what any of the Kenwood
> (or any other manufacturer) manuals directs you to do. Need to ask
> yourself what is the intention of the step? What is the expected
> outcome? Does the Test Point make sense? Does the Adjustment Point
> make sense? Does the Acceptance Criteria make sense? This last one
> takes some level of experience. For example, you have to know that
> Carrier Osc level or LO levels are not typically 50mv. Also helps if
> you can recognize a Balanced Mod or Product Detector configuration
> when you see it on the schematic and on the IF board. Just takes time.
>
> If you have not downloaded the high res TS-820 schematics from Ken
> K4EAA site should do that as well. I have them on my desk top.
>
> 73s
> Terry K9TW

>
>

[Non-text portions of this message have been removed]

43401. Re: Question on TS-830S IF Board

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-15 23:47:21 UTC
From: Terry Wagoner
Topic: 43368 Message: 43401

Yes I have the TS-830 color one blown up and laminated and then a couple of non-laminated ones and one of them is my working copy that has lots of mark ups and notes and is starting to get pretty ragged. I have one spare new one from Ken K4EAA still in the mailing tube so I am good for a long time.

Also, I have the blown up TS-520 laminated (gift from Jimmy WB2KNR) and TS-820 blown up and laminated, but not in color. Just got the TS-530 series from Dave VK5PDL as a nice surprise gift.

I hate the PDF schematics that are cut in two or three sections that find commonly on other sites. The cut or split often doesnt overlay properly and almost always is the point you want to look at. I have had to deal with that with Heath, Drake and Collins schmatics. A real pain.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, W5RKL <w5rkl@...> wrote:
>
> Terry, I have the high res TS-830 schematic, in color. That's the best
> schematic to use when identifying components and for troubleshooting an
> 830. Anyone who has not yet downloaded this schematic yet intends on
> servicing their 830, they should download and study it.
>
> Gordon has provided an excellent free manual service on his website, I
> still have a lot of manuals from his website and I intend on keeping
> them. The ones I will discard are the ones that I got from other
> websites that are difficult to read, fuzzy, and incomplete.
>
> 73
> Mike W5RKL
>
> On 7/15/2013 2:46 PM, Terry Wagoner wrote:
>

43402. RL-1 relay on TS830S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-16 08:34:51 UTC
From: ravnpeter@ymail.com
Topic: 43402 Message: 43402

How do I remove the plastic cover on the RL-1 relay so that I can inspect the contacts on the relay? I push the cover gently to and fro with my hands, but it will not let go.

Thanks.

OZ8CTH, Peter

43403. Re: [TS-520_820_530_830] RL-1 relay on TS830S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-16 12:04:10 UTC
From: crgrbrts@...
Topic: 43402 Message: 43403

Gently pry the cover away from the base at the two small tabs; one each on opposite sides. They are difficult to see.

73,
Craig
W3CRR
Sent via BlackBerry by AT&T

-----Original Message-----
From: "ravnpeter@..." <fasan5@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Tue, 16 Jul 2013 08:34:51
To: <TS-520_820_530_830@yahoogroups.com>
Reply-to: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] RL-1 relay on TS830S

How do I remove the plastic cover on the RL-1 relay so that I can inspect the contacts on the relay? I push the cover gently to and fro with my hands, but it will not let go.

Thanks.

OZ8CTH, Peter

[Non-text portions of this message have been removed]

43404. Re: RL-1 relay on TS830S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-16 12:56:55 UTC
From: Terry Wagoner
Topic: 43402 Message: 43404

The cover does not come off easy as the fit/clearance at the tab area is very tight. It is not hermetically sealed but darned close. Can try a small thin flat blade screwdriver or X-acto hobby knife (I hate to see blood on the audio board!).

I do not recommend that you remove the cover. The contacts are small and it is easy to damage the armature leafs. Any cleaning you can do will not last long in my experience. You are far better off to buy a replacement relay from Ken K4EAA or from Jim at HybridRestore while the sub relays are still available.

A replacement relay will eliminate about 90% of the intermittent conditions you may be experiencing. Not a difficult task to replace one. Should last another 30 years.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "ravnpeter@..." <fasan5@...> wrote:
>
> How do I remove the plastic cover on the RL-1 relay so that I can inspect the contacts on the relay? I push the cover gently to and fro with my hands, but it will not let go.
>
> Thanks.
>
> OZ8CTH, Peter
>

43405. TS 530 Display shows " 0. .0"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-16 12:29:20 UTC
From: audiodoctor2000
Topic: 43405 Message: 43405

My 530 all of a sudden shows this on the display. This is the only issue. The rig tunes frequencies normally.Rx Tx functions normally. Reflowed the solder joints, and feed throughs on the counter board during an overhaul 9 months ago, with no issues till now. Haven't opened the rig to troubleshoot yet, but any suggestions would help. Thanks. Eric KA2PVT

43406. Re: TS 530 Display shows " 0. .0"

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-16 14:22:49 UTC
From: Terry Wagoner
Topic: 43405 Message: 43406

I am curious why you reheated the solder connections on the TS-530 counter board? It is very different configuration from the TS-820 and does not suffer the same problems with vias. I assume you were having some sort of display problem?

Try gently pulling and re-seating the 5 molex connectors on your counter board. Pull straight up and avoid side to side rocking force. Try loosening and re-tightening the board mounting screws.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "audiodoctor2000" <e55sh@...> wrote:
>
> My 530 all of a sudden shows this on the display. This is the only issue. The rig tunes frequencies normally.Rx Tx functions normally. Reflowed the solder joints, and feed throughs on the counter board during an overhaul 9 months ago, with no issues till now. Haven't opened the rig to troubleshoot yet, but any suggestions would help. Thanks. Eric KA2PVT
>

43407. Thanks for everybody's help with the 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-16 15:22:44 UTC
From: Barry
Topic: 43407 Message: 43407

I was able to get the 820 responding pretty well, actually, after everybody's help and patience with my questions. I went to a friend's house Saturday who helped me open it up and clean some spots that I didn't already, and now it is actually transmitting pretty well.

After cleaning more of the connectors Sunday night I had inadvertently incorrectly set one of them, so opening it and resetting the connector last night allowed me to fire it up and transmit. I caught a couple of guys talking around 28.361 after hardly ever hearing anybody on the band, so the cleaning helped me talk to them for a little while. Another guy way off heard me really well, so I'm thinking about buying some new tubes to really get this thing going.

Thanks, everybody, for being willing to help out with your vast knowledge and skills. Your help has opened up a new passion, and I'm liking this old school rig in a big way.

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

43408. Re: Economical tubes for an 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-16 15:33:37 UTC
From: Barry
Topic: 43356 Message: 43408

I ordered them today, James, from SurplusSales.com. I called and talked to them on the phone, and they seemed very helpful. Now that my 820 is up and going I'm sure the new tubes will do it a lot of good.

Thanks for your help!

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, "james27613" <james27613@...> wrote:
>
> hi Barry,
>
> GE USA Made military tubes JAN circa 1987 new in box
>
> 6146W $22 (you do not need matched pair in this application)
> 12BY7a $10 (you do not need to replace driver if replacing finals)
>
> http://www.surplussales.com/Tubes-Sock-Acc/TubeSpecials.html
>
> 72 james ke4drn
>

43409. Re: Economical tubes for an 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-16 17:41:17 UTC
From: Terry Wagoner
Topic: 43356 Message: 43409

After installing the new tubes dont forget to set the idling plate current to 60ma in SSB mode with Mic gain turned all the way CCW. Key rig and adjust the bias voltage adjust trimmer pot for 60ma indication with meter selector switch in Ip position.

Also will need to Neutralize. You do this around 21.250mhz. There are different instructions on how to do this in your operating manual and in the service manual. The service manual has you pre-set the neutralizing capacitor plates to half mesh and then load rig to max output. Then flip SG switch off and adjust neutralizing capacitor for minimum RF voltage across 50 ohm dummy load.

No reason to pre-set the cap to half mesh. OK to load to full load in dummy load and then turn off SG switch and leave Heaters turned on. Not likely to take off on you and position of the Plate Load and Plate Tune caps will affect the adjustment.

You will need RF probe and VTVM or O-scope or another receiver to sense the RF voltage and adjust the null. I use a PL-259 with two 100ohm 1/2 watt resistors in parallel across it. Gives place to connect your RF Probe to measure the voltage drop across this mini-dummy load. Key the rig and adjust the neutralizing capacitor for minimum voltage. After adjusting for a null re-adjust the Plate Load and Plate Tune controls for a peak in voltage while monitoring the RF voltage across the dummy load. Not unusual to get more RF voltage. Adjust the neutralizing capacitor again for minimum RF voltage. You can adjust Plate Tune and Plate Load again to see if you get another peak but usually two iterations is enough.

CAUTION: Make sure you use an insulated tool to adjust the neutralizing capacitor. Some folks make them from oak dowel rod. I just use a screw driver that has a blade the fits the slot very well and have the shaft and handle insulated with couple of layers of heat shrink. If you make one from dowel give your self a handle as the neutralizing capacitor turns stiff by design.

They recommend that you do the adjustment with the PA cage cover on which isnt as easy as it could be inserting the tuning tool at an angle thru the provided hole and not being able to see well what you are doing. For that reason I do it with PA cage cover off and just exercise extreme caution around the tube anode voltage.

If you are uncomfortable doing this adjustment might be a good one for your experienced Ham friend to help you with for this first time.

Make sure you turn SG switch back on when done.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@...> wrote:
>
>
>
> I ordered them today, James, from SurplusSales.com. I called and talked to them on the phone, and they seemed very helpful. Now that my 820 is up and going I'm sure the new tubes

will do it a lot of good.
>
> Thanks for your help!
>
> Barry
> KK4RXN
> Jeremiah 29:11-13 / John 3:16
>
> --- In TS-520_820_530_830@yahoogroups.com, "james27613" <james27613@> wrote:
> >
> > hi Barry,
> >
> > GE USA Made military tubes JAN circa 1987 new in box
> >
> > 6146W $22 (you do not need matched pair in this application)
> > 12BY7a $10 (you do not need to replace driver if replacing finals)
> >
> > http://www.surplussales.com/Tubes-Sock-Acc/TubeSpecials.html
> >
> > 72 james ke4drn
> >
>

43410. Re: [TS-520_820_530_830] Thanks for everybody's help with the 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-16 17:53:38 UTC
From: Joseph Stiles
Topic: 43407 Message: 43410

Barry,

  Glad you got it going...I'm also glad, that I could help you in my small way.
Terry/k9tw, gives good council about neutralization...and keeping safe around that nasty 800+ volts
hanging around the final cage

73 Joe
WB7UQU

From: Barry <bonnevilleblb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, July 16, 2013 8:22 AM
Subject: [TS-520_820_530_830] Thanks for everybody's help with the 820

I was able to get the 820 responding pretty well, actually, after everybody's help and patience with my questions. I went to a friend's house Saturday who helped me open it up and clean some spots that I didn't already, and now it is actually transmitting pretty well.

After cleaning more of the connectors Sunday night I had inadvertently incorrectly set one of them, so opening it and resetting the connector last night allowed me to fire it up and transmit. I caught a couple of guys talking around 28.361 after hardly ever hearing anybody on the band, so the cleaning helped me talk to them for a little while. Another guy way off heard me really well, so I'm thinking about buying some new tubes to really get this thing going.

Thanks, everybody, for being willing to help out with your vast knowledge and skills. Your help has opened up a new passion, and I'm liking this old school rig in a big way.

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

[Non-text portions of this message have been removed]

43411. Re: Economical tubes for an 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-16 19:08:39 UTC
From: Terry Wagoner
Topic: 43356 Message: 43411

I forgot to mention that with SG off and flip to Send you may want to first re-peak the Drive control for max ALC indication to have a decent RF voltage level across the mini-dummy load to work with. Then you can insert adjustment tool into Neutralizing capacitor shaft slot and adjust for minimum rf voltage on your VTVM, O-scope, or signal level on other receiver S-meter and speaker audio.

Terry K9TW

>
> Also will need to Neutralize. You do this around 21.250mhz. There are different instructions on how to do this in your operating manual and in the service manual.
>

43412. Re: Thanks for everybody's help with the 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-16 20:43:15 UTC
From: Barry
Topic: 43407 Message: 43412

I'm happy, too, Joe - for a rookie I'm not doing too bad with this thing. I'd never know anything much without everybody here. Neutralization does look pretty tough, so I may have to have some help with that, and hopefully one of the guys in the group here can oversee it.

I will DEFINITELY be careful around that voltage!

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Barry,
>
> Â Glad you got it going...I'm also glad, that I could help you in my small way.
> Terry/k9tw, Â gives good council about neutralization...and keeping safe around that nasty 800+ volts
> hanging around the final cage
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: Barry <bonnevilleblb@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tuesday, July 16, 2013 8:22 AM
> Subject: [TS-520_820_530_830] Thanks for everybody's help with the 820
>
>
>
> Â
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> After cleaning more of the connectors Sunday night I had inadvertently incorrectly set one of them, so opening it and resetting the connector last night allowed me to fire it up and transmit. I caught a couple of guys talking around 28.361 after hardly ever hearing anybody on the band, so the cleaning helped me talk to them for a little while. Another guy way off heard me really well, so I'm thinking about buying some new tubes to really get

this thing going.
>
> Thanks, everybody, for being willing to help out with your vast knowledge and skills. Your help has opened up a new passion, and I'm liking this old school rig in a big way.
>
> Barry
> KK4RXN
> Jeremiah 29:11-13 / John 3:16
>
>
>
>
> [Non-text portions of this message have been removed]
>

43413. TS-820 frequency stability issues

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-16 21:46:11 UTC
From: coyoteinventor@ymail.com
Topic: 43413 Message: 43413

Hello again everybody.

Thanks for the replies in my previous posts; they've been very helpful.

Following the advice from my previous posts, and also closely following some of the other threads like "TS-820s display and associated issues", I went ahead and cleaned all boards in the radio, removing them one at a time, cleaning all pins and ground contacts, and mounting them again. After that, because the frequency would still not sit still most of the time, I proceeded to clean the VFO several more times, following Mike's helpful tip to focus in the rear wiper, now that I know what it is. ;-)

Current status: The frequency is now stable most of the time on bands 20-160m. After leaving it on for several hours (and sometimes I feel it doesn't matter how long it's on for), it starts jumping around maybe 5kHz up and down, very quickly. And sometimes the jumping around goes to the big leagues, where I think the PLL gives up and the frequency does not even stay on the same band (20m is the quickest one to unlock).

On the other bands (15-10m) the PLL never locks. I think I've only seen 15m lock once or twice since I've owned this radio (~3 months), and never on any of the 10m band segments.

So, it still looks like grounding issues, right? I'm just not sure what else to clean. The only thing I can not reach well to clean is the band switch, so not much deoxit is reaching it. I'm not sure how to take the switch out (service manual does not show that), or somehow open the space around it so I can get really close to it to be able to clean it.

I welcome any more advice on what I should try next. :-)

--Cesar-- K1TNT

43414. Re: [TS-520_820_530_830] TS-820 frequency stability issues

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-16 22:53:44 UTC
From: Joseph Stiles
Topic: 43413 Message: 43414

Cesar,

I will assume that you removed, inspected, and cleaned the boards in the "counter unit." That's the box that supplies the info to the digital display tube. This item has been, at times, a real pain to 820s owners. Have you done the recommended resoldering of the "through holes?" These holes connect one side of the boards to the other...they look like solder pads and are supposed to have solder connecting them from side to side. Often over time, these "connections" fail. May I suggest that you removed the unit, and do the repair..if not done already. Also while the boards are out...inspect under BRIGHT light and magnification ALL the solder connections/pads. Check page 40 of the 820S service manual as it has some trouble shooting info regarding this problem

73 Joe
WB7UQU

From: "coyoteinventor@..." <coyoteinventor@hotmail.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, July 16, 2013 2:46 PM
Subject: [TS-520_820_530_830] TS-820 frequency stability issues

Hello again everybody.

Thanks for the replies in my previous posts; they've been very helpful.

Following the advice from my previous posts, and also closely following some of the other threads like "TS-820s display and associated issues", I went ahead and cleaned all boards in the radio, removing them one at a time, cleaning all pins and ground contacts, and mounting them again. After that, because the frequency would still not sit still most of the time, I proceeded to clean the VFO several more times, following Mike's helpful tip to focus in the rear wiper, now that I know what it is. ;-)

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I welcome any more advice on what I should try next. :-)

--Cesar-- K1TNT

[Non-text portions of this message have been removed]

43415. Re: [TS-520_820_530_830] Re: Thanks for everybody's help with the 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-16 23:08:15 UTC
From: Joseph Stiles
Topic: 43407 Message: 43415

Barry,

Making a simple "dummy load" for neutralization is rather easy. As Terry(k9tw) stated..you can use a PL259 connector and a
couple of 100 ohm 1/2 or 1 watt resistors in parallel to get 50 ohms..use this "dummy load" only AFTER you have tuned up for
max power..on 21.225Mhz and a "regular" dummy load. USE an INSULATED tool..or one of wood or plastic! A simple RF probe/detector and a VTVM or DMM will work fine. I like usinga VTVM, as it's got a nice big face and needle...and all you're looking for is a "null" or the lowest reading...a DMM(digital multi-meter)
works too...just a bit more difficult. Make sure to remember to turn off the "SG" switch before you use the "small dummy load"!!!!!!!! and then remember
to turn it back ON...or you will not transmit.

73 Joe
WB7UQU

From: Barry <bonnevilleblb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, July 16, 2013 1:43 PM
Subject: [TS-520_820_530_830] Re: Thanks for everybody's help with the 820

I'm happy, too, Joe - for a rookie I'm not doing too bad with this thing. I'd never know anything much without everybody here. Neutralization does look pretty tough, so I may have to have some help with that, and hopefully one of the guys in the group here can oversee it.

I will DEFINITELY be careful around that voltage!

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Barry,
>
> Â Glad you got it going...I'm also glad, that I could help you in my small way.
> Terry/k9tw, Â gives good council about neutralization...and keeping safe around that nasty 800+ volts
> hanging around the final cage
>
>
> Â
> 73Â Joe
> WB7UQU

>
>
>
> _____
> From: Barry <bonnevilleblb@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tuesday, July 16, 2013 8:22 AM
> Subject: [TS-520_820_530_830] Thanks for everybody's help with the 820
>
>
>
> Â
> I was able to get the 820 responding pretty well, actually, after everybody's help and patience with my questions. I went to a friend's house Saturday who helped me open it up and clean some spots that I didn't already, and now it is actually transmitting pretty well.
>
> After cleaning more of the connectors Sunday night I had inadvertently incorrectly set one of them, so opening it and resetting the connector last night allowed me to fire it up and transmit. I caught a couple of guys talking around 28.361 after hardly ever hearing anybody on the band, so the cleaning helped me talk to them for a little while. Another guy way off heard me really well, so I'm thinking about buying some new tubes to really get this thing going.
>
> Thanks, everybody, for being willing to help out with your vast knowledge and skills. Your help has opened up a new passion, and I'm liking this old school rig in a big way.
>
> Barry
> KK4RXN
> Jeremiah 29:11-13 / John 3:16
>
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

43416. Re: Economical tubes for an 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-16 23:15:33 UTC
From: Terry Wagoner
Topic: 43356 Message: 43416

In case someone prints this and saves it there is one correction.

After making the initial null adjustment DO NOT adjust the Plate Load control. Leave it where it was for max CW rf output into a 50 ohm dummy load. Only adjust the Plate Tune capacitor for a peak in RF voltage across the test dummy load and then repeat the final neutralizing capacitor adjustment for minimum rf voltage.

Terry K9TW

"After adjusting for a null re-adjust the Plate Load and Plate Tune controls for a peak in voltage while monitoring the RF voltage across the dummy load. Not unusual to get more RF voltage. Adjust the neutralizing capacitor again for minimum RF voltage. You can adjust Plate Tune and Plate Load again to see if you get another peak but usually two iterations is enough."

43417. Re: TS-820 frequency stability issues

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-17 01:40:22 UTC
From: coyoteinventor@ymail.com
Topic: 43413 Message: 43417

Thanks Joe, I will look into that. I wish I had am external frequency counter to make sure the problem is only with the display unit.

--Cesar-- K1TNT

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Cesar,
>
> Â I will assume that you removed, inspected, and cleaned the boards in the "counter unit." That's the box that supplies the info to the digital display
> tube. This item has been, at times, a real pain to 820s owners. Have you done the recommended resoldering of the "through holes?" These holes connect
> one side of the boards to the other...they look like solder pads and are supposed to have solder connecting them from side to side. Often over time,
> these "connections" fail. May I suggest that you removed the unit, and do the repair..if not done already. Also while the boards are out...inspect under
> BRIGHT light and magnification ALL the solder connections/pads. Check page 40 of the 820S service manual as it has some trouble shooting
> info regarding this problem
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: "coyoteinventor@..." <coyoteinventor@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tuesday, July 16, 2013 2:46 PM
> Subject: [TS-520_820_530_830] TS-820 frequency stability issues
>
>
>
> Â
> Hello again everybody.
>
> Thanks for the replies in my previous posts; they've been very helpful.
>
> Following the advice from my previous posts, and also closely following some of the other threads like "TS-820s display and associated issues", I went ahead and cleaned all boards in the radio, removing them one at a time, cleaning all pins and ground contacts, and mounting them again. After that, because the frequency would still not sit still most of

the time, I proceeded to clean the VFO several more times, following Mike's helpful tip to focus in the rear wiper, now that I know what it is. ;-)
>
> Current status: The frequency is now stable most of the time on bands 20-160m. After leaving it on for several hours (and sometimes I feel it doesn't matter how long it's on for), it starts jumping around maybe 5kHz up and down, very quickly. And sometimes the jumping around goes to the big leagues, where I think the PLL gives up and the frequency does not even stay on the same band (20m is the quickest one to unlock).
>
> On the other bands (15-10m) the PLL never locks. I think I've only seen 15m lock once or twice since I've owned this radio (~3 months), and never on any of the 10m band segments.
>
> So, it still looks like grounding issues, right? I'm just not sure what else to clean. The only thing I can not reach well to clean is the band switch, so not much deoxit is reaching it. I'm not sure how to take the switch out (service manual does not show that), or somehow open the space around it so I can get really close to it to be able to clean it.
>
> I welcome any more advice on what I should try next. :-)
>
> --Cesar-- K1TNT
>
>
>
>
> [Non-text portions of this message have been removed]
>

43418. Mostly good news on recently-acquired TS-830S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-17 15:43:13 UTC
From: synovial_98
Topic: 43418 Message: 43418

Hi,

I've been tinkering with the latest addition to the herd, a TS-830S.
I bought it (knowingly) with the description that it was working fine, and then one day - voila! - no TX or RX.

When I received it, I checked the paramaters Terry recommended - all was well. Also did a visual and "smell" test, with nothing obvious noted. I did find the "SG" switch on the rear apron in the "off" position - that'd explain the "no TX issue".

Put the covers back on, plugged it in and eureka! - got receive audio! Subsequent power cycles have seen the lack of display being illuminated.

A carefully-placed, calibrated sharp rap to the cabinet just above the display brings the display to life (in all cases so far).

My question is: Aside from opening the rig back up to re-seat connectors and/or loosen/tighten board mounting screws, is there anything that is 830-specific that I should be looking for?

Thanks,
Ken
WB4EJZ

43419. Re: [TS-520_820_530_830] Mostly good news on recently-acquired TS-830S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-17 20:03:20 UTC
From: W5RKL
Topic: 43418 Message: 43419

Sounds to me like the PLL Unit is changing to an "Unlock" state. I say this because you "hinted" that by tapping on the cover the display comes back along with receive. If the 830 receive and transmit fails when the display goes dark then tapping on the cover brings the display back along with both transmit and receive, the problem is not in the Counter Unit or display but rather the PLL Unit is changing to an "Unlock" state. This can be caused by a number of reasons from loss of B+ to the PLL Unit, loss of the VFO and/or CAR signal to the PLL Unit, broken/cracked foil runs on the PLL Unit board, etc. I would check all voltages (see the 830 service manual) to ensure they are present then look for broken/cracked foil runs starting at the plug pins. Make sure the mounting screws are tight since the board's ground is on the edge of the board and at the mounting screw holes on the foil side. You can clean the plugs by pulling "straight up" then pushing the plugs straight down. This results in "scrubbing action" occurring in the plug as the pins slide into the plug. You can use a cotton swab wet with contact cleaner to clean the pins before you put the plug back on.

Read and adhere to the warnings on all contact cleaner labels.

73
Mike W5RKL

On 7/17/2013 10:43 AM, synovial_98 wrote:
>
> Hi,
>
> I've been tinkering with the latest addition to the herd, a TS-830S.
> I bought it (knowingly) with the description that it was working fine,
> and then one day - voila! - no TX or RX.
>
> When I received it, I checked the paramaters Terry recommended - all
> was well. Also did a visual and "smell" test, with nothing obvious
> noted. I did find the "SG" switch on the rear apron in the "off"
> position - that'd explain the "no TX issue".
>
> Put the covers back on, plugged it in and eureka! - got receive audio!
> Subsequent power cycles have seen the lack of display being illuminated.
>
> A carefully-placed, calibrated sharp rap to the cabinet just above the
> display brings the display to life (in all cases so far).
>
> My question is: Aside from opening the rig back up to re-seat
> connectors and/or loosen/tighten board mounting screws, is there

> anything that is 830-specific that I should be looking for?
>
> Thanks,
> Ken
> WB4EJZ
>
>

[Non-text portions of this message have been removed]

43420. Re: [TS-520_820_530_830] Mostly good news on recently-acquired TS-830S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-17 20:14:31 UTC
From: W5RKL
Topic: 43418 Message: 43420

I forgot to mention that quite often cracks/breaks in foil runs occurs when people think they should reheat solder connections for no reason, quite often because someone told them to. Unless there is clear evidence of a bad solder connection, do NOT reheat the connection! The foil runs on the PC boards are very thin and can crack/break when excess heat is applied. Quite often the crack/break cannot be seen, some crack/breaks occurs under the solder pad that you can't see. If you have an analog ohm meter and you suspect there's a break/crack in a foil run, using the ohm meter to test for continuity over the foil run or from a pin to a component lead. A break will show up as an "infinity" reading on the ohm meter. You may be able to inspect a suspected break in a foil run by using a high intensity light shown on the component side and look on the foil side using a magnifying glass. Not only can you find some foil breaks/cracks that way but you can also find shorts due to slivers of solder or very thin wires that lay soldered across points they should be. Don't think this happens? Think again!! It happens quite often.

73
Mike W5RKL

On 7/17/2013 3:03 PM, W5RKL wrote:
>
> Sounds to me like the PLL Unit is changing to an "Unlock" state. I say
> this because you "hinted" that by tapping on the cover the display comes
> back along with receive. If the 830 receive and transmit fails when the
> display goes dark then tapping on the cover brings the display back
> along with both transmit and receive, the problem is not in the Counter
> Unit or display but rather the PLL Unit is changing to an "Unlock"
> state. This can be caused by a number of reasons from loss of B+ to the
> PLL Unit, loss of the VFO and/or CAR signal to the PLL Unit,
> broken/cracked foil runs on the PLL Unit board, etc. I would check all
> voltages (see the 830 service manual) to ensure they are present then
> look for broken/cracked foil runs starting at the plug pins. Make sure
> the mounting screws are tight since the board's ground is on the edge of
> the board and at the mounting screw holes on the foil side. You can
> clean the plugs by pulling "straight up" then pushing the plugs straight
> down. This results in "scrubbing action" occurring in the plug as the
> pins slide into the plug. You can use a cotton swab wet with contact
> cleaner to clean the pins before you put the plug back on.
>
> Read and adhere to the warnings on all contact cleaner labels.
>
> 73
> Mike W5RKL

>
> On 7/17/2013 10:43 AM, synovial_98 wrote:
> >
> > Hi,
> >
> > I've been tinkering with the latest addition to the herd, a TS-830S.
> > I bought it (knowingly) with the description that it was working fine,
> > and then one day - voila! - no TX or RX.
> >
> > When I received it, I checked the paramaters Terry recommended - all
> > was well. Also did a visual and "smell" test, with nothing obvious
> > noted. I did find the "SG" switch on the rear apron in the "off"
> > position - that'd explain the "no TX issue".
> >
> > Put the covers back on, plugged it in and eureka! - got receive audio!
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> >
> > A carefully-placed, calibrated sharp rap to the cabinet just above the
> > display brings the display to life (in all cases so far).
> >
> > My question is: Aside from opening the rig back up to re-seat
> > connectors and/or loosen/tighten board mounting screws, is there
> > anything that is 830-specific that I should be looking for?
> >
> > Thanks,
> > Ken
> > WB4EJZ
> >
> >
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

43421. Re: Economical tubes for an 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-17 14:28:15 UTC
From: Barry
Topic: 43356 Message: 43421

All great information, Terry. I certainly appreciate it. No doubt I will for sure get my friend to help oversee this operation.

Is it okay to replace the driver tube only and wait on the finals? Just plug and go?

And how are you feeling after the hospital stint? I've been praying you'd adjust well to whatever you have had to deal with.

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> In case someone prints this and saves it there is one correction.
>
> After making the initial null adjustment DO NOT adjust the Plate Load control. Leave it where it was for max CW rf output into a 50 ohm dummy load. Only adjust the Plate Tune capacitor for a peak in RF voltage across the test dummy load and then repeat the final neutralizing capacitor adjustment for minimum rf voltage.
>
> Terry K9TW
>
> "After adjusting for a null re-adjust the Plate Load and Plate Tune controls for a peak in voltage while monitoring the RF voltage across the dummy load. Not unusual to get more RF voltage. Adjust the neutralizing capacitor again for minimum RF voltage. You can adjust Plate Tune and Plate Load again to see if you get another peak but usually two iterations is enough."
>

43422. Re: TS 820 Display Error ((Fixed))

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-17 18:55:26 UTC
From: Wm Marvin
Topic: 43363 Message: 43422

Hi Group Thank you that all those that had suggestions for my 820S Display error.

I removed the counter module and the two boards within. Did a close inspection of the top and bottom for something that maybe wrong. The previous owner(s) had already soldered the feedthrough's using fine bare wire(s).
Hence the problem! 3 feedthrough wires were not trimmed close for the excess wire(s) were shorting to a adjacent pad(s)for atleast 2 of the miscut.
I trimmed the excess wire, then washed both top and bottom of the boards and re-inspected to be safe. Then I lightly sanded all jacks,cleaned then treated each with DeOxit Gold.

Reinstalled......problem fixed!!! The person that did the feedthrough's had snake bit himself by NOT inspecting his work. HE
added a new problem.

Now the rig is working like a champ......displat too!

Best DX

Bill KB9IV

--- In TS-520_820_530_830@yahoogroups.com, "Wm Marvin" <wmarvin2@...> wrote:
>
> I have had no luck correcting the display error (9)for the MHZ digit.....i.e 9.150 for 7.150. My 820 front panel looks brand new because someone has reworked everything on and behind the panel.
>
> The Service manual does not show the Counter Unit views but the PLL board is shown. I suspect either the Counter Unit or PLL,maybe, as the receive function is not affected by this display error.
>
> Last night I treated every edge connector and plug-in connector their is and all circuit board mounting screw(s) and was surprized at the overall receive performance increase.....WoW.
>
> I corrected the VFO sticking calibration ring and now the the VFO rotates with little effort using the KB-1 know that was supplied.
>
> Any ideas for the Mhz digit error would be welcome.
>
> Best DX....Bill KB9IV
>

43423. Re: [TS-520_820_530_830] Re: TS 820 Display Error ((Fixed))

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-18 04:25:32 UTC
From: Joseph Stiles
Topic: 43363 Message: 43423

nice job Bill. I think that you'll really enjoy the rig

73 Joe
WB7UQU

From: Wm Marvin <wmarvin2@charter.net>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, July 17, 2013 11:55 AM
Subject: [TS-520_820_530_830] Re: TS 820 Display Error ((Fixed))

Hi Group Thank you that all those that had suggestions for my 820S Display error.

I removed the counter module and the two boards within. Did a close inspection of the top and bottom for something that maybe wrong. The previous owner(s) had already soldered the feedthrough's using fine bare wire(s).
Hence the problem! 3 feedthrough wires were not trimmed close for the excess wire(s) were shorting to a adjacent pad(s)for atleast 2 of the miscut.
I trimmed the excess wire, then washed both top and bottom of the boards and re-inspected to be safe. Then I lightly sanded all jacks,cleaned then treated each with DeOxit Gold.

Reinstalled......problem fixed!!! The person that did the feedthrough's had snake bit himself by NOT inspecting his work. HE
added a new problem.

Now the rig is working like a champ......displat too!

Best DX

Bill KB9IV

--- In TS-520_820_530_830@yahoogroups.com, "Wm Marvin" <wmarvin2@...> wrote:
>
> I have had no luck correcting the display error (9)for the MHZ digit.....i.e 9.150 for 7.150. My 820 front panel looks brand new because someone has reworked everything on and behind the panel.
>
> The Service manual does not show the Counter Unit views but the PLL board is shown. I suspect either the Counter Unit or PLL,maybe, as the receive function is not affected by this display error.
>
> Last night I treated every edge connector and plug-in connector their is and all circuit board mounting screw(s) and was surprized at the overall receive performance increase.....WoW.
>
> I corrected the VFO sticking calibration ring and now the the VFO rotates with little effort using the KB-1 know that was supplied.

>
> Any ideas for the Mhz digit error would be welcome.
>
> Best DX....Bill KB9IV
>

[Non-text portions of this message have been removed]

43424. Re: Economical tubes for an 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-18 06:49:15 UTC
From: w7jpg
Topic: 43356 Message: 43424

Terry, any chance this procedure works for the 830S, also? If not, have you done a similar procedure outline for the 830S? If so, would you mind repeating it here? I can also do the legwork if you would let me know the approximate date you posted it.
Thanks,
Chris
W7JPG

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> In case someone prints this and saves it there is one correction.
>
> After making the initial null adjustment DO NOT adjust the Plate Load control. Leave it where it was for max CW rf output into a 50 ohm dummy load. Only adjust the Plate Tune capacitor for a peak in RF voltage across the test dummy load and then repeat the final neutralizing capacitor adjustment for minimum rf voltage.
>
> Terry K9TW
>
> "After adjusting for a null re-adjust the Plate Load and Plate Tune controls for a peak in voltage while monitoring the RF voltage across the dummy load. Not unusual to get more RF voltage. Adjust the neutralizing capacitor again for minimum RF voltage. You can adjust Plate Tune and Plate Load again to see if you get another peak but usually two iterations is enough."
>

43425. Re: Economical tubes for an 820

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-18 10:56:43 UTC
From: Terry Wagoner
Topic: 43356 Message: 43425

Chris:

Use the same procedure on all Hybrids or any boat anchor for that matter. Only exception is with introduction of the TS-530/TS-830 Kenwood changed the frequency at which you neutralize from 15 meters (around 21.3 mhz) to 10 meters (around 28.8 mhz).

Since the rigs are multiband 160 thru 10 meters the original 21mhz was selected in an attempt to get some benefit across 20 meters thru 10 meters where the tubes are most likely to oscillate at or near the fundamental frequency. Some of the new linear amplifier manufacturers still recommend 15 meters for same reason Kenwood originally did.

Truth is neutralization is really only 100% effective at the band and frequency it is performed at and the place you are most likely to have the tube oscillate is on the highest operating frequency. By the time you get to 40 meters the reactance of the internal plate to grid capacitance is so high it is very unlikely tube will oscillate so if you do not operate on the higher bands (15 and 10 meters) very unlikely anything will happen if you do not neutralize the new replacement tubes. Truth is neutralizing at 21.3 mhz is a compromise.

I had a fellow write me couple years ago to tell me he never neutralized any 6146 tubes he installed and never had tubes take off. He thought it was a lot of hype. I wrote back and told him yes that is possible but suggested he didnt operate on 15 meters or 10 meters and he was taking some risk if he did operate on those bands especially 10 meters. I asked him why he thought Kenwood would go to expense of adding the neutralizing circuitry if not needed. He responded to say he had no antenna for 10 and never operated there, but did operate on 15 and had no problems. I suspect his neutralizing capacitor was set reasonably close and that the Cgp inter-electrode capacitance from tube to tube brand was pretty close to same value.

Point is if you have not neutralized the tubes in your TS-830 you are OK operating on the lower bands.

This is easy to see if you work the reactance of the 6146 plate to control grid inter-electrode capacitance. Xc = 159 x 10 to the -3/F x C. The tube data sheet shows Cgp = .22pf. At 10 meters 28.8mhz the reactance is approx 25k ohm. At 40 meters 7.2mhz the reactance is approx 100k ohms.

Adjusting the Plate Tune control after first null is a procedure refinement that some folks dont use and Kenwood doesnt describe in the manuals. From practice I know you can get a better null by re-adjusting the Tank. So at 28.8mhz you should end up with max RF output occurring right at Plate current dip. As you move away from 28.8mhz to lower bands and lower in frequency the plate current dip will not occur precisely at max RF output. This is OK. Max Rf output will occur at Tank circuit highest impedance as opposed to where the Tank is pure resistive. This is why I always recommend to load to max RF output without exceeding rated Ip. You will be slightly off resonance, but PA is running more efficient at this point.

So short answer is to neutralize your TS-830S use the same procedure I provided and change the frequency from 21.3mhz to 28.8mhz.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "w7jpg" <ckepus@...> wrote:
>
>
>
> Terry, any chance this procedure works for the 830S, also? If not, have you done a similar procedure outline for the 830S? If so, would you mind repeating it here? I can also do the legwork if you would let me know the approximate date you posted it.
> Thanks,
> Chris
> W7JPG
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > In case someone prints this and saves it there is one correction.
> >
> > After making the initial null adjustment DO NOT adjust the Plate Load control. Leave it where it was for max CW rf output into a 50 ohm dummy load. Only adjust the Plate Tune capacitor for a peak in RF voltage across the test dummy load and then repeat the final neutralizing capacitor adjustment for minimum rf voltage.
> >
> > Terry K9TW
> >
> > "After adjusting for a null re-adjust the Plate Load and Plate Tune controls for a peak in voltage while monitoring the RF voltage across the dummy load. Not unusual to get more RF voltage. Adjust the neutralizing capacitor again for minimum RF voltage. You can adjust Plate Tune and Plate Load again to see if you get another peak but usually two iterations is enough."
> >
>

43426. kenwood 599d twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-18 14:19:11 UTC
From: yash@aol.com
Topic: 43426 Message: 43426

Just put the twins on the air,what a pair. Have a coupla of questions.
the r-599d has a aux position on the band switch. the manual talks about putting in a crystal for WWV and peaking it with the aux trimmer. Why couldn't I put a crystal for 17 meters in ,peak it and listen to 17? just listen ,no transmit.
73
dale wt4t

[Non-text portions of this message have been removed]

43427. TS 530S No display or receive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-18 15:54:11 UTC
From: k5hfg
Topic: 43427 Message: 43427

Hello all,
I acquired a 530 as a parts rig and it is in such good condition I do not want to part it out. Serial no. is 3XXXXXX. Better shape than my bench 530 I use for experimentation. After usual switch and molex plug cleaning I checked all voltages at plugs on each board and all checked OK. The display comes on momentarily on start up but fades like the dying embers of the last beach bonfire of the season. I did check voltage on the counter board where I had access but I did not do a thorough check. Plenty of juice flowing. Have never encountered this before. Tried a known good counter board and it did the same. Also, after the first fade out the display will not come back after repeated switch on's until I remove the board and re-install it again. I have scrubbed the pins repeatedly. The rectifier board is pristine and all voltages are present and correct. Have not attempted transmit until this is resolved. What do you have to tell me before I remove the RF board and begin band switch repair. I do have voltage on the band switch. Anyone ever see this before?

I have been out of commission and have not had much time to be in the shack. I have a few projects I am working on but thought I would take some time to try and save this 530 from the cutting torch.

Thanks, 73, K5HFG

43428. Re: kenwood 599d twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-18 16:40:44 UTC
From: Terry Wagoner
Topic: 43426 Message: 43428

Hi Dale:

I bought a TS-830 from you maybe 2 years ago now. Still have it as a spare rig. Do you still have your Hex beam? I spend winters at Fort Myers Beach and remember coming to your canal home in Cape Coral.

Will let the 599 experts help you. Just wanted to say hello.

73s Terry
K9TW

--- In TS-520_820_530_830@yahoogroups.com, "yash@..." <yash@...> wrote:
>
> Just put the twins on the air,what a pair. Have a coupla of questions.
> the r-599d has a aux position on the band switch. the manual talks about putting in a crystal for WWV and peaking it with the aux trimmer. Why couldn't I put a crystal for 17 meters in ,peak it and listen to 17? just listen ,no transmit.
> 73
> dale wt4t
>
>
>
> [Non-text portions of this message have been removed]
>

43429. Re: TS 530S No display or receive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-18 17:04:28 UTC
From: Terry Wagoner
Topic: 43427 Message: 43429

1. Are you saying you cleaned the 5 counter/display board Molex connectors?

2. Does it do this on all bands?

3. Do you have normal receive?

4. Do you have good 12vdc at Conn 1?

5. Do you have good -6vdc at Conn 2?

6. Should also have good low resistance ground from Conn 2 pins 2 and 5 to chassis ground.

7. Trying a known good counter/display board is telling you something. Besides dc power and ground you do not want a BLK or Blanking input. The blanking pulse originates from the PLL when it is unlocked. Normally it just blanks the display. I have not seen it cause a display to slow fade. If you have normal receive this sounds more like a problem with dc supply or ground. I have seen one bad -24vdc T-power supply, but cant remember it causing the slow fade? Maybe bad caps in the t-power supply pi-filter? I am guessing now.

Get on -6 and watch it as you turn on rig and see if it starts and remains stable.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "k5hfg" <dlbowders@...> wrote:
>
> Hello all,
> I acquired a 530 as a parts rig and it is in such good condition I do not want to part it out. Serial no. is 3XXXXXX. Better shape than my bench 530 I use for experimentation. After usual switch and molex plug cleaning I checked all voltages at plugs on each board and all checked OK. The display comes on momentarily on start up but fades like the dying embers of the last beach bonfire of the season. I did check voltage on the counter board where I had access but I did not do a thorough check. Plenty of juice flowing. Have never encountered this before. Tried a known good counter board and it did the same. Also, after the first fade out the display will not come back after repeated switch on's until I remove the board and re-install it again. I have scrubbed the pins repeatedly. The rectifier board is pristine and all voltages are present and correct. Have not attempted transmit until this is resolved. What do you have to tell me before I remove the RF board and begin band switch repair. I do have voltage on the band switch. Anyone ever see this before?
>
> I have been out of commission and have not had much time to be in the shack. I have a few projects I am working on but thought I would take some time to try and save this 530 from the cutting torch.
>
> Thanks, 73, K5HFG
>

43430. Re: TS 530S No display or receive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-18 17:14:50 UTC
From: Terry Wagoner
Topic: 43427 Message: 43430

I goofed better to monitor 12vdc input with power on.

-6VDC was produced from two different display boards so only thing common would be the 12vdc input and ground that is used by each T-power chopper transistors and T1 windings.

Cant be problem with -6vdc supply unless there is something pulling it down at Conn 2 Pin 12 or loads it supplies off the display board.

So still monitor -6vdc on power on and add 12vdc as well.

Terry

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> 1. Are you saying you cleaned the 5 counter/display board Molex connectors?
>
> 2. Does it do this on all bands?
>
> 3. Do you have normal receive?
>
> 4. Do you have good 12vdc at Conn 1?
>
> 5. Do you have good -6vdc at Conn 2?
>
> 6. Should also have good low resistane ground from Conn 2 pins 2 and 5 to chassis ground.
>
> 7. Trying a known good counter/display board is telling you something. Besides dc power and ground you do not want a BLK or Blanking input. The blanking pulse originates from the PLL when it is unlocked. Normally it just blanks the display. I have not seen it cause a display to slow fade. If you have normal receive this sounds more like a problem with dc supply or ground. I have seen one bad -24vdc T-power supply, but cant remember it causing the slow fade? Maybe bad caps in the t-power supply pi-filter? I am guessing now.
>
> Get on -6 and watch it as you turn on rig and see if it starts and remains stable.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "k5hfg" <dlbowders@> wrote:
> >
> > Hello all,
> > I acquired a 530 as a parts rig and it is in such good condition I do not want to part it out. Serial no. is 3XXXXXX. Better shape than my bench 530 I use for experimentation. After usual switch and molex plug cleaning I checked all voltages at plugs on each board and all checked OK. The display comes on momentarily on start up but fades like the dying embers of the last beach bonfire of the season. I did check voltage on the counter board where I had access but I did not do a thorough check. Plenty of juice flowing. Have never

encountered this before. Tried a known good counter board and it did the same. Also, after the first fade out the display will not come back after repeated switch on's until I remove the board and re-install it again. I have scrubbed the pins repeatedly. The rectifier board is pristine and all voltages are present and correct. Have not attempted transmit until this is resolved. What do you have to tell me before I remove the RF board and begin band switch repair. I do have voltage on the band switch. Anyone ever see this before?
> >
> > I have been out of commission and have not had much time to be in the shack. I have a few projects I am working on but thought I would take some time to try and save this 530 from the cutting torch.
> >
> > Thanks, 73, K5HFG
> >
>

43431. Re: [TS-520_820_530_830] TS 530S No display or receive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-18 18:47:10 UTC
From: Jim Showker
Topic: 43427 Message: 43431

Hi,
Well, if you have no receive, I would guess your problem is a lack of one of the PLL/VFO/VCO/Car that feeds the board, probably no or low VCO. Especially since a known good board doesn't work either. That would indicate to me it's not the counter/display board.

If a counter is bad, it won't prevent receive from operating. I've got an 830 on my bench right now with display very weird, like this-- _.___.0 -- but receive works fine.

I'd check to see if VCO is getting to the RF board, and then the 8.83 car, and VFO. They all have to work for receive, and display.

I think that's your clue.

JIm

On 7/18/2013 8:54 AM, k5hfg wrote:
>
> Hello all,
> I acquired a 530 as a parts rig and it is in such good condition I do
> not want to part it out. Serial no. is 3XXXXXX. Better shape than my
> bench 530 I use for experimentation. After usual switch and molex plug
> cleaning I checked all voltages at plugs on each board and all checked
> OK. The display comes on momentarily on start up but fades like the
> dying embers of the last beach bonfire of the season. I did check
> voltage on the counter board where I had access but I did not do a
> thorough check. Plenty of juice flowing. Have never encountered this
> before. Tried a known good counter board and it did the same. Also,
> after the first fade out the display will not come back after repeated
> switch on's until I remove the board and re-install it again. I have
> scrubbed the pins repeatedly. The rectifier board is pristine and all
> voltages are present and correct. Have not attempted transmit until
> this is resolved. What do you have to tell me before I remove the RF
> board and begin band switch repair. I do have voltage on the band
> switch. Anyone ever see this before?
>
> I have been out of commission and have not had much time to be in the
> shack. I have a few projects I am working on but thought I would take
> some time to try and save this 530 from the cutting torch.
>
> Thanks, 73, K5HFG
>
>

[Non-text portions of this message have been removed]

43432. Re: TS 530S No display or receive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-18 19:04:48 UTC
From: k5hfg
Topic: 43427 Message: 43432

Terry,
1. I cleaned all molex connectors
2. It does it on all bands
3. I have no discernible receive on any band(Band Switch?)
4. good 12vDC (rock steady from switch on to switch off)
5. good -6vDC (also rock steady from on to off)
6. Good low resistance ground on pins 2 and 5 on conn 2
7. -24v supply seems OK as I have checked the voltages at Q12 and 13

I suspected an unlock situation but am not familiar with the PLL enough to know what to do but I did not think the fading would result from that. I think it would be either locked in or unlocked. But, i only think that. Not sure. I thought I better get some help.
I did accidentally get probe on R34 lead and it is pulsing according to my DVM.

I will get back to it later this evening. Right now I have some grandchildren standing around me and I can not answer their questions fast enough and maintain focus on the rig.

Thanks for your help,
Don K5HFG
--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> I goofed better to monitor 12vdc input with power on.
>
> -6VDC was produced from two different display boards so only thing common would be the 12vdc input and ground that is used by each T-power chopper transistors and T1 windings.
>
> Cant be problem with -6vdc supply unless there is something pulling it down at Conn 2 Pin 12 or loads it supplies off the display board.
>
> So still monitor -6vdc on power on and add 12vdc as well.
>
> Terry
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > 1. Are you saying you cleaned the 5 counter/display board Molex connectors?
> >
> > 2. Does it do this on all bands?
> >
> > 3. Do you have normal receive?
> >
> > 4. Do you have good 12vdc at Conn 1?
> >
> > 5. Do you have good -6vdc at Conn 2?
> >
> > 6. Should also have good low resistane ground from Conn 2 pins 2 and 5 to chassis

ground.
> >
> > 7. Trying a known good counter/display board is telling you something. Besides dc power and ground you do not want a BLK or Blanking input. The blanking pulse originates from the PLL when it is unlocked. Normally it just blanks the display. I have not seen it cause a display to slow fade. If you have normal receive this sounds more like a problem with dc supply or ground. I have seen one bad -24vdc T-power supply, but cant remember it causing the slow fade? Maybe bad caps in the t-power supply pi-filter? I am guessing now.
> >
> > Get on -6 and watch it as you turn on rig and see if it starts and remains stable.
> >
> > Terry K9TW

43433. Re: TS 530S No display or receive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-18 19:12:21 UTC
From: k5hfg
Topic: 43427 Message: 43433

Hi Jim,

Have not heard you for awhile. Thanks for the tip. Now that I have 2 top dogs helping me, I should have this solved by end of day. hihi
I will add that to my list. I posted answers to Terry's questions so I will get back on this problem this evening.
73 and thanks,
Don K5HFG

--- In TS-520_820_530_830@yahoogroups.com, Jim Showker <jshowker@...> wrote:
>
> Hi,
> Well, if you have no receive, I would guess your problem is a lack of
> one of the PLL/VFO/VCO/Car that feeds the board, probably no or low
> VCO. Especially since a known good board doesn't work either. That
> would indicate to me it's not the counter/display board.
>
> If a counter is bad, it won't prevent receive from operating. I've
> got an 830 on my bench right now with display very weird, like this--
> _.___.0 -- but receive works fine.
>
> I'd check to see if VCO is getting to the RF board, and then the 8.83
> car, and VFO. They all have to work for receive, and display.
>
> I think that's your clue.
>
> JIm

43434. Re: [TS-520_820_530_830] kenwood 599d twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-18 19:21:34 UTC
From: Jim Showker
Topic: 43426 Message: 43434

The problem is that you need the associated tuned circuitry for that band to work, ant coil/cap etc and mix coil/cap etc. You might be able to change the cap that goes with the ant coil and mix coil in WWV position so as to get them to resonate in the 17 band. Sounds like a lot of work though.

Jm

On 7/18/2013 7:19 AM, yash@... wrote:
>
> Just put the twins on the air,what a pair. Have a coupla of questions.
> the r-599d has a aux position on the band switch. the manual talks
> about putting in a crystal for WWV and peaking it with the aux
> trimmer. Why couldn't I put a crystal for 17 meters in ,peak it and
> listen to 17? just listen ,no transmit.
> 73
> dale wt4t
>
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

43435. Re: [TS-520_820_530_830] kenwood 599d twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-18 19:40:40 UTC
From: W5RKL
Topic: 43426 Message: 43435

Dale,

You will need the appropriate 17 meter AUX "ANT, RF, and OSC" coil plus the correct crystal frequency to listen to 17 Meters. The R599D manual shows the ANT, RF, and OSC coil part numbers plus the crystal frequency to listen to 15Mhz WWV in the aux position. I can't say with any certainty but you may be able to modify or adjust the 15Mhz WWV coils plus install the appropriate crystal to listen on 18 meters.

73
Mike W5RKL

On 7/18/2013 9:19 AM, yash@... wrote:
>
> Just put the twins on the air,what a pair. Have a coupla of questions.
> the r-599d has a aux position on the band switch. the manual talks
> about putting in a crystal for WWV and peaking it with the aux
> trimmer. Why couldn't I put a crystal for 17 meters in ,peak it and
> listen to 17? just listen ,no transmit.
> 73
> dale wt4t
>
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

43436. Re: [TS-520_820_530_830] Re: kenwood 599d twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-18 19:07:52 UTC
From: yash@aol.com
Topic: 43426 Message: 43436

Terry
Hello, been a long time. stop and say hello if you get back one of these days.
dale wt4t

-----Original Message-----
From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com>
Sent: Thu, Jul 18, 2013 12:41 pm
Subject: [TS-520_820_530_830] Re: kenwood 599d twins

Hi Dale:

I bought a TS-830 from you maybe 2 years ago now. Still have it as a spare rig. Do you still have your Hex beam? I spend winters at Fort Myers Beach and remember coming to your canal home in Cape Coral.

Will let the 599 experts help you. Just wanted to say hello.

73s Terry
K9TW

--- In TS-520_820_530_830@yahoogroups.com, "yash@..." <yash@...> wrote:
>
> Just put the twins on the air,what a pair. Have a coupla of questions.
> the r-599d has a aux position on the band switch. the manual talks about putting in a crystal for WWV and peaking it with the aux trimmer. Why couldn't I put a crystal for 17 meters in ,peak it and listen to 17? just listen ,no transmit.
> 73
> dale wt4t
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

43437. Re: TS 530S No display or receive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-18 19:54:41 UTC
From: Terry Wagoner
Topic: 43427 Message: 43437

OK Don grand kids come first.

This is why I asked you about receive state. It sounds like you have lost your VFO signal to the PLL board. Normally when this occurs your BLK at Conn 2 Pin 4 goes from a high state of approx 4.6vdc to low state ie Zero volts and the display blanks, but does not slowly dim.

Of course with no VFO input then no VCO output to your RIF mixer on RF board and no RX.

Go to Conn 2 Pin 4 and measure the BLK voltage. With Display off should read Zero.

Go to PLL board and gently plug and unplug Conn 5 at rear of PLL board. This is the input from the VFO. If you can measure the VFO signal it should be approx 200mv and depending on where VFO dial is at from 5mhz to 6mhz.

If no VFO signal check your 9vdc from the AVR board. It is rare for the molex connector on rear of VFO to be bad. More common for the 9vdc supply to VFO to be interrupted at the DIN micro switch at the External VFO Din connector on rear panel. Assuming you have good 9vdc at AVR board then try cleaning and exercising the DIN switch.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "k5hfg" <dlbowders@...> wrote:
>
> Terry,
> 1. I cleaned all molex connectors
> 2. It does it on all bands
> 3. I have no discernible receive on any band(Band Switch?)
> 4. good 12vDC (rock steady from switch on to switch off)
> 5. good -6vDC (also rock steady from on to off)
> 6. Good low resistance ground on pins 2 and 5 on conn 2
> 7. -24v supply seems OK as I have checked the voltages at Q12 and 13
>
> I suspected an unlock situation but am not familiar with the PLL enough to know what to do but I did not think the fading would result from that. I think it would be either locked in or unlocked. But, i only think that. Not sure. I thought I better get some help.
> I did accidentally get probe on R34 lead and it is pulsing according to my DVM.
>
> I will get back to it later this evening. Right now I have some grandchildren standing around me and I can not answer their questions fast enough and maintain focus on the rig.
>
> Thanks for your help,
> Don K5HFG
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > I goofed better to monitor 12vdc input with power on.
> >

> > -6VDC was produced from two different display boards so only thing common would be the 12vdc input and ground that is used by each T-power chopper transistors and T1 windings.
> >
> > Cant be problem with -6vdc supply unless there is something pulling it down at Conn 2 Pin 12 or loads it supplies off the display board.
> >
> > So still monitor -6vdc on power on and add 12vdc as well.
> >
> > Terry
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > >
> > > 1. Are you saying you cleaned the 5 counter/display board Molex connectors?
> > >
> > > 2. Does it do this on all bands?
> > >
> > > 3. Do you have normal receive?
> > >
> > > 4. Do you have good 12vdc at Conn 1?
> > >
> > > 5. Do you have good -6vdc at Conn 2?
> > >
> > > 6. Should also have good low resistane ground from Conn 2 pins 2 and 5 to chassis ground.
> > >
> > > 7. Trying a known good counter/display board is telling you something. Besides dc power and ground you do not want a BLK or Blanking input. The blanking pulse originates from the PLL when it is unlocked. Normally it just blanks the display. I have not seen it cause a display to slow fade. If you have normal receive this sounds more like a problem with dc supply or ground. I have seen one bad -24vdc T-power supply, but cant remember it causing the slow fade? Maybe bad caps in the t-power supply pi-filter? I am guessing now.
> > >
> > > Get on -6 and watch it as you turn on rig and see if it starts and remains stable.
> > >
> > > Terry K9TW
> >

43438. Re: kenwood 599d twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-18 22:23:57 UTC
From: Terry Wagoner
Topic: 43426 Message: 43438

Dale:

OK hope to get back this winter, but we are helping my daughter by watching our 5 year old grand daughter. We normally come down in early Nov and go back by 2nd week of April. I went to Tampa hamfest and the local club has a regular swap meet in a park not too far from you as I recall.

We rented our place out this past season for the first time and I dont enjoy being an absentee landlord. Dont want to have to do that again.

If we get down plan to visit Ken Kempski at Sarasota and will give you a call.

Best 73s
Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "yash@..." <yash@...> wrote:
>
> Terry
> Hello, been a long time. stop and say hello if you get back one of these days.
> dale wt4t
>
>
>
> -----Original Message-----
> From: Terry Wagoner <wagstw46@...>
> To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com>
> Sent: Thu, Jul 18, 2013 12:41 pm
> Subject: [TS-520_820_530_830] Re: kenwood 599d twins
>
>
>
>
>
>
>
> Hi Dale:
>
> I bought a TS-830 from you maybe 2 years ago now. Still have it as a spare rig. Do you still have your Hex beam? I spend winters at Fort Myers Beach and remember coming to your canal home in Cape Coral.
>
> Will let the 599 experts help you. Just wanted to say hello.
>
> 73s Terry
> K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "yash@" <yash@> wrote:

> >
> > Just put the twins on the air,what a pair. Have a coupla of questions.
> > the r-599d has a aux position on the band switch. the manual talks about putting in a crystal for WWV and peaking it with the aux trimmer. Why couldn't I put a crystal for 17 meters in ,peak it and listen to 17? just listen ,no transmit.
> > 73
> > dale wt4t
> >
> >
> >
> > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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43439. Re: TS 530S No display or receive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-19 00:44:58 UTC
From: k5hfg
Topic: 43427 Message: 43439

OK Terry,
I pulled the PLL board in disgust and found several traces almost completely absent. No sign of burning but they are not there. Bare pins sticking thru the holes in the area of Q15 and 16. I doubt I will be able to repair it because it is so small. So, I replaced the board with an untested spare I have.
After that I checked BLK voltage and it is zero as you said it would be.
I then began the check at PLL conn 5 VFO pin and have 212mV. But it is not stable. The molex pins are wobbly so I repaired that and cleaned and exercised the micro sw at the DIN plug which by the way has a steady 9v but the switch is not stable. I spent an hour or so working it in and out and right now the voltage is stable (I am using the scope to check VFO voltage and freq.) The freq. is 5.458 so that is good. I had checked the AF board for 9v and 3.2v previously so I knew they were good. I also checked the VFO to make sure the output was correct and it is 203mV.
This is my plan for tomorrow evening: I will replace the PLL board with the board in my bench 530 because I know that one is good and continue to trace for the problem. I am hitting the shower and sheets for now. Got to get up at 4 AM for work. Thanks for your help today.
I will give it what for tomorrow evening.

Don K5HFG

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> OK Don grand kids come first.
>
> This is why I asked you about receive state. It sounds like you have lost your VFO signal to the PLL board. Normally when this occurs your BLK at Conn 2 Pin 4 goes from a high state of approx 4.6vdc to low state ie Zero volts and the display blanks, but does not slowly dim.
>
> Of course with no VFO input then no VCO output to your RIF mixer on RF board and no RX.
>
> Go to Conn 2 Pin 4 and measure the BLK voltage. With Display off should read Zero.
>
> Go to PLL board and gently plug and unplug Conn 5 at rear of PLL board. This is the input from the VFO. If you can measure the VFO signal it should be approx 200mv and depending on where VFO dial is at from 5mhz to 6mhz.
>
> If no VFO signal check your 9vdc from the AVR board. It is rare for the molex connector on rear of VFO to be bad. More common for the 9vdc supply to VFO to be interrupted at the DIN micro switch at the External VFO Din connector on rear panel. Assuming you have good 9vdc at AVR board then try cleaning and exercising the DIN switch.
>
> Terry K9TW
>

> --- In TS-520_820_530_830@yahoogroups.com, "k5hfg" <dlbowders@> wrote:
> >
> > Terry,
> > 1. I cleaned all molex connectors
> > 2. It does it on all bands
> > 3. I have no discernible receive on any band(Band Switch?)
> > 4. good 12vDC (rock steady from switch on to switch off)
> > 5. good -6vDC (also rock steady from on to off)
> > 6. Good low resistance ground on pins 2 and 5 on conn 2
> > 7. -24v supply seems OK as I have checked the voltages at Q12 and 13
> >
> > I suspected an unlock situation but am not familiar with the PLL enough to know what to do but I did not think the fading would result from that. I think it would be either locked in or unlocked. But, i only think that. Not sure. I thought I better get some help.
> > I did accidentally get probe on R34 lead and it is pulsing according to my DVM.
> >
> > I will get back to it later this evening. Right now I have some grandchildren standing around me and I can not answer their questions fast enough and maintain focus on the rig.
> >
> > Thanks for your help,
> > Don K5HFG
> > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > >
> > > I goofed better to monitor 12vdc input with power on.
> > >
> > > -6VDC was produced from two different display boards so only thing common would be the 12vdc input and ground that is used by each T-power chopper transistors and T1 windings.
> > >
> > > Cant be problem with -6vdc supply unless there is something pulling it down at Conn 2 Pin 12 or loads it supplies off the display board.
> > >
> > > So still monitor -6vdc on power on and add 12vdc as well.
> > >
> > > Terry
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > > >
> > > > 1. Are you saying you cleaned the 5 counter/display board Molex connectors?
> > > >
> > > > 2. Does it do this on all bands?
> > > >
> > > > 3. Do you have normal receive?
> > > >
> > > > 4. Do you have good 12vdc at Conn 1?
> > > >
> > > > 5. Do you have good -6vdc at Conn 2?
> > > >
> > > > 6. Should also have good low resistane ground from Conn 2 pins 2 and 5 to chassis ground.

> > > >
> > > > 7. Trying a known good counter/display board is telling you something. Besides dc power and ground you do not want a BLK or Blanking input. The blanking pulse originates from the PLL when it is unlocked. Normally it just blanks the display. I have not seen it cause a display to slow fade. If you have normal receive this sounds more like a problem with dc supply or ground. I have seen one bad -24vdc T-power supply, but cant remember it causing the slow fade? Maybe bad caps in the t-power supply pi-filter? I am guessing now.
> > > >
> > > > Get on -6 and watch it as you turn on rig and see if it starts and remains stable.
> > > >
> > > > Terry K9TW
> >
>

43440. RE: [TS-520_820_530_830] TS 530S No display or receive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-19 00:56:24 UTC
From: fpath fpath
Topic: 43427 Message: 43440

Don,

Check all input voltages to PLL as Terry suggested, also have a look at the foil side of PLL board conn2, have seen this cracked and causes similar issue. Also I have seen where CB mods have been attempted and usually wires are cut and soldered back together but they usually don't know how to terminate two wires properly and they break down and cause this issue. IF possible check C91 and C92 only seen this once, Q15 was also dead on this unit.

Don just saw your last post re pulling good PLL board and trying out in this radio. Whilst this will give you some good info, I did this with an IF board some months back and didn't know at the time that the new board that I tried was from a later model and had circuit upgrade which gave me false information as it corrected the original fault and I wasted a lot of time concentrating on the faulty IF board rather than looking for the real issue. Food for thought

73's
Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: dlbowders@...
Date: Thu, 18 Jul 2013 15:54:11 +0000
Subject: [TS-520_820_530_830] TS 530S No display or receive

Hello all,
I acquired a 530 as a parts rig and it is in such good condition I do not want to part it out. Serial no. is 3XXXXXX. Better shape than my bench 530 I use for experimentation. After usual switch and molex plug cleaning I checked all voltages at plugs on each board and all checked OK. The display comes on momentarily on start up but fades like the dying embers of the last beach bonfire of the season. I did check voltage on the counter board where I had access but I did not do a thorough check. Plenty of juice flowing. Have never encountered this before. Tried a known good counter board and it did the same. Also, after the first fade out the display will not come back after repeated switch on's until I remove the board and re-install it again. I have scrubbed the pins repeatedly. The rectifier board is pristine and all voltages are present and correct. Have not attempted transmit until this is resolved. What do you have to tell me before I remove the RF board and begin band switch repair. I do have voltage on the band switch. Anyone ever see this before?

I have been out of commission and have not had much time to be in the shack. I have a few projects I am working on but thought I would take some time to try and save this 530 from the cutting torch.

Thanks, 73, K5HFG

[Non-text portions of this message have been removed]

43441. Re: TS 530S No display or receive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-19 01:44:35 UTC
From: k5hfg
Topic: 43427 Message: 43441

Dave,
You caught me just before bedtime. I am aware of the different revision boards and always compare before swapping out. I generally do not swap boards but as a last resort. The PLL is new teritory for me but am determined to find the problem. I have good readings all over but the problem still eludes me. I am not confident in the spare PLL board as it is untested by me. That is why I am doing it. Thanks for the heads up. By the way I think I remember you trying to talk me into repairing a 530SP face. Just wanted to let you know I found a pristine replacement and it looks good on my rig. I have the old face under the bench and may just give refinishing a try.....Good night OM.

Don K5HFG

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
> Don,
>
> Check all input voltages to PLL as Terry suggested, also have a look at the foil side of PLL board conn2, have seen this cracked and causes similar issue. Also I have seen where CB mods have been attempted and usually wires are cut and soldered back together but they usually don't know how to terminate two wires properly and they break down and cause this issue. IF possible check C91 and C92 only seen this once, Q15 was also dead on this unit.
>
> Don just saw your last post re pulling good PLL board and trying out in this radio. Whilst this will give you some good info, I did this with an IF board some months back and didn't know at the time that the new board that I tried was from a later model and had circuit upgrade which gave me false information as it corrected the original fault and I wasted a lot of time concentrating on the faulty IF board rather than looking for the real issue. Food for thought
>
> 73's
> Dave
> VK5PDL
>
>
>
>
> To: TS-520_820_530_830@...m
> From: dlbowders@...
> Date: Thu, 18 Jul 2013 15:54:11 +0000
> Subject: [TS-520_820_530_830] TS 530S No display or receive
>
>
>
>
> Hello all,

> I acquired a 530 as a parts rig and it is in such good condition I do not want to part it out. Serial no. is 3XXXXXX. Better shape than my bench 530 I use for experimentation. After usual switch and molex plug cleaning I checked all voltages at plugs on each board and all checked OK. The display comes on momentarily on start up but fades like the dying embers of the last beach bonfire of the season. I did check voltage on the counter board where I had access but I did not do a thorough check. Plenty of juice flowing. Have never encountered this before. Tried a known good counter board and it did the same. Also, after the first fade out the display will not come back after repeated switch on's until I remove the board and re-install it again. I have scrubbed the pins repeatedly. The rectifier board is pristine and all voltages are present and correct. Have not attempted transmit until this is resolved. What do you have to tell me before I remove the RF board and begin band switch repair. I do have voltage on the band switch. Anyone ever see this before?
>
> I have been out of commission and have not had much time to be in the shack. I have a few projects I am working on but thought I would take some time to try and save this 530 from the cutting torch.
>
> Thanks, 73, K5HFG
>
>
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

43442. Re: TS 530S No display or receive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-19 02:30:30 UTC
From: Terry Wagoner
Topic: 43427 Message: 43442

Don:

If you have good VFO level and VFO frequency then there was likely a problem on the spare PLL board causing BLK to be Zero although I dont think I have ever subbed a PLL board that did not work to some degree.

It all starts at Q40 RF Mixer. With the external VFO signal as the RF input at Pin 2 and the Carrier Osc produced on the board as the LO at Pin 5 this Mixer produces the sum frequency of 14.xxx mhz which is fed to BPF-2 and so on.....

It looks like you now have good VFO input level and freq so the known good PLL board should result in a nominal 5vdc on BLK line and the display should be lit and you should have good VCO signal level and good receive assuming no other issues outside the PLL board.

Only other external inputs you need to the PLL beyond the VFO signal is the 9vdc regulated supply and mode switch inputs at Conn 8 and the 8.4vdc bandswitch voltages from RF board to the diode BPF switching matrix at Conn 1.

It is unusual that you would be missing all bandswitch inputs at Conn 1 and all mode switch inputs at Conn 8.

Let us know if good board does not result in display lit and receiver alive. Do not remove good board until you have determined what external inputs are missing.

You can confirm Conn 8 inputs good by measuring LSB and USB Carrier Osc signal level and frequency at Conn 7.

Terry K9TW

43443. Re: TS 530S No display or receive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-19 10:24:49 UTC
From: k5hfg
Topic: 43427 Message: 43443

OK Terry,
I will work on this over the weekend. I am hoping for success after sub of PLL board. Now I have good notes for the PLL board work in case I run into this problem again. I am sorry I did not check boards before start of checks but the board looked so good from the top I did not suspect any problem with it. I have learned a valuable lesson. I will remove and examine boards when a problem is found before going any further. Would have saved several hours if I had done it in the beginning. Will report back this weekend all findings.

Thanks All,
Don K5HFG

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Don:
>
> If you have good VFO level and VFO frequency then there was likely a problem on the spare PLL board causing BLK to be Zero although I dont think I have ever subbed a PLL board that did not work to some degree.
>
> It all starts at Q40 RF Mixer. With the external VFO signal as the RF input at Pin 2 and the Carrier Osc produced on the board as the LO at Pin 5 this Mixer produces the sum frequency of 14.xxx mhz which is fed to BPF-2 and so on.....
>
> It looks like you now have good VFO input level and freq so the known good PLL board should result in a nominal 5vdc on BLK line and the display should be lit and you should have good VCO signal level and good receive assuming no other issues outside the PLL board.
>
> Only other external inputs you need to the PLL beyond the VFO signal is the 9vdc regulated supply and mode switch inputs at Conn 8 and the 8.4vdc bandswitch voltages from RF board to the diode BPF switching matrix at Conn 1.
>
> It is unusual that you would be missing all bandswitch inputs at Conn 1 and all mode switch inputs at Conn 8.
>
> Let us know if good board does not result in display lit and receiver alive. Do not remove good board until you have determined what external inputs are missing.
>
> You can confirm Conn 8 inputs good by measuring LSB and USB Carrier Osc signal level and frequency at Conn 7.
>
> Terry K9TW
>

43444. Re: [TS-520_820_530_830] kenwood 599d twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-19 11:21:41 UTC
From: yash@aol.com
Topic: 43426 Message: 43444

Mike
thats what I was asking, if she will do 15mhz, maybe do 18mhz.
dale wt4t

-----Original Message-----
From: W5RKL <w5rkl@...>
To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com>
Sent: Thu, Jul 18, 2013 3:42 pm
Subject: Re: [TS-520_820_530_830] kenwood 599d twins

Dale,

You will need the appropriate 17 meter AUX "ANT, RF, and OSC" coil plus
the correct crystal frequency to listen to 17 Meters. The R599D manual
shows the ANT, RF, and OSC coil part numbers plus the crystal frequency
to listen to 15Mhz WWV in the aux position. I can't say with any
certainty but you may be able to modify or adjust the 15Mhz WWV coils
plus install the appropriate crystal to listen on 18 meters.

73
Mike W5RKL

On 7/18/2013 9:19 AM, yash@... wrote:
>
> Just put the twins on the air,what a pair. Have a coupla of questions.
> the r-599d has a aux position on the band switch. the manual talks
> about putting in a crystal for WWV and peaking it with the aux
> trimmer. Why couldn't I put a crystal for 17 meters in ,peak it and
> listen to 17? just listen ,no transmit.
> 73
> dale wt4t
>
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

43445. Re: TS 530S No display or receive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-19 12:03:56 UTC
From: Terry Wagoner
Topic: 43427 Message: 43445

Don:

You should not have to remove boards and visually inspect for missing foils, cracked traces, addition of jumper wires etc as a matter of routine whenever you have an operational issue. However as these rigs age and pass thru many hands that may indeed need to be your standard mode of operation.

Of course any time I purchase and install a replacement board I do a very good visual and number one thing I do is install a molex plug on each molex connector one at a time and under lite and magnification I rock the plug back and forth and watch the pin solder interface for any movement. Often see the pin moving and a circumferential crack in the solder around the pin. I place the plug on to ensure the pins are all fully seated and gives me a little more leverage and simulates the action of plugging and unplugging a connector.

It is true that there are plenty of boards out there that have been butchered and cobbled attempts at repairs. I dont have them in my personal radios but seen my share.

Let us know what you find when installing the good PLL board. Hopefully display and receive will be restored. The board that had missing pads at ICs Q15 and Q16 pins are probably beyond repair and can be used to harvest parts from. The other PLL board if no serious pads or trace issues can be troubleshot and repaired if you are so inclined. Especially since you have operational radio to make comparisons.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "k5hfg" <dlbowders@...> wrote:
>
> OK Terry,
> I will work on this over the weekend. I am hoping for success after sub of PLL board. Now I have good notes for the PLL board work in case I run into this problem again. I am sorry I did not check boards before start of checks but the board looked so good from the top I did not suspect any problem with it. I have learned a valuable lesson. I will remove and examine boards when a problem is found before going any further. Would have saved several hours if I had done it in the beginning. Will report back this weekend all findings.
> >
> Thanks All,
> Don K5HFG
> >
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Don:
> >
> > If you have good VFO level and VFO frequency then there was likely a problem on the spare PLL board causing BLK to be Zero although I dont think I have ever subbed a PLL board that did not work to some degree.

> >
> > It all starts at Q40 RF Mixer. With the external VFO signal as the RF input at Pin 2 and the Carrier Osc produced on the board as the LO at Pin 5 this Mixer produces the sum frequency of 14.xxx mhz which is fed to BPF-2 and so on.....
> >
> > It looks like you now have good VFO input level and freq so the known good PLL board should result in a nominal 5vdc on BLK line and the display should be lit and you should have good VCO signal level and good receive assuming no other issues outside the PLL board.
> >
> > Only other external inputs you need to the PLL beyond the VFO signal is the 9vdc regulated supply and mode switch inputs at Conn 8 and the 8.4vdc bandswitch voltages from RF board to the diode BPF switching matrix at Conn 1.
> >
> > It is unusual that you would be missing all bandswitch inputs at Conn 1 and all mode switch inputs at Conn 8.
> >
> > Let us know if good board does not result in display lit and receiver alive. Do not remove good board until you have determined what external inputs are missing.
> >
> > You can confirm Conn 8 inputs good by measuring LSB and USB Carrier Osc signal level and frequency at Conn 7.
> >
> > Terry K9TW
> >
>

43446. Lost audio in LSB

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-19 12:24:15 UTC
From: Don D
Topic: 43446 Message: 43446

Hi All
My TS520s has lost sound in LSB,Tune,Cw and USB are fine.
The signals are present in LSB,but just no audio.
So were should i start first ,,relay?
73
Don/Ve2ud

43447. Re: [TS-520_820_530_830] Lost audio in LSB

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-19 12:56:31 UTC
From: W5RKL
Topic: 43446 Message: 43447

It appears the LSB CAR Unit crystal has failed to oscillate. First try cleaning the MODE switch. If that doesn't help then check the LSB CAR Unit crystal frequency by connecting a frequency counter to the CAR Unit's "OUT" terminal. The counter should display "3393.5Khz" if the LSB CAR Unit crystal is oscillating. A separate receiver tuned to 3393.5Khz will also work.

73
Mike W5RKL

On 7/19/2013 7:24 AM, Don D wrote:
>
> Hi All
> My TS520s has lost sound in LSB,Tune,Cw and USB are fine.
> The signals are present in LSB,but just no audio.
> So were should i start first ,,relay?
> 73
> Don/Ve2ud
>
>

[Non-text portions of this message have been removed]

43448. Re: [TS-520_820_530_830] kenwood 599d twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-19 13:01:06 UTC
From: Dale Parfitt
Topic: 43426 Message: 43448

I guess the place to start Dale is to put in the crystal and see if you can get the oscillator to take off w/o modifying the 15MHz coil.

Dale W4OP
----- Original Message -----
From: yash@...
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, July 19, 2013 7:21 AM
Subject: Re: [TS-520_820_530_830] kenwood 599d twins

Mike
thats what I was asking, if she will do 15mhz, maybe do 18mhz.
dale wt4t

-----Original Message-----
From: W5RKL <w5rkl@...>
To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com>
Sent: Thu, Jul 18, 2013 3:42 pm
Subject: Re: [TS-520_820_530_830] kenwood 599d twins

Dale,

You will need the appropriate 17 meter AUX "ANT, RF, and OSC" coil plus the correct crystal frequency to listen to 17 Meters. The R599D manual shows the ANT, RF, and OSC coil part numbers plus the crystal frequency to listen to 15Mhz WWV in the aux position. I can't say with any certainty but you may be able to modify or adjust the 15Mhz WWV coils plus install the appropriate crystal to listen on 18 meters.

73
Mike W5RKL

On 7/18/2013 9:19 AM, yash@... wrote:
>
> Just put the twins on the air,what a pair. Have a coupla of questions.
> the r-599d has a aux position on the band switch. the manual talks
> about putting in a crystal for WWV and peaking it with the aux
> trimmer. Why couldn't I put a crystal for 17 meters in ,peak it and
> listen to 17? just listen ,no transmit.
> 73
> dale wt4t
>
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.2904 / Virus Database: 3204/6498 - Release Date: 07/17/13

[Non-text portions of this message have been removed]

43449. Re: [TS-520_820_530_830] Lost audio in LSB

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-19 13:00:48 UTC
From: Don
Topic: 43446 Message: 43449

Hi Mike
First time i have had a problem with this rig
Will check it out over the weekend and let you know how i make out
Thanks for your reply
73
Don/Ve2ud

On 19/07/2013 8:56 AM, W5RKL wrote:
>
> It appears the LSB CAR Unit crystal has failed to oscillate. First try
> cleaning the MODE switch. If that doesn't help then check the LSB CAR
> Unit crystal frequency by connecting a frequency counter to the CAR
> Unit's "OUT" terminal. The counter should display "3393.5Khz" if the LSB
> CAR Unit crystal is oscillating. A separate receiver tuned to 3393.5Khz
> will also work.
>
> 73
> Mike W5RKL
>
> On 7/19/2013 7:24 AM, Don D wrote:
> >
> > Hi All
> > My TS520s has lost sound in LSB,Tune,Cw and USB are fine.
> > The signals are present in LSB,but just no audio.
> > So were should i start first ,,relay?
> > 73
> > Don/Ve2ud
> >
> >
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

43450. RE: [TS-520_820_530_830] Lost audio in LSB

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-19 14:20:53 UTC
From: Brad Allen
Topic: 43446 Message: 43450

No I would not bother with the relays. I would start with the schematic and follow the path. Your symptom does not seem possible to lose audio like that although I am sure that is what you are noticing. Audio is normally produced after the receive stages and signals are sent to the audio stage. In other words, it is common to all signals except maybe a SWITCH path. So dig out your schematic and check your audio path in the mode giving you trouble and see if it goes through a switch. I would not just go messing with the relays without knowing if they are even involved. Use some sort of signal tracer or a small amplifier with a probe to find the faulty path. If you are seeing signals and not hearing audio, my guess would be a mode switch especially since you can see signals and the other modes work. Radio shack sells a small porcelain burnishing tool. This may work for renewing the contacts or put some deox-it on them also available at Radio shack with a needle dropper bottle. Brad KB2CHY

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Don D
Sent: Friday, July 19, 2013 8:24 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Lost audio in LSB

Hi All
My TS520s has lost sound in LSB,Tune,Cw and USB are fine.
The signals are present in LSB,but just no audio.
So were should i start first ,,relay?
73
Don/Ve2ud

[Non-text portions of this message have been removed]

43451. Re: [TS-520_820_530_830] Lost audio in LSB

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-19 14:57:11 UTC
From: Don
Topic: 43446 Message: 43451

Hi Brad

I use the radio at the cottage.so maybe something got lose,in the
transportation.
Will be the first time in 20yrs that i have had a problem with it.

Thanks for your reply

73
Don/Ve2ud

On 19/07/2013 10:20 AM, Brad Allen wrote:
>
> No I would not bother with the relays. I would start with the
> schematic and
> follow the path. Your symptom does not seem possible to lose audio
> like that
> although I am sure that is what you are noticing. Audio is normally
> produced
> after the receive stages and signals are sent to the audio stage. In other
> words, it is common to all signals except maybe a SWITCH path. So dig out
> your schematic and check your audio path in the mode giving you
> trouble and
> see if it goes through a switch. I would not just go messing with the
> relays
> without knowing if they are even involved. Use some sort of signal
> tracer or
> a small amplifier with a probe to find the faulty path. If you are seeing
> signals and not hearing audio, my guess would be a mode switch especially
> since you can see signals and the other modes work. Radio shack sells a
> small porcelain burnishing tool. This may work for renewing the
> contacts or
> put some deox-it on them also available at Radio shack with a needle
> dropper
> bottle. Brad KB2CHY
>
> _____
>
> From: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> [mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Don D
> Sent: Friday, July 19, 2013 8:24 AM
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: [TS-520_820_530_830] Lost audio in LSB

>
> Hi All
> My TS520s has lost sound in LSB,Tune,Cw and USB are fine.
> The signals are present in LSB,but just no audio.
> So were should i start first ,,relay?
> 73
> Don/Ve2ud
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

43452. Re: [TS-520_820_530_830] Lost audio in LSB

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-19 17:13:27 UTC
From: Don
Topic: 43446 Message: 43452

Mike
Yes you are right,there is no output for LSB
I got 3.394 for tune and same for CW
USB is 3.396 and nil for LSB
As there is three crystals which one would it be

73
Don/Ve2ud

I do have a parts TS 520,as it should be the same

On 19/07/2013 8:56 AM, W5RKL wrote:
>
> It appears the LSB CAR Unit crystal has failed to oscillate. First try
> cleaning the MODE switch. If that doesn't help then check the LSB CAR
> Unit crystal frequency by connecting a frequency counter to the CAR
> Unit's "OUT" terminal. The counter should display "3393.5Khz" if the LSB
> CAR Unit crystal is oscillating. A separate receiver tuned to 3393.5Khz
> will also work.
>
> 73
> Mike W5RKL
>
> On 7/19/2013 7:24 AM, Don D wrote:
> >
> > Hi All
> > My TS520s has lost sound in LSB,Tune,Cw and USB are fine.
> > The signals are present in LSB,but just no audio.
> > So were should i start first ,,relay?
> > 73
> > Don/Ve2ud
> >
> >
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

43453. Re: [TS-520_820_530_830] Lost audio in LSB

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-19 17:22:00 UTC
From: Don
Topic: 43446 Message: 43453

Mike
I think it's crystal x3

73
Don

On 19/07/2013 1:13 PM, Don wrote:
>
>
> Mike
> Yes you are right,there is no output for LSB
> I got 3.394 for tune and same for CW
> USB is 3.396 and nil for LSB
> As there is three crystals which one would it be
>
> 73
> Don/Ve2ud
>
> I do have a parts TS 520,as it should be the same
>
> On 19/07/2013 8:56 AM, W5RKL wrote:
> >
> > It appears the LSB CAR Unit crystal has failed to oscillate. First try
> > cleaning the MODE switch. If that doesn't help then check the LSB CAR
> > Unit crystal frequency by connecting a frequency counter to the CAR
> > Unit's "OUT" terminal. The counter should display "3393.5Khz" if the LSB
> > CAR Unit crystal is oscillating. A separate receiver tuned to 3393.5Khz
> > will also work.
> >
> > 73
> > Mike W5RKL
> >
> > On 7/19/2013 7:24 AM, Don D wrote:
> > >
> > > Hi All
> > > My TS520s has lost sound in LSB,Tune,Cw and USB are fine.
> > > The signals are present in LSB,but just no audio.
> > > So were should i start first ,,relay?
> > > 73
> > > Don/Ve2ud
> > >
> > >
> >
> > [Non-text portions of this message have been removed]
> >

> >
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

43454. Re: [TS-520_820_530_830] Lost audio in LSB

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-19 20:12:20 UTC
From: W5RKL
Topic: 43446 Message: 43454

The crystals have their frequencies stamped on them. The LSB crystal is identified by "3393.5" stamped on the crystal case and the PC board silk screen label is "X3".

The CAR Unit signal, in receive, is the "BFO" signal that is applied to the GENERATOR Unit's BD where it mixes with the IF Unit's signal, resulting in recovered audio at the BD's output that is then applied to the Audio amp. Loss of the CAR Unit's "BFO" signal in LSB results in no output from the BD which results in no audio applied to the AF Unit's audio amp, hence nothing hear in LSB. I don't know if you realized it or not but you also lost LSB transmit. USB and CW plus TUNE will work fine but LSB transmit will be zero.

73
Mike W5RKL

On 7/19/2013 12:13 PM, Don wrote:
>
>
> Mike
> Yes you are right,there is no output for LSB
> I got 3.394 for tune and same for CW
> USB is 3.396 and nil for LSB
> As there is three crystals which one would it be
>
> 73
> Don/Ve2ud
>
> I do have a parts TS 520,as it should be the same
>
> On 19/07/2013 8:56 AM, W5RKL wrote:
> >
> > It appears the LSB CAR Unit crystal has failed to oscillate. First try
> > cleaning the MODE switch. If that doesn't help then check the LSB CAR
> > Unit crystal frequency by connecting a frequency counter to the CAR
> > Unit's "OUT" terminal. The counter should display "3393.5Khz" if the LSB
> > CAR Unit crystal is oscillating. A separate receiver tuned to 3393.5Khz
> > will also work.
> >
> > 73
> > Mike W5RKL
> >
> > On 7/19/2013 7:24 AM, Don D wrote:
> > >
> > > Hi All
> > > My TS520s has lost sound in LSB,Tune,Cw and USB are fine.

> > > The signals are present in LSB,but just no audio.
> > > So were should i start first ,,relay?
> > > 73
> > > Don/Ve2ud
> > >
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43455. Re: [TS-520_820_530_830] Lost audio in LSB

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-19 20:28:36 UTC
From: Don
Topic: 43446 Message: 43455

I know it now as i did not know that
So should i start by changing the crystal Mike

73
Don/Ve2ud

\
On 19/07/2013 4:12 PM, W5RKL wrote:
>
> The crystals have their frequencies stamped on them. The LSB crystal is
> identified by "3393.5" stamped on the crystal case and the PC board silk
> screen label is "X3".
>
> The CAR Unit signal, in receive, is the "BFO" signal that is applied to
> the GENERATOR Unit's BD where it mixes with the IF Unit's signal,
> resulting in recovered audio at the BD's output that is then applied to
> the Audio amp. Loss of the CAR Unit's "BFO" signal in LSB results in no
> output from the BD which results in no audio applied to the AF Unit's
> audio amp, hence nothing hear in LSB. I don't know if you realized it or
> not but you also lost LSB transmit. USB and CW plus TUNE will work fine
> but LSB transmit will be zero.
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> 73
> Mike W5RKL
>
> On 7/19/2013 12:13 PM, Don wrote:
> >
> >
> > Mike
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> > I do have a parts TS 520,as it should be the same
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> > On 19/07/2013 8:56 AM, W5RKL wrote:
> > >
> > > It appears the LSB CAR Unit crystal has failed to oscillate. First try
> > > cleaning the MODE switch. If that doesn't help then check the LSB CAR
> > > Unit crystal frequency by connecting a frequency counter to the CAR
> > > Unit's "OUT" terminal. The counter should display "3393.5Khz" if

> the LSB
> > > CAR Unit crystal is oscillating. A separate receiver tuned to
> 3393.5Khz
> > > will also work.
> > >
> > > 73
> > > Mike W5RKL
> > >
> > > On 7/19/2013 7:24 AM, Don D wrote:
> > > >
> > > > Hi All
> > > > My TS520s has lost sound in LSB,Tune,Cw and USB are fine.
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43456. TS-830s RF board diodes

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-19 13:54:33 UTC
From: ralph_ts_830s
Topic: 43456 Message: 43456

Group,

I actually have two of these radios, S/N 2041XXX and 3120XXX. I have spent most of my time using the newer one as it seems to work ok (over 90 watts out on 10 meters). The older one has the YK-88C and YG-455C filters so it might turn out to be the better radio. Hopefully I can learn from working on it. The older one is the one with some issues. Most obvious issue to me is low power out across all bands (maybe 80 watts). There are likely more problems that I will see after using it more. I noticed there is a group of diodes near the nine pin connector at the front of the RF board top view (I think D4 through D10), that most if not all of them are damaged (difficult to see). I have the service manual but I am having trouble identifying the diodes in the parts list. Assuming I can find new diodes and assuming I can get the RF board out, cleaned, lubed and diodes replaced, are their other components related to this diode problem that in your experience might need my attention? Root cause?
I am in the process of gathering the tools I need to properly troubleshoot this radio. I have a SM-220 scope which I need to fabricate an RF probe for. If the 220 is not up to the task I have access to a Tektronix TDS3054 scope which I am not yet familiar with how to use. I have a Fluke 744 meter as well. I am using a dummy load made from Ken's (K4EAA) design and calculating my output power from it. Typical for me, I am jumping into this hobby with both feet. I am familiar with basic electrical troubleshooting but radio, RF specifically, is a new challenge for me. I am not expecting to "get it" all at once. I plan to browse past posts for relative info creating extensive notes and use my second radio as a test bed for my education. This message board is an incredibly valuable resource and I am fortunate to be a part of it.
73
Ralph (KB1ZYI)

43457. Re: Lost audio in LSB

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-19 20:50:33 UTC
From: w5rkl
Topic: 43446 Message: 43457

Don,

Replace the suspected bad X3 in your 520 with X3 from your 520 parts radio, that should fix your problem. When the replacement is complete, perform the 520's CAR Unit adjustment in the 520 service manual.

73
Mike W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> I know it now as i did not know that
> So should i start by changing the crystal Mike
>
> 73
> Don/Ve2ud
>
>
> \
> On 19/07/2013 4:12 PM, W5RKL wrote:
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> > output from the BD which results in no audio applied to the AF Unit's
> > audio amp, hence nothing hear in LSB. I don't know if you realized it or
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> >
> > On 7/19/2013 12:13 PM, Don wrote:
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> > > I do have a parts TS 520,as it should be the same
> > >
> > > On 19/07/2013 8:56 AM, W5RKL wrote:
> > > >
> > > > It appears the LSB CAR Unit crystal has failed to oscillate. First try
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43458. Re: [TS-520_820_530_830] Re: Lost audio in LSB

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-19 21:14:18 UTC
From: Don
Topic: 43446 Message: 43458

Okie Dokie Mike

will give a go tomorrow

Thanks again
73
Don/Ve2ud

On 19/07/2013 4:50 PM, w5rkl wrote:
>
> Don,
>
> Replace the suspected bad X3 in your 520 with X3 from your 520 parts
> radio, that should fix your problem. When the replacement is complete,
> perform the 520's CAR Unit adjustment in the 520 service manual.
>
> 73
> Mike W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
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> > So should i start by changing the crystal Mike
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> > 73
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> > > > > Unit crystal frequency by connecting a frequency counter to
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43459. Re: [TS-520_820_530_830] TS-830s RF board diodes

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-19 21:56:06 UTC
From: Joseph Stiles
Topic: 43456 Message: 43459

Ralph,

  The diodes on the RF board...D-4, D-5, D-6 by connector 1 are for enabling the WARC bands. D-4 is for 10Mhz, D-5 is for 18Mhz, and
D--6 is for 24.5Mhz. It sounds like someone just broke them...instead of clipping the small blue wire from Connector 6 Pin1on the RF board to Connector 6
Pin4 on the AF unit. This is easily done if you get access to the bottom of the rig.
I'll have to look more to see what the other possibly damaged diodes do.

 Low power may be caused by numerous things, as you may be aware,
Removal of the RF board is not difficult. You will need a long 1.5mm "allen wrench" to loosen
the set screws that hold the band switch shaft to the band switch in the final cage. DO THIS WITH POWER OFF
and RIG UNPLUGGED. Make absolutely sure that there is NO high voltage in there..or you'll get a BIG surprise
..as in SK. Proper orientation of the shaft and other parts essential for removal and installation. I can give you more
about that later..if needed

  Look on Pg 12 of your service manual...it shows an XRAY view of the RF board

73 Joe
WB7UQU

From: ralph_ts_830s <r_krohne@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, July 19, 2013 6:54 AM
Subject: [TS-520_820_530_830] TS-830s RF board diodes

Group,

I actually have two of these radios, S/N 2041XXX and 3120XXX. I have spent most of my time using the newer one as it seems to work ok (over 90 watts out on 10 meters). The older one has the YK-88C and YG-455C filters so it might turn out to be the better radio. Hopefully I can learn from working on it. The older one is the one with some issues. Most obvious issue to me is low power out across all bands (maybe 80 watts). There are likely more problems that I will see after using it more. I noticed there is a group of diodes near the nine pin connector at the front of the RF board top view (I think D4 through D10), that most if not all of them are damaged (difficult to see). I have the service manual but I am having trouble identifying the diodes in the parts list. Assuming I can find new diodes and assuming I can get the RF board out, cleaned, lubed and diodes replaced, are their other components related to this diode problem that in your experience
might need my attention? Root cause?
I am in the process of gathering the tools I need to properly troubleshoot this radio. I have a SM-220 scope which I need to fabricate an RF probe for. If the 220 is not up to the

task I have access to a TektronixTDS3054 scope which I am not yet familiar with how to use. I have a Fluke 744 meter as well. I am using a dummy load made from Ken's (K4EAA) design and calculating my output power from it. Typical for me, I am jumping into this hobby with both feet. I am familiar with basic electrical troubleshooting but radio, RF specifically, is a new challenge for me. I am not expecting to "get it" all at once. I plan to browse past posts for relative info creating extensive notes and use my second radio as a test bed for my education. This message board is an incredibly valuable resource and I am fortunate to be a part of it.
73
Ralph (KB1ZYI)

[Non-text portions of this message have been removed]

43460. Re: TS-830s RF board diodes

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-19 21:58:56 UTC
From: Terry Wagoner
Topic: 43456 Message: 43460

It sounds like you are talking about the bandswitching diodes. How can you tell my looking at them that they are bad? Do you see physical damage to them? This would be very unusual and I would also want to determine the root cause.

These diodes provide bandswitch position information to the PLL board diode matrix that selects corresponding VCO oscillator and Band Pass Filters.

They also key the automatic Q1 RF amp output signal shunt when rig is in 10 meters position so that full receiver RF gain from RF amp Q1 is provided. In 160 thru 15 meters some of Q1 RF amp output signal is shunted to ground to prevent IMD and strong signal blocking. Diode D3 controls the capacitive voltage dividers that determine whether the receiver front end has full signal or reduced signal at input of RIF Mixer. A clever circuit.

All of these functions are fed from 9vdc and the diodes forward current is low. Very unusual for these diodes to be damaged from normal switching action unless somehow got high voltage on the 9vdc bus and then would think almost anything fed by the regulated 9vdc from series pass regulator could have incurred damage.

Will be hard to find original 1S1555 diodes. Since they dont actually switch any tuned circuits should be OK to sub with 1N4148 fast switchers. They are actually special bandswitch diodes with very low forward resistance so they do not D-"Q" any tuning circuits. Commonly found in VHF tuned circuit switching. I dont see why Kenwood speced them for this application?

You do not typically need a RF probe for your scope. Not much need to demodulate any signals. I think the band width of the SM-220 is very low as a bench scope. OK for audio and power supply work. You would be better off getting a VTVM for use with your RF probe. Even though your Fluke has a bar graph. Far easier to use analog meter for any peaking or nulling adjustments.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "ralph_ts_830s" <r_krohne@...> wrote:
>
> Group,
>
> I actually have two of these radios, S/N 2041XXX and 3120XXX. I have spent most of my time using the newer one as it seems to work ok (over 90 watts out on 10 meters). The older one has the YK-88C and YG-455C filters so it might turn out to be the better radio. Hopefully I can learn from working on it. The older one is the one with some issues. Most obvious issue to me is low power out across all bands (maybe 80 watts). There are likely more problems that I will see after using it more. I noticed there is a group of diodes near the nine pin connector at the front of the RF board top view (I think D4 through D10), that most if not all of them are damaged (difficult to see). I have the service manual but I am having trouble identifying the diodes in the parts list. Assuming I can find new diodes and assuming I can get the RF board out, cleaned, lubed and diodes replaced, are their other components related to this diode problem that in your experience might need my

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> 73
> Ralph (KB1ZYI)
>

43461. Re: TS-830s RF board diodes

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-19 22:03:26 UTC
From: Terry Wagoner
Topic: 43456 Message: 43461

Very good Joe. The TOF diodes may have been broken during the cutting action. I forgot about that as cant imagine why anyone would do this as opposed to the simple task of cutting blue wire. No reason to replace the TOF diodes but if they broke others then will need to replace them. Much more likely the Root Cause than any high voltage on the 9vdc bus. Good work.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Ralph,
>
> Â The diodes on the RF board...D-4, D-5, D-6 by connector 1 are for enabling the WARC bands. D-4 is for 10Mhz, D-5 is for 18Mhz, and
> D--6 is for 24.5Mhz. It sounds like someone just broke them...instead of clipping the small blue wire fromÂ Connector 6 Pin1on the RF board toÂ Connector 6
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> Â Low power may be caused by numerous things, as you may be aware,
> Removal of the RF board is not difficult. You will need a long 1.5mm "allen wrench" to loosen
> the set screws that hold the band switch shaft to the band switch in the final cage. DO THIS WITH POWER OFF
> and RIG UNPLUGGED. Make absolutely sure that there is NO high voltage in there..or you'll get a BIG surprise
> ..as in SK. Proper orientation of the shaft and other parts essential for removal and installation. I can give you more
> about that later..if needed
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> Â Look on Pg 12 of your service manual...it shows an XRAY view of the RF board
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>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: ralph_ts_830s <r_krohne@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Friday, July 19, 2013 6:54 AM
> Subject: [TS-520_820_530_830] TS-830s RF board diodes
>

>
>
> Â
> Group,
>
> I actually have two of these radios, S/N 2041XXX and 3120XXX. I have spent most of my time using the newer one as it seems to work ok (over 90 watts out on 10 meters). The older one has the YK-88C and YG-455C filters so it might turn out to be the better radio. Hopefully I can learn from working on it. The older one is the one with some issues. Most obvious issue to me is low power out across all bands (maybe 80 watts). There are likely more problems that I will see after using it more. I noticed there is a group of diodes near the nine pin connector at the front of the RF board top view (I think D4 through D10), that most if not all of them are damaged (difficult to see). I have the service manual but I am having trouble identifying the diodes in the parts list. Assuming I can find new diodes and assuming I can get the RF board out, cleaned, lubed and diodes replaced, are their other components related to this diode problem that in your experience
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> 73
> Ralph (KB1ZYI)
>
>
>
>
> [Non-text portions of this message have been removed]
>

43462. Re: TS-830s RF board diodes

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-19 23:00:00 UTC
From: Terry Wagoner
Topic: 43456 Message: 43462

I forgot about the TOF (Transmit OFF Warc and 10 mhz Diodes). Joe set me straight about that.

The bandswitch info is just the 9vdc being switched by the contacts on the S1-1 deck and being routed to the Diode matrix on the PLL board. No diodes involved on RF board for this function.

The remaining diodes control D3 RF amp output signal shunt so that 1st Mixer gets full RF signal level on 10 meters where signals at the antenna will be much lower level than the low band signals especially 160 and 80. On the low bands some of Q1 RF Amp output is shunted to ground to improve strong signal and 2 signal performance.

I failed to look at the schematic and was talking from memory. Sorry about that.

Terry K9TW

43463. Re: TS 530S No display or receive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-20 00:33:36 UTC
From: k5hfg
Topic: 43427 Message: 43463

Terry,

After 3 1/2 Hrs. I can confirm success. I replaced the PLL board with my known good board and the display came on and went right back off. Imagine my disappointment. So I started tracing and checking voltages. Everything was just as good as it was with the other PLL board. I checked every wire in the rig for cracked or shorted areas or pinched. Could find nothing that even looked suspicious. But I noticed that the VCO coax was very difficult to plug into the PLL board and I really had to work at it. I removed the coax completely and checked continuity. It was fine. But, not satisfied with the fit in the plug I reached into my wire junk box and pulled another out. It checked OK so I plugged it in both ends and reassembled everything. I mashed the switch and the display came on bright, flickered and dimmed out again. I removed the coax again and checked both ends. I removed some of the bumps on the pins and pressed the coax back into the plugs and twisted them a little bit to make sure they were seated. Turned on the power and the rig has been running for the last hour with good receive on all bands that had signals. Now I suspect the other board will work as well. I will work on it tomorrow. Thanks for your help, I know more about the PLL board now than I did a few days ago and have some good notes for the file.
73, Don K5HFG

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Don:
>
> You should not have to remove boards and visually inspect for missing foils, cracked traces, addition of jumper wires etc as a matter of routine whenever you have an operational issue. However as these rigs age and pass thru many hands that may indeed need to be your standard mode of operation.
>
> Of course any time I purchase and install a replacement board I do a very good visual and number one thing I do is install a molex plug on each molex connector one at a time and under lite and magnification I rock the plug back and forth and watch the pin solder interface for any movement. Often see the pin moving and a circumferential crack in the solder around the pin. I place the plug on to ensure the pins are all fully seated and gives me a little more leverage and simulates the action of plugging and unplugging a connector.
>
> It is true that there are plenty of boards out there that have been butchered and cobbled attempts at repairs. I dont have them in my personal radios but seen my share.
>
> Let us know what you find when installing the good PLL board. Hopefully display and receive will be restored. The board that had missing pads at ICs Q15 and Q16 pins are probably beyond repair and can be used to harvest parts from. The other PLL board if no serious pads or trace issues can be troubleshot and repaired if you are so inclined. Especially since you have operational radio to make comparisons.
>

> Terry K9TW

43464. Re: TS-830s RF board diodes

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-20 00:01:28 UTC
From: ralph_ts_830s
Topic: 43456 Message: 43464

Joe/Terry,

Thanks for the prompt reply. Yes, the diodes look to have been broken intentionally rather than having been burned. I'm guessing someone chose this method over removing the bottom cover and cutting the blue wire. Quick and dirty (lazy). I'll leave the RF board alone for now. After I find a VTVM I'll perform some more checks to determine my low power issue. I'll keep you posted (pun intended).
73
Ralph/KB1ZYI

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Ralph,
>
> Â The diodes on the RF board...D-4, D-5, D-6 by connector 1 are for enabling the WARC bands. D-4 is for 10Mhz, D-5 is for 18Mhz, and
> D--6 is for 24.5Mhz. It sounds like someone just broke them...instead of clipping the small blue wire fromÂ Connector 6 Pin1on the RF board toÂ Connector 6
> Pin4 on the AF unit. This is easily done if you get access to the bottom of the rig.
> I'll have to look more to see what the other possibly damaged diodes do.
>
> Â Low power may be caused by numerous things, as you may be aware,
> Removal of the RF board is not difficult. You will need a long 1.5mm "allen wrench" to loosen
> the set screws that hold the band switch shaft to the band switch in the final cage. DO THIS WITH POWER OFF
> and RIG UNPLUGGED. Make absolutely sure that there is NO high voltage in there..or you'll get a BIG surprise
> ..as in SK. Proper orientation of the shaft and other parts essential for removal and installation. I can give you more
> about that later..if needed
>
> Â Look on Pg 12 of your service manual...it shows an XRAY view of the RF board
>
>
> Â
> 73Â Joe
> WB7UQU
>
>
>
> _____
> From: ralph_ts_830s <r_krohne@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Friday, July 19, 2013 6:54 AM

> Subject: [TS-520_820_530_830] TS-830s RF board diodes
>
>
>
> Â
> Group,
>
> I actually have two of these radios, S/N 2041XXX and 3120XXX. I have spent most of my time using the newer one as it seems to work ok (over 90 watts out on 10 meters). The older one has the YK-88C and YG-455C filters so it might turn out to be the better radio. Hopefully I can learn from working on it. The older one is the one with some issues. Most obvious issue to me is low power out across all bands (maybe 80 watts). There are likely more problems that I will see after using it more. I noticed there is a group of diodes near the nine pin connector at the front of the RF board top view (I think D4 through D10), that most if not all of them are damaged (difficult to see). I have the service manual but I am having trouble identifying the diodes in the parts list. Assuming I can find new diodes and assuming I can get the RF board out, cleaned, lubed and diodes replaced, are their other components related to this diode problem that in your experience
> might need my attention? Root cause?
> I am in the process of gathering the tools I need to properly troubleshoot this radio. I have a SM-220 scope which I need to fabricate an RF probe for. If the 220 is not up to the task I have access to a TektronixTDS3054 scope which I am not yet familiar with how to use. I have a Fluke 744 meter as well. I am using a dummy load made from Ken's (K4EAA) design and calculating my output power from it. Typical for me, I am jumping into this hobby with both feet. I am familiar with basic electrical troubleshooting but radio, RF specifically, is a new challenge for me. I am not expecting to "get it" all at once. I plan to browse past posts for relative info creating extensive notes and use my second radio as a test bed for my education. This message board is an incredibly valuable resource and I am fortunate to be a part of it.
> 73
> Ralph (KB1ZYI)
>
>
>
>
> [Non-text portions of this message have been removed]
>

43465. Re: TS-830s RF board diodes

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-20 03:21:30 UTC
From: Terry Wagoner
Topic: 43456 Message: 43465

Ralph:

I dont remember the details of your low RF output. Low on all bands or just one or more bands? One or more is commonly due to bad bandswitch contacts.

I think you said you had a Tek O-scope. If so you dont have to wait until you get an RF probe and VTVM to troubleshoot low RF output. Look at the TX Level Diagram in your service manual and you will see the RF levels listed in RMS. These were taken with a RF Millivolt meter.

You can use the O-scope to measure these levels. Your scope will display Peak to Peak RF voltages. Just divide by 2.828 to get the RMS levels to compare to what you see on the TX Level Diagram.

For example starting with the TIF signal level at the IF board. You will see that TX Level Diagram shows 12.4mv rms. So with your O-scope should measure approx 12.4mv x 2.828 = 35mv volts P-P.

The RF output of the Transmit Mixer at TP-4 on RF board should be approx 2rms volts or 2 x 2.828 = 5.7v P-P.

Load the rig into dummy load in CW mode on 14.200 mhz to max rf output you can get without exceeding plate dissipation. Turn off SG switch. Leave heaters on. Now can measure RF drive levels from the TIF amp to the control grids of the 6146 finals. Flip to send to make your measurements with your O-scope. Depending on the input capacitance of your scope probe you may have to peak the Drive control when probe tip is touching the test point to maximize your reading.

Where you find the RF drive low is where you then focus your troubleshooting.

Terry K9TW

43466. Re: TS 530S No display or receive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-20 11:55:31 UTC
From: k5hfg
Topic: 43427 Message: 43466

Good morning, More good news to report. The spare PLL board I have also is in good working order. I put it in late last nite and it does work. So, on to the next task and checkout tx side. I will get to that this afternoon. Thanks again Terry and all.

--- In TS-520_820_530_830@yahoogroups.com, "k5hfg" <dlbowders@...> wrote:
>
> Terry,
>
> After 3 1/2 Hrs. I can confirm success. I replaced the PLL board with my known good board and the display came on and went right back off. Imagine my disappointment. So I started tracing and checking voltages. Everything was just as good as it was with the other PLL board. I checked every wire in the rig for cracked or shorted areas or pinched. Could find nothing that even looked suspicious. But I noticed that the VCO coax was very difficult to plug into the PLL board and I really had to work at it. I removed the coax completely and checked continuity. It was fine. But, not satisfied with the fit in the plug I reached into my wire junk box and pulled another out. It checked OK so I plugged it in both ends and reassembled everything. I mashed the switch and the display came on bright, flickered and dimmed out again. I removed the coax again and checked both ends. I removed some of the bumps on the pins and pressed the coax back into the plugs and twisted them a little bit to make sure they were seated. Turned on the power and the rig has been running for the last hour with good receive on all bands that had signals. Now I suspect the other board will work as well. I will work on it tomorrow. Thanks for your help, I know more about the PLL board now than I did a few days ago and have some good notes for the file.
> 73, Don K5HFG
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Don:
> >
> > You should not have to remove boards and visually inspect for missing foils, cracked traces, addition of jumper wires etc as a matter of routine whenever you have an operational issue. However as these rigs age and pass thru many hands that may indeed need to be your standard mode of operation.
> >
> > Of course any time I purchase and install a replacement board I do a very good visual and number one thing I do is install a molex plug on each molex connector one at a time and under lite and magnification I rock the plug back and forth and watch the pin solder interface for any movement. Often see the pin moving and a circumferential crack in the solder around the pin. I place the plug on to ensure the pins are all fully seated and gives me a little more leverage and simulates the action of plugging and unplugging a connector.
> >
> > It is true that there are plenty of boards out there that have been butchered and cobbled attempts at repairs. I dont have them in my personal radios but seen my share.
> >

> > Let us know what you find when installing the good PLL board. Hopefully display and receive will be restored. The board that had missing pads at ICs Q15 and Q16 pins are probably beyond repair and can be used to harvest parts from. The other PLL board if no serious pads or trace issues can be troubleshot and repaired if you are so inclined. Especially since you have operational radio to make comparisons.
> >
> > Terry K9TW
>

43467. Re: TS 530S No display or receive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-20 13:54:47 UTC
From: Terry Wagoner
Topic: 43427 Message: 43467

Don:

Glad you got it working, but having a bad VCO cable or connector cannot be the cause of having no Display when you installed the first spare board.

The VCO signal is an output from the PLL and has nothing to do with the Display. The VCO is the LO (local oscillator) for the TX and RX Mixers on the RF board. No VCO or low VCO signal and you will have no RX and TX but the display will be fine.

So I do not understand why the first spare board you installed did not result in an illuminated display? You can unplug your VCO output cable from your PLL board and your display will remain illuminated and will change frequency up and down as you rotate the VFO knob.

When you installed this first spare board and had no display the problem had to be due to not having VFO signal input to the PLL.
Plugging and unplugging the VFO Molex connector should have wiped the pins.

If the display blanks again suggest you confirm good 9vdc at External VFO connector on rear panel and re-clean the mini-Din switch. I use a spare Din plug and De-oxit it and plug and unplug the spare plug multiple times to exercise the switch.

If you said that I am sorry as I must have missed it. It seemed like you focused on the VCO cable connector which of course was the cause of no RX but not the root cause for display problem.

Terry K9TW

>

43468. Re: TS 530S No display or receive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-20 15:33:11 UTC
From: k5hfg
Topic: 43427 Message: 43468

Terry,

I am sorry but I completely omitted the problem with the counter board. In my haste to report, I typed faster than my brain was working. The first time the display faded out on the new PLL board I took it out and examined the foil side. Found damaged traces under Q6 and Q14. So, I put in a spare known good counter board and it lit up but still no receive. That is when I went thru wire checking and onto the VCO coax. I was typing from my notes and just skipped over a few lines. Dang it! Anyway I am looking at the faulty counter board now and it appears to have the same type of trace damage. Not burned but completely missing with bare pins showing. I presume someone tried to repair and lifted the trace with to much lead in their pencil. Don't know if I can repair or if there is any damage to Q6 or Q14. Someone tried a repair but hacked it pretty good.
They bent the pins over and tried to reattach to remaining trace. May or may not be able to fix. That should clear this mess up for us and get us back on the same page. Again I apologize for the omission.
By the way, I did mention the 9v at the DIN plug and it was good but I cleaned and exercised anyway just to be sure it was stable. Have good 200+ mV VFO signal. All Receive is working fine. Now I will concentrate on the TX side. Thanks for helping me save this rig. It is in to good of shape to go to parts. Someone will enjoy it.

Don K5HFG

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Don:
>
> Glad you got it working, but having a bad VCO cable or connector cannot be the cause of having no Display when you installed the first spare board.
>
> The VCO signal is an output from the PLL and has nothing to do with the Display. The VCO is the LO (local oscillator) for the TX and RX Mixers on the RF board. No VCO or low VCO signal and you will have no RX and TX but the display will be fine.
>
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>
> When you installed this first spare board and had no display the problem had to be due to not having VFO signal input to the PLL.
> Plugging and unplugging the VFO Molex connector should have wiped the pins.
>
> If the display blanks again suggest you confirm good 9vdc at External VFO connector on rear panel and re-clean the mini-Din switch. I use a spare Din plug and De-oxit it and plug and unplug the spare plug multiple times to exercise the switch.
>

> If you said that I am sorry as I must have missed it. It seemed like you focused on the VCO cable connector which of course was the cause of no RX but not the root cause for display problem.
>
>
> Terry K9TW
>
> >
>

43469. Re: [TS-520_820_530_830] Re: Lost audio in LSB

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-20 15:54:05 UTC
From: Don
Topic: 43446 Message: 43469

Hi Mike

I replaced the crystal with the one from the parts radio.Bingo it worked.
I decided to check the crstal with my crystal tester and it showed it
was good.
I then put it back in and it worked fine.
As i did not want it to act up again down the road i put the parts
radio crystal back in
Maybe i should have just reheat the pins first?
Don't think is very common for a crystal to fail unless another
component or a voltage spike would take it out.

The bottom line is that i saved hundreds of dollars with your help

73
Don/Ve2ud

On 19/07/2013 4:50 PM, w5rkl wrote:
>
> Don,
>
> Replace the suspected bad X3 in your 520 with X3 from your 520 parts
> radio, that should fix your problem. When the replacement is complete,
> perform the 520's CAR Unit adjustment in the 520 service manual.
>
> 73
> Mike W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> > I know it now as i did not know that
> > So should i start by changing the crystal Mike
> >
> > 73
> > Don/Ve2ud
> >
> >
> > \
> > On 19/07/2013 4:12 PM, W5RKL wrote:
> > >
> > > The crystals have their frequencies stamped on them. The LSB
> crystal is
> > > identified by "3393.5" stamped on the crystal case and the PC
> board silk
> > > screen label is "X3".

> > >
> > > The CAR Unit signal, in receive, is the "BFO" signal that is
> applied to
> > > the GENERATOR Unit's BD where it mixes with the IF Unit's signal,
> > > resulting in recovered audio at the BD's output that is then
> applied to
> > > the Audio amp. Loss of the CAR Unit's "BFO" signal in LSB results
> in no
> > > output from the BD which results in no audio applied to the AF Unit's
> > > audio amp, hence nothing hear in LSB. I don't know if you realized
> it or
> > > not but you also lost LSB transmit. USB and CW plus TUNE will work
> fine
> > > but LSB transmit will be zero.
> > >
> > > 73
> > > Mike W5RKL
> > >
> > > On 7/19/2013 12:13 PM, Don wrote:
> > > >
> > > >
> > > > Mike
> > > > Yes you are right,there is no output for LSB
> > > > I got 3.394 for tune and same for CW
> > > > USB is 3.396 and nil for LSB
> > > > As there is three crystals which one would it be
> > > >
> > > > 73
> > > > Don/Ve2ud
> > > >
> > > > I do have a parts TS 520,as it should be the same
> > > >
> > > > On 19/07/2013 8:56 AM, W5RKL wrote:
> > > > >
> > > > > It appears the LSB CAR Unit crystal has failed to oscillate.
> First try
> > > > > cleaning the MODE switch. If that doesn't help then check the
> LSB CAR
> > > > > Unit crystal frequency by connecting a frequency counter to
> the CAR
> > > > > Unit's "OUT" terminal. The counter should display "3393.5Khz" if
> > > the LSB
> > > > > CAR Unit crystal is oscillating. A separate receiver tuned to
> > > 3393.5Khz
> > > > > will also work.
> > > > >
> > > > > 73
> > > > > Mike W5RKL
> > > > >
> > > > > On 7/19/2013 7:24 AM, Don D wrote:

> > > > > >
> > > > > > Hi All
> > > > > > My TS520s has lost sound in LSB,Tune,Cw and USB are fine.
> > > > > > The signals are present in LSB,but just no audio.
> > > > > > So were should i start first ,,relay?
> > > > > > 73
> > > > > > Don/Ve2ud
> > > > > > >
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43470. Re: [TS-520_820_530_830] Re: Lost audio in LSB

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-20 16:06:06 UTC
From: Don
Topic: 43446 Message: 43470

Now that i have the covers off my TS520s were is the adjustment for the
s meter
as i get a two unit reading with no signal on any band and no antenna
connection

73
Don/Ve2ud

On 19/07/2013 4:50 PM, w5rkl wrote:
>
> Don,
>
> Replace the suspected bad X3 in your 520 with X3 from your 520 parts
> radio, that should fix your problem. When the replacement is complete,
> perform the 520's CAR Unit adjustment in the 520 service manual.
>
> 73
> Mike W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
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> > I know it now as i did not know that
> > So should i start by changing the crystal Mike
> >
> > 73
> > Don/Ve2ud
> >
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> > \
> > On 19/07/2013 4:12 PM, W5RKL wrote:
> > >
> > > The crystals have their frequencies stamped on them. The LSB
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> > > screen label is "X3".
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> > > The CAR Unit signal, in receive, is the "BFO" signal that is
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> it or
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> fine
> > > but LSB transmit will be zero.
> > >
> > > 73
> > > Mike W5RKL
> > >
> > > On 7/19/2013 12:13 PM, Don wrote:
> > > >
> > > >
> > > > Mike
> > > > Yes you are right,there is no output for LSB
> > > > I got 3.394 for tune and same for CW
> > > > USB is 3.396 and nil for LSB
> > > > As there is three crystals which one would it be
> > > >
> > > > 73
> > > > Don/Ve2ud
> > > >
> > > > I do have a parts TS 520,as it should be the same
> > > >
> > > > On 19/07/2013 8:56 AM, W5RKL wrote:
> > > > >
> > > > > It appears the LSB CAR Unit crystal has failed to oscillate.
> First try
> > > > > cleaning the MODE switch. If that doesn't help then check the
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> > > > > Unit crystal frequency by connecting a frequency counter to
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> > > > > On 7/19/2013 7:24 AM, Don D wrote:
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43471. Re: [TS-520_820_530_830] Re: Lost audio in LSB

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-20 17:24:24 UTC
From: Joseph Stiles
Topic: 43446 Message: 43471

Don,

  Look at the service manual, Pg 13, Section 3-18. The "S" meter adjustments are on the IF board(X48-1060-00) which is on the left side of the VFO,
on the top side of the chassis...they are VR-1 and VR-2

73 Joe
WB7UQU

From: Don <ve2ud@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, July 20, 2013 9:06 AM
Subject: Re: [TS-520_820_530_830] Re: Lost audio in LSB

Now that i have the covers off my TS520s were is the adjustment for the
s meter
as i get a two unit reading with no signal on any band and no antenna
connection

73
Don/Ve2ud

On 19/07/2013 4:50 PM, w5rkl wrote:
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> Don,
>
> Replace the suspected bad X3 in your 520 with X3 from your 520 parts
> radio, that should fix your problem. When the replacement is complete,
> perform the 520's CAR Unit adjustment in the 520 service manual.
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> 73
> Mike W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
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> > > Mike W5RKL
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> > > > As there is three crystals which one would it be
> > > >
> > > > 73
> > > > Don/Ve2ud
> > > >
> > > > I do have a parts TS 520,as it should be the same
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> > > > On 19/07/2013 8:56 AM, W5RKL wrote:
> > > > >
> > > > > It appears the LSB CAR Unit crystal has failed to oscillate.
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> > > > > Mike W5RKL
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43472. Re: [TS-520_820_530_830] Re: Lost audio in LSB

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-20 17:36:04 UTC
From: Don
Topic: 43446 Message: 43472

Thanks Joe

73
Don ve2ud

On 20/07/2013 1:24 PM, Joseph Stiles wrote:
>
> Don,
>
> Look at the service manual, Pg 13, Section 3-18. The "S" meter
> adjustments are on the IF board(X48-1060-00) which is on the left side
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> on the top side of the chassis...they are VR-1 and VR-2
>
>
> 73 Joe
> WB7UQU
>
> _____
> From: Don <ve2ud@... <mailto:ve2ud%40travel-net.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Saturday, July 20, 2013 9:06 AM
> Subject: Re: [TS-520_820_530_830] Re: Lost audio in LSB
>
>
>
> Now that i have the covers off my TS520s were is the adjustment for the
> s meter
> as i get a two unit reading with no signal on any band and no antenna
> connection
>
> 73
> Don/Ve2ud
>
> On 19/07/2013 4:50 PM, w5rkl wrote:
> >
> > Don,
> >
> > Replace the suspected bad X3 in your 520 with X3 from your 520 parts
> > radio, that should fix your problem. When the replacement is complete,
> > perform the 520's CAR Unit adjustment in the 520 service manual.
> >
> > 73
> > Mike W5RKL

> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> > >
> > > I know it now as i did not know that
> > > So should i start by changing the crystal Mike
> > >
> > > 73
> > > Don/Ve2ud
> > >
> > >
> > > \
> > > On 19/07/2013 4:12 PM, W5RKL wrote:
> > > >
> > > > The crystals have their frequencies stamped on them. The LSB
> > crystal is
> > > > identified by "3393.5" stamped on the crystal case and the PC
> > board silk
> > > > screen label is "X3".
> > > >
> > > > The CAR Unit signal, in receive, is the "BFO" signal that is
> > applied to
> > > > the GENERATOR Unit's BD where it mixes with the IF Unit's signal,
> > > > resulting in recovered audio at the BD's output that is then
> > applied to
> > > > the Audio amp. Loss of the CAR Unit's "BFO" signal in LSB results
> > in no
> > > > output from the BD which results in no audio applied to the AF
> Unit's
> > > > audio amp, hence nothing hear in LSB. I don't know if you realized
> > it or
> > > > not but you also lost LSB transmit. USB and CW plus TUNE will work
> > fine
> > > > but LSB transmit will be zero.
> > > >
> > > > 73
> > > > Mike W5RKL
> > > >
> > > > On 7/19/2013 12:13 PM, Don wrote:
> > > > >
> > > > >
> > > > > Mike
> > > > > Yes you are right,there is no output for LSB
> > > > > I got 3.394 for tune and same for CW
> > > > > USB is 3.396 and nil for LSB
> > > > > As there is three crystals which one would it be
> > > > >
> > > > > 73
> > > > > Don/Ve2ud

> > > > >
> > > > > I do have a parts TS 520,as it should be the same
> > > > >
> > > > > On 19/07/2013 8:56 AM, W5RKL wrote:
> > > > > >
> > > > > > It appears the LSB CAR Unit crystal has failed to oscillate.
> > First try
> > > > > > cleaning the MODE switch. If that doesn't help then check the
> > LSB CAR
> > > > > > Unit crystal frequency by connecting a frequency counter to
> > the CAR
> > > > > > Unit's "OUT" terminal. The counter should display "3393.5Khz" if
> > > > the LSB
> > > > > > CAR Unit crystal is oscillating. A separate receiver tuned to
> > > > 3393.5Khz
> > > > > > will also work.
> > > > > >
> > > > > > 73
> > > > > > Mike W5RKL
> > > > > >
> > > > > > On 7/19/2013 7:24 AM, Don D wrote:
> > > > > > >
> > > > > > > Hi All
> > > > > > > My TS520s has lost sound in LSB,Tune,Cw and USB are fine.
> > > > > > > The signals are present in LSB,but just no audio.
> > > > > > > So were should i start first ,,relay?
> > > > > > > 73
> > > > > > > Don/Ve2ud
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > > [Non-text portions of this message have been removed]
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43473. Re: TS 530S No display or receive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-20 17:53:59 UTC
From: Terry Wagoner
Topic: 43427 Message: 43473

Don:

No reason to be sorry. I wasnt scolding you. Just wanted to make sure you did not think fixing VCO cable connector would cure the display problem.

Well very odd to have two PLL boards like this. I think you are correct someone overheated and lifted the involved IC lead pads. I dont think there would be enough lead length to bend IC leads over to bridge the gap and resolder.

You might take a look at some sockets to see if they have longer pin length and perhaps could get a small gauge jumper wire from its pins to the foil trace? Sockets would also help at any location where you see this damage as would allow you to swap out chips easily.

Best IC unsoldering tool I have ever used is a Hakko 808 but pricey for just casual user. With extra tips just over $200. In matter of seconds the IC usually will literally fall off the board.

You are making good progress. While we need parts rigs for restoring these treasures I am with you it is best if can first make an effort to fix and keep them on the air. Plus cant beat the experience you gain.

Take Care
Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "k5hfg" <dlbowders@...> wrote:
>
> Terry,
>
> I am sorry but I completely omitted the problem with the counter board. In my haste to report, I typed faster than my brain was working. The first time the display faded out on the new PLL board I took it out and examined the foil side. Found damaged traces under Q6 and Q14. So, I put in a spare known good counter board and it lit up but still no receive. That is when I went thru wire checking and onto the VCO coax. I was typing from my notes and just skipped over a few lines. Dang it! Anyway I am looking at the faulty counter board now and it appears to have the same type of trace damage. Not burned but completely missing with bare pins showing. I presume someone tried to repair and lifted the trace with to much lead in their pencil. Don't know if I can repair or if there is any damage to Q6 or Q14. Someone tried a repair but hacked it pretty good.
> They bent the pins over and tried to reattach to remaining trace. May or may not be able to fix. That should clear this mess up for us and get us back on the same page. Again I apologize for the omission.
> By the way, I did mention the 9v at the DIN plug and it was good but I cleaned and exercised anyway just to be sure it was stable. Have good 200+ mV VFO signal. All Receive is working fine. Now I will concentrate on the TX side. Thanks for helping me save this rig. It is in to good of shape to go to parts. Someone will enjoy it.
>
> Don K5HFG

>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Don:
> >
> > Glad you got it working, but having a bad VCO cable or connector cannot be the cause of having no Display when you installed the first spare board.
> >
> > The VCO signal is an output from the PLL and has nothing to do with the Display. The VCO is the LO (local oscillator) for the TX and RX Mixers on the RF board. No VCO or low VCO signal and you will have no RX and TX but the display will be fine.
> >
> > So I do not understand why the first spare board you installed did not result in an illuminated display? You can unplug your VCO output cable from your PLL board and your display will remain illuminated and will change frequency up and down as you rotate the VFO knob.
> >
> > When you installed this first spare board and had no display the problem had to be due to not having VFO signal input to the PLL.
> > Plugging and unplugging the VFO Molex connector should have wiped the pins.
> >
> > If the display blanks again suggest you confirm good 9vdc at External VFO connector on rear panel and re-clean the mini-Din switch. I use a spare Din plug and De-oxit it and plug and unplug the spare plug multiple times to exercise the switch.
> >
> > If you said that I am sorry as I must have missed it. It seemed like you focused on the VCO cable connector which of course was the cause of no RX but not the root cause for display problem.
> >
> >
> > Terry K9TW
> >
> > >
> >
>

43474. Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-20 19:59:16 UTC
From: jweigh
Topic: 43474 Message: 43474

I am setting up a room in the house for the "shack". I would like to know if an 8 gage THHN primary wire would work to join the shack ground rod to the mains ground rod (about 80 ft.). Will this be a small enough resistance to direct lightning away from the Shack if the antenna cables and radio grounds are run through a grounding panel to the shack ground rod then to the mains ground rod.
Thanks for any input, Jerry

43475. Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-20 20:33:10 UTC
From: w5rkl
Topic: 43474 Message: 43475

Jerry,

Yes that wire should be okay for a ground. Drive an 8 foot ground rod into the ground just outside of the shack. Connect that ground rod using the 8 gauge wire to the house mains ground rod. Run the wire underground and do not have "kinks, sharp bents, or large loops" at the end of the run when connecting to the main ground rod. My shack is 85 feet from the house and power is run underground in conduit. I have an 8 foot ground rod driven into the ground at the point where the power cable enters the shack. The breaker panel and neutral are connected to the ground rod. This puts the shack and the house at the same ground potential. I have an Ameritron RSC 4 coax switch mounted on another ground rod on the opposite end of the shack some 20 feet away that's connected to the shack ground using solid copper ground wire ran underground. That puts everything at the same ground potential.

I have a 120 foot tall pine tree about 20 feet from the shack. The pine tree sustained a direct hit last summer. My inverted vee is hung from one of the pine tree limbs. The lightning traveled down the tree, through the center, continued down the other side of the tree surface, blew off bark, then traveled up the limb "next to" the inverted vee balun, and "jumped 6 feet" to the balun ground strap then flowed down the coax shield and dissipated in the ground. The coax was damage only at the PL-259. The balun sustained carbon tracks on the SO-239 but no internal damage. I cut off the damaged area of the coax, about 6 inches, and put another PL-239 on the coax and it's been working fine every since. The tree sustained some damage but the tree did NOT die, it's still doing well. Nothing in the shack sustained any damage, not even from the EMP (Electro Magnetic Pulse) that occurs in every lightning strike. I suspect if I did not have the grounding system I have I would have seen some damage to equipment in the shack.

73
Mike W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "jweigh" <jweigh@...> wrote:
>
> I am setting up a room in the house for the "shack". I would like to know if an 8 gage THHN primary wire would work to join the shack ground rod to the mains ground rod (about 80 ft.). Will this be a small enough resistance to direct lightning away from the Shack if the antenna cables and radio grounds are run through a grounding panel to the shack ground rod then to the mains ground rod.
> Thanks for any input, Jerry
>

43476. problem with 599d twins.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-20 20:23:49 UTC
From: yash@aol.com
Topic: 43476 Message: 43476

Have a pair of twins,t599d/r-599d. When following the manual to tune the transmitter ,every thing goes fine , easy 100 watt output . The manual says to tune the transmitter with the transceive/ seperate switch on the back in separate,the light is then on for the transmitter vfo. when Iam done, I push the switch back to transceive, transmitter light goes out . I then put the receiver - transceiver switch to RX and the receiver comes to life.
When I key the transmitter, receiver mutes as it should.....BUT NO output from the transmitter, on ssb. Now If I do NOT touch any thing except to slide the transceive/seperate, back to separate when I key the transmitter all is fine,full out.
These are new to me ,have had a bunch of kenwoods hybrids over the years, these are the first twins.
anyone have any suggestions as to where to start.? I rang out the transceive cable, checks fine.
73
dale wt4t

[Non-text portions of this message have been removed]

43477. Re: [TS-520_820_530_830] problem with 599d twins.

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-20 20:45:49 UTC
From: <pmarkavage@...>
Topic: 43476 Message: 43477

Are both the receiver and the transmitter bandswitch on the same band? If not, only the receiver will work when the back switch is in transceive.

Pete, wa2cwa
http://www.manualman.com

On Sat, 20 Jul 2013 16:23:49 -0400 (EDT) "yash@..." <yash@...> writes:
> Have a pair of twins,t599d/r-599d. When following
> the manual to tune the transmitter ,every thing goes fine , easy 100
> watt output . The manual says to tune the transmitter with the
> transceive/ seperate switch on the back in separate,the light is
> then on for the transmitter vfo. when Iam done, I push the switch
> back to transceive, transmitter light goes out . I then put the
> receiver - transceiver switch to RX and the receiver comes to life.
>
> When I key the transmitter, receiver mutes as it should.....BUT
> NO output from the transmitter, on ssb. Now If I do NOT touch any
> thing except to slide the transceive/seperate, back to separate
> when I key the transmitter all is fine,full out.
> These are new to me ,have had a bunch of kenwoods hybrids over
> the years, these are the first twins.
> anyone have any suggestions as to where to start.? I rang out the
> transceive cable, checks fine.
> 73
> dale wt4t

43478. Re: [TS-520_820_530_830] Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-20 20:58:00 UTC
From: W5RKL
Topic: 43474 Message: 43478

When I said no sharp bends, kinks, or loops in the ground wire, I meant throughout the entire run of the ground wire. Small smooth bends in the wire are acceptable but sharp bends or kinks are not.

You might also take some time to look at Tom Ranch, W8JI, website where he discussed grounding.

http://w8ji.com/ground_systems.htm

and lightning

http://w8ji.com/lightning.htm

I spoke to Tom when I installed the grounding in my shack last summer. I sent him pictures and text showing/discussing how the ground rods were installed and how the grounds were connected. He said my grounding system was exactly what's necessary for protection of both the shack and the house.

73
Mike W5RKL

On 7/20/2013 3:33 PM, w5rkl wrote:
>
> Jerry,
>
> Yes that wire should be okay for a ground. Drive an 8 foot ground rod
> into the ground just outside of the shack. Connect that ground rod
> using the 8 gauge wire to the house mains ground rod. Run the wire
> underground and do not have "kinks, sharp bents, or large loops" at
> the end of the run when connecting to the main ground rod. My shack is
> 85 feet from the house and power is run underground in conduit. I have
> an 8 foot ground rod driven into the ground at the point where the
> power cable enters the shack. The breaker panel and neutral are
> connected to the ground rod. This puts the shack and the house at the
> same ground potential. I have an Ameritron RSC 4 coax switch mounted
> on another ground rod on the opposite end of the shack some 20 feet
> away that's connected to the shack ground using solid copper ground
> wire ran underground. That puts everything at the same ground potential.
>
> I have a 120 foot tall pine tree about 20 feet from the shack. The
> pine tree sustained a direct hit last summer. My inverted vee is hung
> from one of the pine tree limbs. The lightning traveled down the tree,
> through the center, continued down the other side of the tree surface,
> blew off bark, then traveled up the limb "next to" the inverted vee

> balun, and "jumped 6 feet" to the balun ground strap then flowed down
> the coax shield and dissipated in the ground. The coax was damage only
> at the PL-259. The balun sustained carbon tracks on the SO-239 but no
> internal damage. I cut off the damaged area of the coax, about 6
> inches, and put another PL-239 on the coax and it's been working fine
> every since. The tree sustained some damage but the tree did NOT die,
> it's still doing well. Nothing in the shack sustained any damage, not
> even from the EMP (Electro Magnetic Pulse) that occurs in every
> lightning strike. I suspect if I did not have the grounding system I
> have I would have seen some damage to equipment in the shack.
>
> 73
> Mike W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "jweigh" <jweigh@...>
> wrote:
> >
> > I am setting up a room in the house for the "shack". I would like to
> know if an 8 gage THHN primary wire would work to join the shack
> ground rod to the mains ground rod (about 80 ft.). Will this be a
> small enough resistance to direct lightning away from the Shack if the
> antenna cables and radio grounds are run through a grounding panel to
> the shack ground rod then to the mains ground rod.
> > Thanks for any input, Jerry
> >
>
>

[Non-text portions of this message have been removed]

43479. Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-20 20:48:40 UTC
From: jweigh
Topic: 43474 Message: 43479

Mike,
Thanks for the quick and great reply...A minor problem may be I cannot easily run the wire underground as I have an 8 inch concrete slab between the shack grnd rod and the mains which goes out from the house about 18 ft. Do you think if I went around the slab underground (probably another 25-30 ft. of wire) it would still be ok?? turns out the grnd rods are on opposite ends of the house.
Thanks again, Jerry K4GEW

43480. Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-20 21:15:02 UTC
From: w5rkl
Topic: 43474 Message: 43480

I would add an additional ground rod along the under ground run. I rented a "ditch witch", makes trenches much easier. Check with your local utilities, you should have them come out and verify that the area you are going to dig will not cause damage to telephone, cable TV, and power. If you cause damage to any of these utilities because you didn't call them and have them come out to mark their lines, YOU will be responsible for repairing those utility lines!! So don't forget to consider that before you dig!!

73
Mike W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "jweigh" <jweigh@...> wrote:
>
>
> Mike,
> Thanks for the quick and great reply...A minor problem may be I cannot easily run the wire underground as I have an 8 inch concrete slab between the shack grnd rod and the mains which goes out from the house about 18 ft. Do you think if I went around the slab underground (probably another 25-30 ft. of wire) it would still be ok?? turns out the grnd rods are on opposite ends of the house.
> Thanks again, Jerry K4GEW
>

43481. Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-20 21:23:08 UTC
From: jweigh
Topic: 43474 Message: 43481

Mike, I like the ditch witch idea and I already looked at Tom's site. that's where I learned I needed to join the mains grnd rod to the other end of the house and antenna. I just can't afford the copper flashing he used, so the THHN 8 gage will have to do. Do I have to put THHN inside conduit or just bury it?
Thanks again,
Jerry K4GEW

43482. Got my General today so the 820 will be up

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-20 21:48:48 UTC
From: Barry
Topic: 43482 Message: 43482

I just passed the General exam this morning, so the 820 will be fired up tonight. Hope I catch some of you out there!

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

43483. Re: Got my General today so the 820 will be up

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-20 23:01:17 UTC
From: k5hfg
Topic: 43482 Message: 43483

Congratulations Barry. Good Job!! 73, Don K5HFG

--- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@...> wrote:
>
> I just passed the General exam this morning, so the 820 will be fired up tonight. Hope I catch some of you out there!
>
> Barry
> KK4RXN
> Jeremiah 29:11-13 / John 3:16
>

43484. Re: Got my General today so the 820 will be up

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 00:15:01 UTC
From: sal.cerda
Topic: 43482 Message: 43484

Congratulations, Barry! Good job.
Now, while you have the momentum, start studying for your extra. There is lots more room on the Extra parts of the bands. ;-)
73
Sal
KD0UBE

--- In TS-520_820_530_830@yahoogroups.com, "k5hfg" <dlbowders@...> wrote:
>
> Congratulations Barry. Good Job!! 73, Don K5HFG
>
> --- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@> wrote:
> >
> > I just passed the General exam this morning, so the 820 will be fired up tonight. Hope I catch some of you out there!
> >

43485. Got my General today so the 820 will be

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 01:36:32 UTC
From: Les Zwiebel WB6ORZ
Topic: 43485 Message: 43485

Congratulations, OM. C U on the air.
   (((73)))
   Les
   ---===WB6ORZ===---

-------- Original message --------
From: k5hfg <dlbowders@...>
Date: 07/20/2013 4:01 PM (GMT-08:00)
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Got my General today so the 820 will be up

Congratulations Barry. Good Job!! 73, Don K5HFG

--- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@...> wrote:
>
> I just passed the General exam this morning, so the 820 will be fired up tonight. Hope I catch some of you out there!
>
> Barry
> KK4RXN
> Jeremiah 29:11-13 / John 3:16
>

[Non-text portions of this message have been removed]

43486. Re: [TS-520_820_530_830] Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 02:44:37 UTC
From: Mike
Topic: 43474 Message: 43486

You can bury it, no conduit required. The only reason the ground that connects my house ground rod to my shack's ground rod is because the power cable from the house was run in conduit at the start. The other ground rod thatgrounds the Ameritron RCS4 switch box on the other side of the shackto the shack ground rod is run underground without conduit. I use separate ground clamps on the shack's ground rod. This prevents the ground rod clamp's set screw connection from coming loose. I check the ground rod clamp connections on a regular basis.

Tom's website, as you have found, is a treasure chest of valuable information pertaining to grounds and lightning. As Tom sayson his website, there is no real 100% protection against lightning strike. You can only do the necessary grounding to bleed off the static build up to "help prevent" a strike from forming.Notice the phrase, "Helps prevent" a strike which does not mean "prevent strikes from hitting your antenna and/or tower".Lightning is "unpredictable" and anyone who believes they are completely protected with a grounded system is wrong. I've read where hams says they have never been hit and they say it's because of the grounding system they have. I never believe that. It's just hasn't been his time, yet. I live 350 feet from a 150 foot tall 120KV power line metal pole. Normally it gets hit at least 2 or 3 times during the summer. I've been told by my electric company that my house and surrounding yard, including my shack, is under what he referred to as "Cone of protection by the 150 foot tall pole". When I told him him that wasn't true and explained why, that the pine tree in my back yard got hit, he changed his tune rather quickly. We can only do the best we can to help prevent the build up of static charge on our antenna systemthat could easily lead to a strike. That's allwe can, nothing more.

73
Mike W5RKL

On 7/20/2013 4:23 PM, jweigh wrote:
>
>
> Mike, I like the ditch witch idea and I already looked at Tom's site.
> that's where I learned I needed to join the mains grnd rod to the
> other end of the house and antenna. I just can't afford the copper
> flashing he used, so the THHN 8 gage will have to do. Do I have to put
> THHN inside conduit or just bury it?
> Thanks again,
> Jerry K4GEW
>
>

[Non-text portions of this message have been removed]

43487. Re: [TS-520_820_530_830] Got my General today so the 820 will be up

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 04:14:34 UTC
From: William Houghton
Topic: 43482 Message: 43487

Congratulations & we will see you on the air!

73,

Bill

From: Barry <bonnevilleblb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, July 20, 2013 2:48 PM
Subject: [TS-520_820_530_830] Got my General today so the 820 will be up

I just passed the General exam this morning, so the 820 will be fired up tonight. Hope I catch some of you out there!

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

[Non-text portions of this message have been removed]

43488. Re: [TS-520_820_530_830] Got my General today so the 820 will be up

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 04:19:02 UTC
From: Don Cunningham
Topic: 43482 Message: 43488

Barry,

Congratulations on a BIG step in your "ham life". I well remember the thrill when I passed my General Class exam before the FCC examiner, and that was MANY years ago.

Let us know when and where you are operating so maybe we can work you.
73,
Don, WB5HAK

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.3349 / Virus Database: 3204/6507 - Release Date: 07/20/13

[Non-text portions of this message have been removed]

43489. RE: [TS-520_820_530_830] Got my General today so the 820 will be up

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 02:05:37 UTC
From: Tom Bryan
Topic: 43482 Message: 43489

Congratulations Barry!

Great Job!

Tom

KC9JZF

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Barry
Sent: Saturday, July 20, 2013 4:49 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Got my General today so the 820 will be up

I just passed the General exam this morning, so the 820 will be fired up
tonight. Hope I catch some of you out there!

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

[Non-text portions of this message have been removed]

43490. Re: Got my General today so the 820 will be up

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 00:53:46 UTC
From: sal.cerda
Topic: 43482 Message: 43490

Congratulations, Barry! Good job.
Now, while you have the momentum, start studying for your extra. There is lots more room on the Extra parts of the bands. ;-)
73
Sal
KD0UBE

--- In TS-520_820_530_830@yahoogroups.com, "k5hfg" <dlbowders@...> wrote:
>
> Congratulations Barry. Good Job!! 73, Don K5HFG
>
> --- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@> wrote:
> >
> > I just passed the General exam this morning, so the 820 will be fired up tonight. Hope I catch some of you out there!
> >

43491. Re: [TS-520_820_530_830] Got my General today so the 820 will be

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 11:57:48 UTC
From: Alvin Chipmunk
Topic: 43485 Message: 43491

Super! Congrats!

From: Les Zwiebel WB6ORZ <wb6orz@...>
To: "TS-520_820_530_830@yahoogroups com" <TS-520_820_530_830@yahoogroups.com>
Sent: Saturday, July 20, 2013 9:36 PM
Subject: [TS-520_820_530_830] Got my General today so the 820 will be

Congratulations, OM. C U on the air.
(((73)))
Les
---===WB6ORZ===---

-------- Original message --------
From: k5hfg <dlbowders@...>
Date: 07/20/2013 4:01 PM (GMT-08:00)
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Got my General today so the 820 will be up

Congratulations Barry. Good Job!! 73, Don K5HFG

--- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@...> wrote:
>
> I just passed the General exam this morning, so the 820 will be fired up tonight. Hope I catch some of you out there!
>
> Barry
> KK4RXN
> Jeremiah 29:11-13 / John 3:16
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

43492. Re: [TS-520_820_530_830] Re: Early TS830's

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 15:29:54 UTC
From: Don
Topic: 43023 Message: 43492

Hi Terry
Well JD might not be one up on you
Rig started to act up again,by arching and power dropping right off.
Now when i turn it on,i only get panel lamps and fan,as the rest is dead
Could be that the transformer is kaput? as someting has shorted out

Don/Ve2ud

On 11/07/2013 2:14 PM, Terry Wagoner wrote:
>
> Well Don you reported -60vdc operating bias on the 6146 control grids
> in TX mode. I specifically asked you about this. If your bias voltage
> pot was dirty, bad, or intermittent after cleaning no way to have
> proper bias voltage in TX mode. Unless you were just measuring it when
> it was there to spec and at that time you should have noticed that you
> did not have high IP.
>
> You reported 100ma plus IP with Car Level Pot full CCW with rig keyed
> in CW mode. Only two ways for that to occur. 1. Did not have -60vdc on
> control grids or 2. Balanced Mod carrier was not nulled.
>
> Assuming you have not adjusted the Bal Mod carrier null then at the
> moment you had this high level of IP you did not have the correct
> operating bias voltage on your finals.
>
> I do not remember if you reported that Aux relay on Audio board has
> been replaced or not?
>
> I guess it shall remain a mystery. Although your bias voltage was not
> "stuck" as JD proposed I will give Round 1 to him!
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> > Hi Terry
> > Hope all is well
> > Well back from holidays and i think my radio enjoyed the holiday too as
> > it's working as it should in the load up procedure.
> > In Rf meter position i am now able to back the carrier from 250 ma's
> > right down to zero now.
> > In IP position when i back it down,it goes to 60ma as it should
> > Maybe when i cleaned the pots i did not let them dry enough.
> > There is no more arching,as it might have been that PL259 you told

> me to
> > clean.
> >
> > I just have to do the carrier balance as LSB band works ok,but i
> have to
> > turn the mic up higher compared to the USB.
> > Will go over the reply's you have me and and have a go at it when i get
> > back to normal,what ever normal is
> > Thanks Again.
> > Don/Ve2ud
> >
> >
> >
> >
> >
> >
> > On 07/07/2013 7:36 AM, Terry Wagoner wrote:
> > >
> > > Don:
> > >
> > > Do I understand that while loading the rig if you turn the Carrier
> > > Level Pot full CCW with rig keyed you see 100ma on the IP meter???
> > >
> > > Also why would you think it should be 225 ma? We can talk about that
> > > off the list if you like.
> > >
> > > In Tune mode the meter should be in ALC position and Car Level Pot
> > > increased to get decent indication on meter to allow you to peak the
> > > Drive control. At this step NONE of the meter scales are being
> read or
> > > mean anything. It is just a relative indication to allow you to
> adjust
> > > the drive stage tune circuits to resonance. Use enough Car Level to
> > > give your self something on the meter to work with. Nothing less than
> > > far right hand end of the Black ALC box on meter face. What you are
> > > really looking at on the meter is the ALC bus voltage going down due
> > > to small amount of positive grid current flowing on the peak of
> the rf
> > > drive envelope being applied to the 6146 control grids. When the ALC
> > > bus voltage goes down it drives the meter up scale same as it does
> for
> > > AGC bus action in receive mode. After peaking this relative meter
> > > indication with Drive control then go to Ip and adjust the Plate
> > > Tuning capacitor to get your initial plate current dip.Now you are
> > > measuring final tube plate current on the Ip ma meter scale. Now
> it is
> > > safe to go to CW mode and load the rig. This initial step just makes
> > > sure your Tank capacitor is not so far off resonance that you have
> 300
> > > plus ma plate current taxing the finals while rig is keyed.

> > >
> > > If my question above is true then I suggest you check the Balanced
> > > Modulator carrier suppression. I would also measure CV terminal at
> > > Conn 8 on the IF board. With Car Pot full CCW you should have ZERO dc
> > > volts at CV. Not likely you have any voltage, but a quick check would
> > > be good.
> > >
> > > The Balanced Modulator produces a 455khz double side band suppressed
> > > carrier output (DSBSC) which becomes your Transmit IF (TIF) signal
> and
> > > leaves the IF board and goes to RF board as input for your Transmit
> > > Mixer to produce the actual transmit frequency RF drive.
> > >
> > > The only time you should have any output from the Balanced Modulator
> > > when loading the rig is when the Car Level pot is advanced off full
> > > CCW position. This supplies from approx 0 to 0.6vdc at the
> junction of
> > > D29/D32 to forward bias the ring diodes and unbalance the modulator
> > > and produce the 455khz dsbcc output. The other time is in SSB mode
> > > when you have Mic audio at input of the Balanced Modulator.
> > >
> > > If you are seeing 100ma of Ip while trying to load the rig with Car
> > > Level pot at full CCW then you either have voltage from Car Level pot
> > > at its full CCW position or the Carrier Suppression has not been
> > > adjusted properly (can also have a failure in the BM but lets address
> > > carrier suppression first as it is the most likely cause).
> > >
> > > Couple of ways to adjust Carrier Suppression. I have a PL-259 with
> two
> > > 100 ohm 1/2 watt resistors soldered from the center pin to the shell.
> > > Screw that on to the SO-239 and now have a 1 watt 50 ohm dummy load
> > > with resistor lead length that allows me to read the voltage across
> > > the resistors. Can use a RF probe/VTVM/DMM or O-scope, or RF
> millivolt
> > > meter to monitor the voltage while I adjust VR-4 Trimmer pot and TC-3
> > > Trimmer cap at Balanced Mod on the IF board. Adjust these trimmers
> for
> > > a minimum or null in voltage across the dummy load in CW mode.
> Then go
> > > to LSB and USB modes and go back and forth until you get the null
> > > balanced between them. This is touchy and wont be perfectly equal. Do
> > > this Carrier Suppression adjustments with the SG Switch off or your
> > > little dummy load wont like it.
> > >
> > > Another way that works well is to use another receiver set near your
> > > TS-830 tuned to the frequency you will be nulling at. May need to
> > > place a short piece of wire in the receiver SO-239 and bring it near
> > > the TS830 so you can hear the Carrier. Now adjust VR-4 and TC-3 until
> > > you cant hear the Carrier in speaker or headphones. May not be
> able to

> > > get a complete null but should be able to get it very low.
> > >
> > > With experience you will learn how VR-4 reacts vs how TC-3 reacts and
> > > the interaction between them.
> > >
> > > After performing the Carrier Suppression go back and re-adjust the
> > > resting plate current for an Ip indication of 60ma in SSB mode.
> > >
> > > Terry
> > > K9TW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > > >
> > > >
> > > > Ok here goes
> > > > I turned the carrier down fully counter clockwise and i get 100
> > > > ma's
> > >
> > >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
>

[Non-text portions of this message have been removed]

43493. Re: [TS-520_820_530_830] Digest Number 4346

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 15:23:51 UTC
From: Harold CF Haugland
Topic: 43493 Message: 43493

Congrats to you! Hard Work Pays off!73 Harold KB1OZZ [still working]

From: "TS-520_820_530_830@...m" <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, July 21, 2013 10:05 AM
Subject: [TS-520_820_530_830] Digest Number 4346

There are 9 messages in this issue.

Topics in this digest:

1a. Re: Got my General today so the 820 will be up
    From: k5hfg
1b. Re: Got my General today so the 820 will be up
    From: sal.cerda
1c. Re: Got my General today so the 820 will be up
    From: William Houghton
1d. Re: Got my General today so the 820 will be up
    From: Don Cunningham
1e. Re: Got my General today so the 820 will be up
    From: Tom Bryan
1f. Re: Got my General today so the 820 will be up
    From: sal.cerda

2a. Got my General today so the 820 will be
    From: Les Zwiebel WB6ORZ
2b. Re: Got my General today so the 820 will be
    From: Alvin Chipmunk

3a. Re: Grounding from shack to mains ground rod
    From: Mike

Messages

1a. Re: Got my General today so the 820 will be up
    Posted by: "k5hfg" dlbowders@... k5hfg
    Date: Sat Jul 20, 2013 4:01 pm ((PDT))

Congratulations Barry. Good Job!! 73, Don K5HFG

--- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@...> wrote:
>
> I just passed the General exam this morning, so the 820 will be fired up tonight. Hope I catch some of you out there!
>
> Barry

> KK4RXN
> Jeremiah 29:11-13 / John 3:16
>

Messages in this topic (7)

1b. Re: Got my General today so the 820 will be up
    Posted by: "sal.cerda" sal.cerda@... sal.cerda
    Date: Sat Jul 20, 2013 5:23 pm ((PDT))

Congratulations, Barry! Good job.
Now, while you have the momentum, start studying for your extra. There is lots more room on the Extra parts of the bands. ;-)
73
Sal
KD0UBE

--- In TS-520_820_530_830@yahoogroups.com, "k5hfg" <dlbowders@...> wrote:
>
> Congratulations Barry. Good Job!! 73, Don K5HFG
>
> --- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@> wrote:
> >
> > I just passed the General exam this morning, so the 820 will be fired up tonight. Hope I catch some of you out there!
> >

Messages in this topic (7)

1c. Re: Got my General today so the 820 will be up
    Posted by: "William Houghton" rdrbill@... wa6neq
    Date: Sat Jul 20, 2013 9:14 pm ((PDT))

Congratulations & we will see you on the air!

73,

Bill

From: Barry <bonnevilleblb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, July 20, 2013 2:48 PM
Subject: [TS-520_820_530_830] Got my General today so the 820 will be up

I just passed the General exam this morning, so the 820 will be fired up tonight. Hope I catch some of you out there!

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

[Non-text portions of this message have been removed]

Messages in this topic (7)

1d. Re: Got my General today so the 820 will be up
    Posted by: "Don Cunningham" donc@... taffycandyparadise
    Date: Sat Jul 20, 2013 9:31 pm ((PDT))

Barry,

Congratulations on a BIG step in your "ham life". I well remember the thrill when I passed my General Class exam before the FCC examiner, and that was MANY years ago.

Let us know when and where you are operating so maybe we can work you.
73,
Don, WB5HAK

No virus found in this message.
Checked by AVG - http://www.avg.com/
Version: 2013.0.3349 / Virus Database: 3204/6507 - Release Date: 07/20/13

[Non-text portions of this message have been removed]

Messages in this topic (7)

1e. Re: Got my General today so the 820 will be up
    Posted by: "Tom Bryan" kc9jzf@... sparkyinchicago
    Date: Sat Jul 20, 2013 9:31 pm ((PDT))

Congratulations Barry!

Great Job!

Tom

KC9JZF

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Barry
Sent: Saturday, July 20, 2013 4:49 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Got my General today so the 820 will be up

I just passed the General exam this morning, so the 820 will be fired up tonight. Hope I catch some of you out there!

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

[Non-text portions of this message have been removed]

Messages in this topic (7)

1f. Re: Got my General today so the 820 will be up
    Posted by: "sal.cerda" sal.cerda@gmail.com sal.cerda

Date: Sat Jul 20, 2013 9:31 pm ((PDT))

Congratulations, Barry! Good job.
Now, while you have the momentum, start studying for your extra. There is lots more room on the Extra parts of the bands. ;-)
73
Sal
KD0UBE

--- In TS-520_820_530_830@yahoogroups.com, "k5hfg" <dlbowders@...> wrote:
>
> Congratulations Barry. Good Job!! 73, Don K5HFG
>
> --- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@> wrote:
> >
> > I just passed the General exam this morning, so the 820 will be fired up tonight. Hope I catch some of you out there!
> >

Messages in this topic (7)

2a. Got my General today so the 820 will be
Posted by: "Les Zwiebel WB6ORZ" wb6orz@... wb6orz
Date: Sat Jul 20, 2013 6:36 pm ((PDT))

Congratulations, OM. C U on the air.
(((73)))
Les
---===WB6ORZ===---

-------- Original message --------
From: k5hfg <dlbowders@...>
Date: 07/20/2013 4:01 PM (GMT-08:00)
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Got my General today so the 820 will be up

Congratulations Barry. Good Job!! 73, Don K5HFG

--- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@...> wrote:
>
> I just passed the General exam this morning, so the 820 will be fired up tonight. Hope I catch some of you out there!
>
> Barry
> KK4RXN
> Jeremiah 29:11-13 / John 3:16
>

[Non-text portions of this message have been removed]

Messages in this topic (2)

2b. Re: Got my General today so the 820 will be
    Posted by: "Alvin Chipmunk" n3kvl@... n3kvl
    Date: Sun Jul 21, 2013 4:57 am ((PDT))

Super! Congrats!

From: Les Zwiebel WB6ORZ <wb6orz@...>
To: "TS-520_820_530_830@yahoogroups com" <TS-520_820_530_830@yahoogroups.com>
Sent: Saturday, July 20, 2013 9:36 PM
Subject: [TS-520_820_530_830] Got my General today so the 820 will be

   Congratulations, OM. C U on the air.
   (((73)))
   Les
   ---===WB6ORZ===---

-------- Original message --------
From: k5hfg <dlbowders@...>
Date: 07/20/2013 4:01 PM (GMT-08:00)
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Got my General today so the 820 will be up

Congratulations Barry. Good Job!! 73, Don K5HFG

--- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@...> wrote:
>
> I just passed the General exam this morning, so the 820 will be fired up tonight. Hope I catch some of you out there!
>
> Barry
> KK4RXN
> Jeremiah 29:11-13 / John 3:16
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

Messages in this topic (2)

3a. Re: Grounding from shack to mains ground rod
    Posted by: "Mike" w5rkl@... w5rkl
    Date: Sat Jul 20, 2013 7:45 pm ((PDT))

You can bury it, no conduit required. The only reason the ground that connects my house ground rod to my shack's ground rod is because the power cable from the house was run in conduit at the start. The other ground rod thatgrounds the Ameritron RCS4 switch box on the other side of the shackto the shack ground rod is run underground without conduit. I use separate ground clamps on the shack's ground rod. This prevents

the ground rod clamp's set screw connection from coming loose. I check the ground rod clamp connections on a regular basis.

Tom's website, as you have found, is a treasure chest of valuable information pertaining to grounds and lightning. As Tom sayson his website, there is no real 100% protection against lightning strike. You can only do the necessary grounding to bleed off the static build up to "help prevent" a strike from forming.Notice the phrase, "Helps prevent" a strike which does not mean "prevent strikes from hitting your antenna and/or tower".Lightning is "unpredictable" and anyone who believes they are completely protected with a grounded system is wrong. I've read where hams says they have never been hit and they say it's because of the grounding system they have. I never believe that. It's just hasn't been his time, yet. I live 350 feet from a 150 foot tall 120KV power line metal pole. Normally it gets hit at least 2 or 3 times during the summer. I've been told by my electric company that my house and surrounding yard, including my shack, is under what he referred to as "Cone of protection by the 150 foot tall pole". When I told him him that wasn't true and explained why, that the pine tree in my back yard got hit, he changed his tune rather quickly. We can only do the best we can to help prevent the build up of static charge on our antenna systemthat could easily lead to a strike. That's allwe can, nothing more.

73
Mike W5RKL

On 7/20/2013 4:23 PM, jweigh wrote:
>
>
> Mike, I like the ditch witch idea and I already looked at Tom's site.
> that's where I learned I needed to join the mains grnd rod to the
> other end of the house and antenna. I just can't afford the copper
> flashing he used, so the THHN 8 gage will have to do. Do I have to put
> THHN inside conduit or just bury it?
> Thanks again,
> Jerry K4GEW
>
>

[Non-text portions of this message have been removed]

Messages in this topic (7)

Yahoo! Groups Links

[Non-text portions of this message have been removed]

43494. TS-820S Neutralization

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 15:24:37 UTC
From: Terry Wagoner
Topic: 43494 Message: 43494

Newer Members and New Hybrid Owners:

Recently I spent a significant amount of time and many many keystrokes to explain to a new member and new TS-820 owner what neutralization was, why you did it, what happens if you do not do it, different methods to accomplish and pros and cons of each, differences in the instruction manual and service manual, and finally the procedure how to cold neutralize using the Screen Grid switch that Kenwood provided.

I find that this person has posted the same question on Eham. He is certainly within his right to do so. Nothing wrong with doing due diligence as long as you are smart enough to separate the BS from the straight advice. Not always easy to do.

Here is my problem with multiple postings on this site, Eham, QRZ, Yahoo Amateur Repair and other forums. You can bet that you will almost always get the same typical responses as follows:

1. I dont own a Kenwood TS-820 but I do own an Acme-123 and here is how I neutralize it. WORTHLESS!

2. I owned a new Kenwood TS-820 back in the day and here is how it worked or how I loaded it or how I did it. What is wrong with this one? Couple of things. Do you want to rely on 30 year old recall? This fellow has slept since then. Did this fellow ever have the covers off? Do you think that a brand new rig might exhibit the same operational characteristics as a 30 year old radio now does? Pretty close to WORTHLESS!

3. You need to lift the screen grid leads off the 6146 finals and tape the ends over and cold neutralize. This is absolutely the worst of the three as it is flat wrong, it is BUM DOPE. Worse than WORTHLESS!

This fellow has no idea that the hybrids have a Screen Grid switch nor does he know what it does. He also has no idea the the Anodes have potential at all times and heaven forbid you mess around with lifting it. I will let you study the schematic and if you cannot figure out the function of the SG switch from that then measure the SG voltage at pins of the 6146 finals and see what voltage readings you get. It wont be Zero!

So my advice to all recently licensed members who may have bought a technically complex Kenwood Hybrid as their first rig I am glad you you bought a Hybrid and found your way to this site. I hope with time you will come to see why this is the best site to obtain accurate information on operational, routine maintenance, and repair questions.

You have people here who freely share literally years of Kenwood hybrid specific knowledge and experience with you. These people are Subject Matter Experts (SME). An SME is someone who most recently did it and did it to the prescribed standard. By the way that isnt necessarily the most senior or experienced person as sometimes they have been doing it wrong a long time or have fallen into short cuts or bad practices or bad habits.

Those of us trying to help you had no such resource coming up at our finger tips. Also, if you get bum doped on this site you have a much greater chance of someone speaking up and correcting the error.

As for me I would appreciate it if you would say in your post that you posted the very same question on Eham and was told you needed to lift the 6146 screen grid leads and tape them over. Is this correct? I could have simply hit three keys.....NO!

It is my own damn fault trying to teach.

Just making a pitch for our Forum as the best one in town.

I wouldnt take my Cadillac to the Ford dealer. You of course are free to do so.

Terry K9TW

43495. Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 16:45:34 UTC
From: rkersey tds.net
Topic: 43474 Message: 43495

Hi Mike,

I'm glad you qualified your previous post on lightning. You are worlds ahead of me in understanding ham radio in general, but I've done some reading on antennas and lightning and, as you stated, if you sustain a direct hit, it's unlikely that any equipment that is connected will survive. I think a big strike could just burn up a #6 wire or even a bigger one than that. Everyone can decide what's an acceptable risk for themselves. With my lot (about a half acre) and situation, I'm not looking to put up anything big for the low bands, just verticals for 10-40M, and I've about decided that most of it will be antennas that I can put up and take down or disconnect 30 feet from the house. To hook directly into the house ground would require a run of about sixty feet halfway round the house with at least that #6 wire. A lot more trouble than picking a 13 foot T vertical hinged to a two foot post up off the ground. YMMV.

Best Regards,
Roy Kersey
KI4HAG

[Non-text portions of this message have been removed]

43496. Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 13:59:15 UTC
From: jweigh
Topic: 43474 Message: 43496

Mike, I really appreciate all the help. I already bought the wire.
Thanks for your help.
Jerry, K4GEW

43497. Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 16:56:55 UTC
From: N7IQV
Topic: 43474 Message: 43497

As a former line locator (among other chores) I can't echo loud or long enough the importance of checking BEFORE you start digging.

Check your local phone book (if you still have those) and look for "Blue Stake" or similarly named location services. Most are supported by the local utility providers (water, gas, electric, sewer, communications providers) and will do the "locate" job as a free service. Call several days to a week prior to your planned digging.

Also, once the line locations are marked, take an elevated-view color photo of your yard. That will give you a clue should you need to figure out "why is the dirt wet, all of a sudden?", and let you know which pipe is your problem. Each type of line will be color coded as to its purpose. Generally, water lines are marked with blue paint, electric power in red, communications lines in orange, sewer in green, etc. (your local marks may vary) You can also mark in advance, with white paint lines, where you are planning to dig. If your marker crew is on top of their game, they'll take extra steps to show you the routing of lines closer to your planned dig.

John/N7IQV

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> I would add an additional ground rod along the under ground run. I rented a "ditch witch", makes trenches much easier. Check with your local utilities, you should have them come out and verify that the area you are going to dig will not cause damage to telephone, cable TV, and power. If you cause damage to any of these utilities because you didn't call them and have them come out to mark their lines, YOU will be responsible for repairing those utility lines!! So don't forget to consider that before you dig!!
>
> 73
> Mike W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "jweigh" <jweigh@> wrote:
> >
> >
> > Mike,
> > Thanks for the quick and great reply...A minor problem may be I cannot easily run the wire underground as I have an 8 inch concrete slab between the shack grnd rod and the mains which goes out from the house about 18 ft. Do you think if I went around the slab underground (probably another 25-30 ft. of wire) it would still be ok?? turns out the grnd rods are on opposite ends of the house.
> > Thanks again, Jerry K4GEW
> >
>

43498. Re: [TS-520_820_530_830] Got my General today so the 820 will be

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 15:12:27 UTC
From: Gregory Graham
Topic: 43485 Message: 43498

Barry
Congratulations. Keep moving on up to Extra. Many years ago I bought my new 820 S the day after I passed my General. I have and have made that radio my favorite ever sense. Enjoy your new adventure.
Greg

Sent by crazylegs

On Jul 21, 2013, at 4:57 AM, Alvin Chipmunk <n3kvl@...> wrote:

> Super! Congrats!
>
> _____
> From: Les Zwiebel WB6ORZ <wb6orz@...>
> To: "TS-520_820_530_830@yahoogroups com" <TS-520_820_530_830@yahoogroups.com>
> Sent: Saturday, July 20, 2013 9:36 PM
> Subject: [TS-520_820_530_830] Got my General today so the 820 will be
>
>
>
> Congratulations, OM. C U on the air.
> (((73)))
> Les
> ---===WB6ORZ===---
>
> -------- Original message --------
> From: k5hfg <dlbowders@...>
> Date: 07/20/2013 4:01 PM (GMT-08:00)
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: Got my General today so the 820 will be up
>
> Congratulations Barry. Good Job!! 73, Don K5HFG
>
> --- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@...> wrote:
> >
> > I just passed the General exam this morning, so the 820 will be fired up tonight. Hope I catch some of you out there!
> >
> > Barry
> > KK4RXN
> > Jeremiah 29:11-13 / John 3:16
> >
>
> [Non-text portions of this message have been removed]
>
> [Non-text portions of this message have been removed]

>
>

[Non-text portions of this message have been removed]

43499. Re: [TS-520_820_530_830] Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 17:01:25 UTC
From: Bob Macklin
Topic: 43474 Message: 43499

I'd like to comment about the lightning problem.

I spent many years as an EE for NASA in Arizona where lightning is a major problem.

We found the best solution was to disconnect everything we wanted protected.

In the case of a ham radio set it up so you can disconnect the antenna before it enters your shack. During the lightning system keep it disconnected except when in use. In the case of a coax feedline, pull the feedline as far from the shack as possible.

If a tree in your yard takes a direct hit all bets are off. Fingers go everywhere.

One of the places I worked where lightning was a major problem was Kitt Peak National Observatory near Tucson, Az.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: rkersey tds.net
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, July 21, 2013 9:45 AM
Subject: [TS-520_820_530_830] Re: Grounding from shack to mains ground rod

Hi Mike,

I'm glad you qualified your previous post on lightning. You are worlds ahead of me in understanding ham radio in general, but I've done some reading on antennas and lightning and, as you stated, if you sustain a direct hit, it's unlikely that any equipment that is connected will survive. I think a big strike could just burn up a #6 wire or even a bigger one than that. Everyone can decide what's an acceptable risk for themselves. With my lot (about a half acre) and situation, I'm not looking to put up anything big for the low bands, just verticals for 10-40M, and I've about decided that most of it will be antennas that I can put up and take down or disconnect 30 feet from the house. To hook directly into the house ground would require a run of about sixty feet halfway round the house with at least that #6 wire. A lot more trouble than picking a 13 foot T vertical hinged to a two foot post up off the ground. YMMV.

Best Regards,
Roy Kersey
KI4HAG

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

43500. Re: TS-820S Neutralization

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 17:37:33 UTC
From: Robert Port
Topic: 43494 Message: 43500

Sometimes you just can't teach, we you know. Keep up the great work Terry.

Robert Port

KE7KPB Amateur radio operator

If it doesn't glow - It's not a radio.

[Non-text portions of this message have been removed]

43501. KENWOOD HYBRID USER NET (July 21st, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 18:37:48 UTC
From: mvgilger
Topic: 43501 Message: 43501

The Saturday's net on 40 meter had 16 stations checking in with poor band conditions. We had 4 new check-in's, KK4NXD, KU4NY, KB1ZSQ, KD4IRB

Out of all stations checking in, there was:

3 running TS-520(x)
4 running TS-530(x)
4 running TS-820(x)
1 running TS-830S

I was running my TS-940s. The rest were running non hybrids of one model or another.

The Sunday's net on 20 meter we had 9 stations checking in under ok band conditions. Out of those, there was:

2 running TS-520(x)
0 running TS-530(x)
0 running TS-820(x)
2 running TS-830S

I was running my TS-940s. The rest were running non hybrids of one model or another.

We have been having several people checking in regularly with their TS-430, TS-440, and TS-940's, which of course is not a hybrid, although over 30+ years old. Everyone is welcome as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a net control station, please send me an email. Currently it's just myself, WB2KNR and WB0SGA. I would like to get several more. If we do, we can alternate so everyone might be on a 3-4 week rotation. It's a lot of fun and a good way to make sure you station is optimized.

For anyone that has not heard, we have a new web site that WB4HFN is hosting. He currently has a very nice site for Drake, Collins and Heathkit and now Kenwood Hybrids. Good quality manuals plus sale flyers and brochures will be found here, along with user supplied information for all Hybrids.

His URL is:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754 check-ins, Sunday total 563 check-ins

November 2012, Saturday's, net total = 47, Sundays total = 20
December 2012, Saturday's, net total = 74, Sunday's total = 70
January 2013, Saturday's, net total = 93, Sunday's total = 87
February 2013, Saturday's net total = 103, Sundays total = 87
March 2013, Saturday's, net total = 112, Sunday's total =39

April 2013, Saturday's net total = 52, Sunday's total = 29
May 2013, Saturday's net total = 45, Sunday's total = 50
June 2013, Saturday's net total = 30, Sunday's total = 27
July 2013, Saturday's net total = 63, Sunday's total = 33 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

43502. Re: [TS-520_820_530_830] Mostly good news on recently-acquired TS-830S

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 18:43:58 UTC
From: Ken Webb
Topic: 43418 Message: 43502

Thanks,Mike for the advice. I'll be looking into it as time permits.
73s
Ken

From: W5RKL <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, July 17, 2013 4:14 PM
Subject: Re: [TS-520_820_530_830] Mostly good news on recently-acquired TS-830S

I forgot to mention that quite often cracks/breaks in foil runs occurs when people think they should reheat solder connections for no reason, quite often because someone told them to. Unless there is clear evidence of a bad solder connection, do NOT reheat the connection! The foil runs on the PC boards are very thin and can crack/break when excess heat is applied. Quite often the crack/break cannot be seen, some crack/breaks occurs under the solder pad that you can't see. If you have an analog ohm meter and you suspect there's a break/crack in a foil run, using the ohm meter to test for continuity over the foil run or from a pin to a component lead. A break will show up as an "infinity" reading on the ohm meter. You may be able to inspect a suspected break in a foil run by using a high intensity light shown on the component side and look on the foil side using a magnifying glass. Not only can you find some foil breaks/cracks that way but you can also find shorts due to slivers of solder or very thin wires that lay soldered across points they should be. Don't think this happens? Think again!! It happens quite often.

73
Mike W5RKL

On 7/17/2013 3:03 PM, W5RKL wrote:
>
> Sounds to me like the PLL Unit is changing to an "Unlock" state. I say
> this because you "hinted" that by tapping on the cover the display comes
> back along with receive. If the 830 receive and transmit fails when the
> display goes dark then tapping on the cover brings the display back
> along with both transmit and receive, the problem is not in the Counter
> Unit or display but rather the PLL Unit is changing to an "Unlock"
> state. This can be caused by a number of reasons from loss of B+ to the
> PLL Unit, loss of the VFO and/or CAR signal to the PLL Unit,
> broken/cracked foil runs on the PLL Unit board, etc. I would check all
> voltages (see the 830 service manual) to ensure they are present then
> look for broken/cracked foil runs starting at the plug pins. Make sure
> the mounting screws are tight since the board's ground is on the edge of
> the board and at the mounting screw holes on the foil side. You can

> clean the plugs by pulling "straight up" then pushing the plugs straight
> down. This results in "scrubbing action" occurring in the plug as the
> pins slide into the plug. You can use a cotton swab wet with contact
> cleaner to clean the pins before you put the plug back on.
>
> Read and adhere to the warnings on all contact cleaner labels.
>
> 73
> Mike W5RKL
>
> On 7/17/2013 10:43 AM, synovial_98 wrote:
> >
> > Hi,
> >
> > I've been tinkering with the latest addition to the herd, a TS-830S.
> > I bought it (knowingly) with the description that it was working fine,
> > and then one day - voila! - no TX or RX.
> >
> > When I received it, I checked the paramaters Terry recommended - all
> > was well. Also did a visual and "smell" test, with nothing obvious
> > noted. I did find the "SG" switch on the rear apron in the "off"
> > position - that'd explain the "no TX issue".
> >
> > Put the covers back on, plugged it in and eureka! - got receive audio!
> > Subsequent power cycles have seen the lack of display being illuminated.
> >
> > A carefully-placed, calibrated sharp rap to the cabinet just above the
> > display brings the display to life (in all cases so far).
> >
> > My question is: Aside from opening the rig back up to re-seat
> > connectors and/or loosen/tighten board mounting screws, is there
> > anything that is 830-specific that I should be looking for?
> >
> > Thanks,
> > Ken
> > WB4EJZ
> >
> >
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

Yahoo! Groups Links

[Non-text portions of this message have been removed]

43503. Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 18:50:53 UTC
From: Terry Wagoner
Topic: 43474 Message: 43503

I have Alpha-Delta protectors at my coax feedline entry panel mounted on a copper plate and connected at base of tower ground which is star config ground rods that are bonded to the utility neutral. I used No. 6 bare copper. Also have MOVs in my 200amp service entrance panel and have arc gaps on the phone line.

However, when I am home and a storm is brewing I disconnect my coax connectors at the feedline entry panel and I unplug my rigs from the 120vac line. Probably should remove the chassis safety ground to protect rig from ground potential rise? I think my system will work for ESD from nearby strike, but hate to rely on it for a hit on the tower. I just dont trust the protection to do what it is designed to do. As Mike said Lightning doesnt always follow the rules. I am not sure which is worse the house burning down or having to rewind a L41 transformer!

You will get many people who are in the camp of not grounding the tower. This topic evokes much heated debate.

I like to hear the experience of long time broadcast engineers. Here is an interesting article.

http://www.novaris.com.au/images/stories/Sales%20Kit/SK09/Radio%20Comms.pdf

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@...> wrote:
>
> I'd like to comment about the lightning problem.
>
> I spent many years as an EE for NASA in Arizona where lightning is a major problem.
>
> We found the best solution was to disconnect everything we wanted protected.
>
> In the case of a ham radio set it up so you can disconnect the antenna before it enters your shack. During the lightning system keep it disconnected except when in use. In the case of a coax feedline, pull the feedline as far from the shack as possible.
>
> If a tree in your yard takes a direct hit all bets are off. Fingers go everywhere.
>
> One of the places I worked where lightning was a major problem was Kitt Peak National Observatory near Tucson, Az.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: rkersey tds.net

> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sunday, July 21, 2013 9:45 AM
> Subject: [TS-520_820_530_830] Re: Grounding from shack to mains ground rod
>
>
>
> Hi Mike,
>
> I'm glad you qualified your previous post on lightning. You are worlds
> ahead of me in understanding ham radio in general, but I've done some
> reading on antennas and lightning and, as you stated, if you sustain a
> direct hit, it's unlikely that any equipment that is connected will
> survive. I think a big strike could just burn up a #6 wire or even a bigger
> one than that. Everyone can decide what's an acceptable risk for
> themselves. With my lot (about a half acre) and situation, I'm not looking
> to put up anything big for the low bands, just verticals for 10-40M, and
> I've about decided that most of it will be antennas that I can put up and
> take down or disconnect 30 feet from the house. To hook directly into the
> house ground would require a run of about sixty feet halfway round the
> house with at least that #6 wire. A lot more trouble than picking a 13 foot
> T vertical hinged to a two foot post up off the ground. YMMV.
>
> Best Regards,
> Roy Kersey
> KI4HAG
>
> [Non-text portions of this message have been removed]
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

43504. Re: Got my General today so the 820 will be up

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 19:31:17 UTC
From: Steve
Topic: 43482 Message: 43504

Congrats Barry!
Work 820 to 820. Give us some frequencies.
And as others have said, get to work on ur Extra
73s
Steve
W5SO

J. Steven Orr, CFA
Communities Foundation of Texas
214-750-4238
Sent from my iPhone

43505. Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 19:41:33 UTC
From: Terry Wagoner
Topic: 43474 Message: 43505

I forgot to mention that I dont know anyone who has measured their ground system resistance to see if they actually have a low impedance ground. Lot of different kinds of soils out there. Lighting is high frequency so need a low impedance earth connection.

I know I have not measured my ground system. It is not easy to do. National Elec Code spec is 25 ohms and IEEE is 5 ohms which is what most utilities and telecommunications companies use.

Not as simple as disconnecting lead from your ground rod and measuring resistance to earth and by the way never want to lift your neutral and place your self in series with it.

I worked for large electric utility and their Communications Dept had test sets to perform the standard "FOP" or Fall Of Potential test. Some folks call it the 3-point test. Even with proper earth measuring test gear (Biddle is popular meter and Fluke makes them as well) it is not a simple test.

Search on Ebay for earth resistance testers and you will see why not many hams own this piece of test gear and by the way do not confuse it with a hand crank megger. A megger is used to check dielectric strength of insulation and not to be used for ground rod testing.

I suppose might be able to rent a FOP test set or if you have friend who works for local electric or phone company might be able to borrow a test set.

I have thought about chemical grounds, but that is about as far as it has gone. I am on sand. If interested you can Google on them. Essentially a 2" by 10 ft copper pipe set in center of a hole dug with a power post hole auger. Surround the pipe with Bentonite clay and fill the pipe with Epsom salt and install a pipe cap on it.

Wonder if anyone is using these?

Terry K9TW

43506. Re: [TS-520_820_530_830] Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 19:56:06 UTC
From: Bob Macklin
Topic: 43474 Message: 43506

When I worked for NASA at the Mississippi Test Facility they were using SALT WATER WELLS for grounding.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Terry Wagoner
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, July 21, 2013 12:41 PM
Subject: [TS-520_820_530_830] Re: Grounding from shack to mains ground rod

I forgot to mention that I dont know anyone who has measured their ground system resistance to see if they actually have a low impedance ground. Lot of different kinds of soils out there. Lighting is high frequency so need a low impedance earth connection.

I know I have not measured my ground system. It is not easy to do. National Elec Code spec is 25 ohms and IEEE is 5 ohms which is what most utilities and telecommunications companies use.

Not as simple as disconnecting lead from your ground rod and measuring resistance to earth and by the way never want to lift your neutral and place your self in series with it.

I worked for large electric utility and their Communications Dept had test sets to perform the standard "FOP" or Fall Of Potential test. Some folks call it the 3-point test. Even with proper earth measuring test gear (Biddle is popular meter and Fluke makes them as well) it is not a simple test.

Search on Ebay for earth resistance testers and you will see why not many hams own this piece of test gear and by the way do not confuse it with a hand crank megger. A megger is used to check dielectric strength of insulation and not to be used for ground rod testing.

I suppose might be able to rent a FOP test set or if you have friend who works for local electric or phone company might be able to borrow a test set.

I have thought about chemical grounds, but that is about as far as it has gone. I am on sand. If interested you can Google on them. Essentially a 2" by 10 ft copper pipe set in center of a hole dug with a power post hole auger. Surround the pipe with Bentonite clay and fill the pipe with Epsom salt and install a pipe cap on it.

Wonder if anyone is using these?

Terry K9TW

[Non-text portions of this message have been removed]

43507. Re: [TS-520_820_530_830] Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 20:04:30 UTC
From: Wes Will
Topic: 43474 Message: 43507

> I suppose might be able to rent a FOP test set or if you have friend who
> works for local electric or phone company might be able to borrow a test
> set.

Don't know about anyone else's area, but here I have had the power company linemen (when doing other work, not as a special visit just for that purpose) test my panel ground.

We had no power for eleven days after the 8 May 2008 storms that ripped through here. (My little valley was the site of the measured 108 mph straight-line winds that roared through.) When they were in the neighbourhood resetting poles (nineteen of them on my street alone) and removing trees (too many to count but I'm STILL burning some of them for firewood five years later), I asked one of the LOCAL - not any of the out-of-area guys who had come in to assist - if they could pop the test gear on my ground rod and see if I didn't need a new one.

It's not a long process, just takes a few seconds with the right gear. He had a Fluke meter for the purpose, and said it had rarely been used, nobody bothered with checking around here.

(We're on loam and Mississippi river-bottom clay, and it's pretty much ALWAYS wet this close to the Mighty Mississip. The water table is only about 17 feet down - I know because I drove a 6-inch PVC pipe down that far and hung a pitcher pump on it, to water the garden. Last year's drought means that this year I need to drive a new one, and I'll go down to 20 feet this time. The one at 17 feet collapsed around the sand point, and had to be pulled out and back-filled. Annoying, that.)

The result of the power company test of the ground rod? 3.4 ohms. It's the original one from Great Ghu alone knows when this mausoleum was first wired and grounded. 1960-something is my guess.

3.4 even meets IEEE standard. I'll not be too worried about any of the other ones I drive, if/when I get to run up a tower. There are minor compensations for living on a flood plain in the middle of nowhere.

--
Wes Will
N9KDY

43508. Re: [TS-520_820_530_830] Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 20:26:44 UTC
From: Joe - W7RKN
Topic: 43474 Message: 43508

Dumb question time...what does FOP stand for? Is an Earth Ground Resistance tester the same thing? (Sounds like it!

Joe - W7RKN

----- Original Message -----
From: "Wes Will" <wwill@...>
Subject: Re: [TS-520_820_530_830] Re: Grounding from shack to mains ground rod

>> I suppose might be able to rent a FOP test set or if you have friend who
>> works for local electric or phone company might be able to borrow a test

43509. Re: [TS-520_820_530_830] Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 20:30:52 UTC
From: Joe - W7RKN
Topic: 43474 Message: 43509

Never mind...I looked back and found my answer....I *think* I may have a Biddle on my shelf somewhere...picked it with a bunch of stuff an SK's wife gave me for helping her clean out the garage shack!

Joe - W7RKN

----- Original Message -----
From: "Wes Will" <wwill@...>
Subject: Re: [TS-520_820_530_830] Re: Grounding from shack to mains ground rod

>> I suppose might be able to rent a FOP test set or if you have friend who
>> works for local electric or phone company might be able to borrow a test
>> set.

43510. Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 20:35:54 UTC
From: Terry Wagoner
Topic: 43474 Message: 43510

I thought I spelled that out in my post as Fall of Potential Test?

Google on it and you will find good explanation of how to run the test. Here is description of several test methods.

http://www.esgroundingsolutions.com/about-electrical-grounding/how-to-do-a-3-point-method-fall-of-potential-and-induced-frequency-ground-resistance-test.php

--- In TS-520_820_530_830@yahoogroups.com, Joe - W7RKN <w7rkn.7@...> wrote:
>
> Dumb question time...what does FOP stand for? Is an Earth Ground Resistance
> tester the same thing? (Sounds like it!
>
> Joe - W7RKN
>
>
> ----- Original Message -----
> From: "Wes Will" <wwill@...>
> Subject: Re: [TS-520_820_530_830] Re: Grounding from shack to mains ground
> rod
>
>
> >> I suppose might be able to rent a FOP test set or if you have friend who
> >> works for local electric or phone company might be able to borrow a test
>

43511. Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 20:43:22 UTC
From: Terry Wagoner
Topic: 43474 Message: 43511

Maybe you can earn a few bucks renting it out to hams after you write up the test procedure and validate it on your ground system.

There are more modern high frequency test sets that induce a ac signal but in some circles these are thought not to be as accurate as the old 3 point or FOP test sets.

You may want to take a close look at the Biddle test set you have. They make all kinds of test sets and more commonly will find Meggers, Hi-pots, Transformer TTR sets,Phase rotation meters,Digital Milliohm test sets etc. All test sets that Electrical Maintenance and Motor shops would commonly have. I have never seen a Biddle Earth Resistance test set. Sure would be good find if you have one.

--- In TS-520_820_530_830@yahoogroups.com, Joe - W7RKN <w7rkn.7@...> wrote:
>
> Never mind...I looked back and found my answer....I *think* I may have a
> Biddle on my shelf somewhere...picked it with a bunch of stuff an SK's wife
> gave me for helping her clean out the garage shack!
>
> Joe - W7RKN
>
> ----- Original Message -----
> From: "Wes Will" <wwill@...>
> Subject: Re: [TS-520_820_530_830] Re: Grounding from shack to mains ground
> rod
>
>
> >> I suppose might be able to rent a FOP test set or if you have friend who
> >> works for local electric or phone company might be able to borrow a test
> >> set.
>

43512. Re: [TS-520_820_530_830] Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 20:48:50 UTC
From: W5RKL
Topic: 43474 Message: 43512

Roy and others,

Damage to your radio can still occur even if you disconnect the coax feed line, throw it out into the yard, and disconnect the radio's power cord from the wall outlet. How does this happen when the radio's not connected to anything? Simple, the damage occurs due to a lightning bolt's rising EMP Magnetic field lines of flux that occurs with every lightning bolt. EMP stands for Electro Magnetic Pulse"

The easiest way to explain it is for you to take a glass rod or long pencil and run it through a doughnut. Use gloves, the good tasting glaze is pretty sticky. The rod or pencil represents the lightning bolt and the doughnut represents the lightning bolt's rising EMP magnetic field's lines of flux, radiating outward from the lightning bolt. When a lightning bolt occurs, current flows which is what produces the bright "leg" of the bolt you see. When current flows, a magnetic field is produced that radiates outward from the bolt. If your radio is in the path of the "rising magnetic field" of the lightning bolt's EMP, then the component leads and wiring will "cut" the rising magnetic field's lines of flux resulting in a current flowing in the radio. It's this current that flows is what causes the damage to the radio.

Thunder is the rapid expansion movement of heated air surrounding the lightning bolt. As the rapidly moving heated air expands outward from the lightning bolt, sound is produce (explosion if it happens near your house) or a "rumble" if it's off in the distance.

Power transformers use magnetic fields to induce voltages in the secondary windings. Lets take a simple filament voltage power transformer that has one primary winding and one secondary winding. Applying AC voltage, 120VAC at 60Hz, to the primary winding, a magnetic field is produced. The magnetic field rises and falls at "60 times per second" (60hz) and the rising magnetic field cuts the windings of the transformer's "secondary windings" which results in an voltage to appear on the secondary windings.This is exactly how a lightning bolt's rapid rising of it's EMP magnetic field's lines of flux cause damage to radios that are not connected to anything, the leads, wiring, etc, cuts the rising magnetic filed causing current to flow where it shouldn't resulting in damage.

73s
Mike W5RKL

On 7/21/2013 11:45 AM, rkersey tds.net wrote:
>

> Hi Mike,
>
> I'm glad you qualified your previous post on lightning. You are worlds
> ahead of me in understanding ham radio in general, but I've done some
> reading on antennas and lightning and, as you stated, if you sustain a
> direct hit, it's unlikely that any equipment that is connected will
> survive. I think a big strike could just burn up a #6 wire or even a
> bigger
> one than that. Everyone can decide what's an acceptable risk for
> themselves. With my lot (about a half acre) and situation, I'm not looking
> to put up anything big for the low bands, just verticals for 10-40M, and
> I've about decided that most of it will be antennas that I can put up and
> take down or disconnect 30 feet from the house. To hook directly into the
> house ground would require a run of about sixty feet halfway round the
> house with at least that #6 wire. A lot more trouble than picking a 13
> foot
> T vertical hinged to a two foot post up off the ground. YMMV.
>
> Best Regards,
> Roy Kersey
> KI4HAG
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

43513. Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 20:54:03 UTC
From: Terry Wagoner
Topic: 43474 Message: 43513

That should make a very effective ground. Only concern I would have is the electrical connection. I suppose if not exposed to the salt water then would not corrode. Same with the home copper pipe salt ground would have to keep connection above salt level and inspect regularly. I suspect folks who operate ham radio out of salt water vessels have some special connections to their hull ground plates?

Sorry to digress from Kenwood Hybrids but safety and rf ground is relative.

I think I am just going to assume I have done best I can with my tower ground rods and bonding to my utility neutral.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Bob Macklin" <macklinbob@...> wrote:
>
> When I worked for NASA at the Mississippi Test Facility they were using SALT WATER WELLS for grounding.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Terry Wagoner
> To: TS-520_820_530_830@...m
> Sent: Sunday, July 21, 2013 12:41 PM
> Subject: [TS-520_820_530_830] Re: Grounding from shack to mains ground rod
>
>
>
> I forgot to mention that I dont know anyone who has measured their ground system resistance to see if they actually have a low impedance ground. Lot of different kinds of soils out there. Lighting is high frequency so need a low impedance earth connection.
>
> I know I have not measured my ground system. It is not easy to do. National Elec Code spec is 25 ohms and IEEE is 5 ohms which is what most utilities and telecommunications companies use.
>
> Not as simple as disconnecting lead from your ground rod and measuring resistance to earth and by the way never want to lift your neutral and place your self in series with it.
>
> I worked for large electric utility and their Communications Dept had test sets to perform the standard "FOP" or Fall Of Potential test. Some folks call it the 3-point test. Even with proper earth measuring test gear (Biddle is popular meter and Fluke makes them as well) it is not a simple test.
>

> Search on Ebay for earth resistance testers and you will see why not many hams own this piece of test gear and by the way do not confuse it with a hand crank megger. A megger is used to check dielectric strength of insulation and not to be used for ground rod testing.
>
> I suppose might be able to rent a FOP test set or if you have friend who works for local electric or phone company might be able to borrow a test set.
>
> I have thought about chemical grounds, but that is about as far as it has gone. I am on sand. If interested you can Google on them. Essentially a 2" by 10 ft copper pipe set in center of a hole dug with a power post hole auger. Surround the pipe with Bentonite clay and fill the pipe with Epsom salt and install a pipe cap on it.
>
> Wonder if anyone is using these?
>
> Terry K9TW
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

43514. Re: [TS-520_820_530_830] Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 20:24:41 UTC
From: Wes Will
Topic: 43474 Message: 43514

> http://www.novaris.com.au/images/stories/Sales%20Kit/SK09/Radio%20Comms.pdf

THANK YOU. I had lost that article or a link to it, some time ago after a disk crash. Never got around to looking for it again.

The advice there is meant for the big guys and commercial installations, but works for amateurs just as well. Physics doesn't play favourites.

The best (and probably the most-ignored) part of the article is the bit about bonding the coax sheath to the grounding strap or to the grounded tower structure, at the TOP of the mast/tower (right at the antennas), at the BOTTOM of the mast BEFORE any bends to horizontal, and then again at the ENTRANCE to the building.

The coax sheath/braid is grounded THREE times.

Most people do only one, at the shack entrance....

It isn't enough, not if you're serious about trying to keep the sparks out of your house. An antenna mast is a really big and attractive (pun intended of course) target for a lightning bolt. I don't think that I should be adding that much more risk to my family just for a hobby.

Taking the time and effort to properly ground things only makes sense.

--
Wes Will
N9KDY

43515. Re: [TS-520_820_530_830] Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 20:27:25 UTC
From: Wes Will
Topic: 43474 Message: 43515

On 07/21/2013 03:26 PM, Joe - W7RKN wrote:
> Dumb question time...what does FOP stand for? Is an Earth Ground Resistance
> tester the same thing? (Sounds like it!
>
> Joe - W7RKN

"FOP" = "Fall Of Potential" test. AKA the "Three-Point Test."

43516. Re: [TS-520_820_530_830] Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 20:56:53 UTC
From: Joe - W7RKN
Topic: 43474 Message: 43516

I happen to have the operator's manful for the instrument so I will dig it out and read up on the tester. The SK was an Extra, and was really into antennas, and he lived in lightning country at the Lake, so..I am guessing it is the real McCoy....**********trying to find the manual as I type..not very good '1 handing it'! LOL. The meter is in its original box, and with it was a bag of 'things' that I have no clue...If I remember...clamps, wires and some rods...again...I *think*.

Not too worried about lightning here...it *can* strike, but rarely does.....it will usually strike the higher peaks around me.....I *am* grounded...3 copper rods, driven 15 feet into the earth To do it, I had to drill holes through the concrete in the dog run.....then removed the concrete in-between the 3 holes. I then soaked for a week..every day, then drove in the rods with my 1" impact drill/driver. I have oft debated whether or not to soak the ground with salt, to improve the ground, but, as it seems adequate as is, I have not done so. <<Ground rods last so much longer without salt>>

Joe - W7RKN

----- Original Message -----
From: "Terry Wagoner" <wagstw46@...>
Subject: [TS-520_820_530_830] Re: Grounding from shack to mains ground rod

> Maybe you can earn a few bucks renting it out to hams after you write up
> the test procedure and validate it on your ground system.

43517. Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 21:18:07 UTC
From: Terry Wagoner
Topic: 43474 Message: 43517

Wes:

If he just checked your neutral at your meter base that is not good enough. You need to check your driven ground rods individually. To do that you have to disconnect them.

I am surprised he had a meter. Utilities arent worried so much about lightening or ESD and dont really care if your Ham station ground system is a good low ohms single point ground system. They have arrestors at your distribution transformer to address lightning.

They do however have an obligation to give you a good low ohms neutral so that you have a stiff nominal 120 vac on each side of your service under full load conditions.

They are more concerned about service entrance "neutral shift". If you have a high resistance neutral or have lost your neutral the 240vac supplied from the distribution transformer secondary to your breaker panel will not split evenly to 120vac from each hot leg to the neutral in your service panel under load. This can be a very bad thing.

You could see 180 volts to ground on one side and 60 volts to ground on the other side or many other unbalanced voltage combinations depending on what loads you have cycling on at the moment. This of course is not good for any of your 120vac appliances. Electronics and compressors will complain. If you can prove that you have lost your neutral that resulted in lost appliances you have the basis for a claim with your utility. They do not advertise this.

In old days the servicers or trouble men all carried on their trucks electric irons or ceramic cone heaters with the plugs cut off and alligator clips on the leads. This gave them a 1200 to 1500 watt dummy load. They would pull your meter and connect this dummy load from hot leg to neutral and measure the voltage. They would do that on each side of your service and if the voltage did not split evenly they knew you had a bad neutral. They would then re-do all the neutral crimps from your service entrance back to the pole.

Later someone invented a nice tester that had high wattage switchable dummy load in it and a voltmeter on front panel. You pull the KWH meter and insert this tester in its place and flip the load switch back and forth and watch the voltmeter to see how evenly the voltage splits under load. I wish I had thought of it.

Anyone can do this test with a hair dryer or space heater if they are careful in their service entrance panel. Can make a lot of fireworks in there as almost infinite current capacity. At least it will seem like it as tools can vaporize and copper splatter not good for your eyes.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Wes Will <wwill@...> wrote:
>
> > I suppose might be able to rent a FOP test set or if you have friend who
> > works for local electric or phone company might be able to borrow a test

> > set.
>
> Don't know about anyone else's area, but here I have had the power
> company linemen (when doing other work, not as a special visit just for
> that purpose) test my panel ground.
>
> We had no power for eleven days after the 8 May 2008 storms that ripped
> through here. (My little valley was the site of the measured 108 mph
> straight-line winds that roared through.) When they were in the
> neighbourhood resetting poles (nineteen of them on my street alone) and
> removing trees (too many to count but I'm STILL burning some of them for
> firewood five years later), I asked one of the LOCAL - not any of the
> out-of-area guys who had come in to assist - if they could pop the test
> gear on my ground rod and see if I didn't need a new one.
>
> It's not a long process, just takes a few seconds with the right gear.
> He had a Fluke meter for the purpose, and said it had rarely been used,
> nobody bothered with checking around here.
>
> (We're on loam and Mississippi river-bottom clay, and it's pretty much
> ALWAYS wet this close to the Mighty Mississip. The water table is only
> about 17 feet down - I know because I drove a 6-inch PVC pipe down that
> far and hung a pitcher pump on it, to water the garden. Last year's
> drought means that this year I need to drive a new one, and I'll go down
> to 20 feet this time. The one at 17 feet collapsed around the sand
> point, and had to be pulled out and back-filled. Annoying, that.)
>
> The result of the power company test of the ground rod? 3.4 ohms. It's
> the original one from Great Ghu alone knows when this mausoleum was
> first wired and grounded. 1960-something is my guess.
>
> 3.4 even meets IEEE standard. I'll not be too worried about any of the
> other ones I drive, if/when I get to run up a tower. There are minor
> compensations for living on a flood plain in the middle of nowhere.
>
> --
> Wes Will
> N9KDY
>

43518. Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 21:27:20 UTC
From: Terry Wagoner
Topic: 43474 Message: 43518

Sounds like you have the standard Star ground rod configuration and it took some work to do it. I too would be worried about the corrosive affects of adding salt water around the rods.

You are correct about likely hood. I have seen colored maps of US that show likely hood of lightning strikes and places like Florida rank pretty high. Silly to spend a lot of money on good single point ground system if you live where strikes are rare.

I am going to do some research on Cell Tower grounding. With proliferation of these lower height towers with electronics mounted on them you can bet the engineers have come up with the latest in lightning protection. I suspect bonding of feedline shields and arc gaps or movs on the center conductors are a piece of it.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Joe - W7RKN <w7rkn.7@...> wrote:
>
> I happen to have the operator's manful for the instrument so I will dig it
> out and read up on the tester. The SK was an Extra, and was really into
> antennas, and he lived in lightning country at the Lake, so..I am guessing
> it is the real McCoy....**********trying to find the manual as I type..not
> very good '1 handing it'! LOL. The meter is in its original box, and with
> it was a bag of 'things' that I have no clue...If I remember...clamps, wires
> and some rods...again...I *think*.
>
> Not too worried about lightning here...it *can* strike, but rarely
> does.....it will usually strike the higher peaks around me.....I *am*
> grounded...3 copper rods, driven 15 feet into the earth To do it, I had to
> drill holes through the concrete in the dog run.....then removed the
> concrete in-between the 3 holes. I then soaked for a week..every day, then
> drove in the rods with my 1" impact drill/driver. I have oft debated
> whether or not to soak the ground with salt, to improve the ground, but, as
> it seems adequate as is, I have not done so. <<Ground rods last so much
> longer without salt>>
>
> Joe - W7RKN
>
> ----- Original Message -----
> From: "Terry Wagoner" <wagstw46@...>
> Subject: [TS-520_820_530_830] Re: Grounding from shack to mains ground rod
>
>
> > Maybe you can earn a few bucks renting it out to hams after you write up
> > the test procedure and validate it on your ground system.
>

43519. Re: TS-820S Neutralization

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-22 01:30:40 UTC
From: Barry
Topic: 43494 Message: 43519

This group is the best resource I have, Terry, and if it wasn't for you guys I would have sold my 820 a while back because it sure is complex for a first rig. I sure like it a lot more than the Yaesu FT-757GX that I also got from my Uncle before he had to go into a nursing home.

I am sure it's me you are calling out here, and I sincerely apologize. I think I was on eHam.net one morning before I posted the question here. Like you mentioned, I have read so much in doing my due diligence so I don't bother you guys that I probably put it there just to get their feedback while I was on there.

I wish I was much nearer you guys so I could be an apprentice of yours. Then I wouldn't have to bother anybody with any questions at all. I just appreciate everybody's help so much and am sorry for any offense.

I know 20 years ago I knew absolutely nothing about IT or Graphic Design and had to start at the level I am on with ham radio now. It's now how I make a decent living, and I am proficient at it. In 20 years I hope to be at that level with ham radio, and it sure will largely be because of you guys and your help.

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Newer Members and New Hybrid Owners:
>
> Recently I spent a significant amount of time and many many keystrokes to explain to a new member and new TS-820 owner what neutralization was, why you did it, what happens if you do not do it, different methods to accomplish and pros and cons of each, differences in the instruction manual and service manual, and finally the procedure how to cold neutralize using the Screen Grid switch that Kenwood provided.
>
> I find that this person has posted the same question on Eham. He is certainly within his right to do so. Nothing wrong with doing due diligence as long as you are smart enough to separate the BS from the straight advice. Not always easy to do.
>
> Here is my problem with multiple postings on this site, Eham, QRZ, Yahoo Amateur Repair and other forums. You can bet that you will almost always get the same typical responses as follows:
>
> 1. I dont own a Kenwood TS-820 but I do own an Acme-123 and here is how I neutralize it. WORTHLESS!
>
> 2. I owned a new Kenwood TS-820 back in the day and here is how it worked or how I loaded it or how I did it. What is wrong with this one? Couple of things. Do you want to rely on

30 year old recall? This fellow has slept since then. Did this fellow ever have the covers off? Do you think that a brand new rig might exhibit the same operational characteristics as a 30 year old radio now does? Pretty close to WORTHLESS!
>
> 3. You need to lift the screen grid leads off the 6146 finals and tape the ends over and cold neutralize. This is absolutely the worst of the three as it is flat wrong, it is BUM DOPE. Worse than WORTHLESS!
>
> This fellow has no idea that the hybrids have a Screen Grid switch nor does he know what it does. He also has no idea the the Anodes have potential at all times and heaven forbid you mess around with lifting it. I will let you study the schematic and if you cannot figure out the function of the SG switch from that then measure the SG voltage at pins of the 6146 finals and see what voltage readings you get. It wont be Zero!
>
> So my advice to all recently licensed members who may have bought a technically complex Kenwood Hybrid as their first rig I am glad you you bought a Hybrid and found your way to this site. I hope with time you will come to see why this is the best site to obtain accurate information on operational, routine maintenance, and repair questions.
>
> You have people here who freely share literally years of Kenwood hybrid specific knowledge and experience with you. These people are Subject Matter Experts (SME). An SME is someone who most recently did it and did it to the prescribed standard. By the way that isnt necessarily the most senior or experienced person as sometimes they have been doing it wrong a long time or have fallen into short cuts or bad practices or bad habits.
>
> Those of us trying to help you had no such resource coming up at our finger tips. Also, if you get bum doped on this site you have a much greater chance of someone speaking up and correcting the error.
>
> As for me I would appreciate it if you would say in your post that you posted the very same question on Eham and was told you needed to lift the 6146 screen grid leads and tape them over. Is this correct? I could have simply hit three keys.....NO!
>
> It is my own damn fault trying to teach.
>
> Just making a pitch for our Forum as the best one in town.
>
> I wouldnt take my Cadillac to the Ford dealer. You of course are free to do so.
>
>
> Terry K9TW
>

43520. TS-520S Drive Tuning

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-22 00:37:45 UTC
From: SeanH
Topic: 43520 Message: 43520

I just can't seem to find the answer for this, in the manual it says to peak the ALC reading with the drive control. The manual says "maximum meter deflection", does that mean full sweep or within the ALC range?

43521. Re: [TS-520_820_530_830] Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 21:30:36 UTC
From: Wes Will
Topic: 43474 Message: 43521

On 07/21/2013 04:18 PM, Terry Wagoner wrote:
> Wes:
>
> If he just checked your neutral at your meter base that is not good

At the time that was the only ground rod in the place. It was the only one he checked.

He used one of the new Fluke meters, something like a 1.7 kHz (I looked that up, I didn't remember the frequency he said it used) signal injected right at the ground rod. It was only good for small systems, he said. They had an FOP set on one of the other trucks for big buildings.

Apparently for small systems, the readings they got using the Fluke were almost identical to the results that came from doing a full FOP nine-measurement set.

AND it was done in a very small fraction of the time it took to drive the X and Z rods and measure and maneuver around to find clear spots exactly 1-9 times the diagonal length of the ground system.

He said they had a heck of a time sometimes (in cities mostly, since that's where most of the big buildings seem to be for some odd reason <-;) finding a place to GET to earth at the required distances. Concrete everywhere.

But since I'm repeating an anecdote about the concrete, if that information is incorrect I'd appreciate knowing it. Sounds plausible, but so many things do.

I had heard about the imbalanced ground business and loading splits that weren't even, but have never run across one myself. A 60/180 volt division sounds quite the recipe for letting out some magic smoke.

--
Wes Will
N9KDY

43522. Re: [TS-520_820_530_830] Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-21 21:11:40 UTC
From: Wes Will
Topic: 43474 Message: 43522

> it was a bag of 'things' that I have no clue...If I remember...clamps,
> wires
> and some rods...again...I *think*.

"X" and "Z" rods for the test, with associated connectors and clamps.
You'll be taking nine measurements at multiple distances of the
"diagonal length" of the grounding system. It's a bit of geometry that
takes into account multiple rods, usually used for commercial
installations and also by the savvier hams....

>I have oft debated
> whether or not to soak the ground with salt, to improve the ground, but, as

Please. Don't.

The salt will spread and kill off about anything around in the way of
vegetation. Including trees. And the salt contamination will remain
for a -very- long time.

This is why ancient armies would "salt the earth" of conquered foes.
The land would be rendered more or less permanently incapable of
sustaining life (including food crops) and the vanquished enemies would
be forced to move away.

Putting down enough salt to affect your ground resistance in any
appreciable amount would likely leave you in the middle of a large
barren patch of dead land. Not to mention the salt would contaminate
the ground water which would eventually wind up in any lakes, streams,
rivers, or wells in the area. It might also get you some attention from
the EPA folks, if you do a 'good' enough job of it, for contaminating
the ground water.

This kind of thing is one of the reasons I'm dead against this
"fracking" nonsense. Toxic waste is toxic waste and it does NOT belong
in my drinking water.

(I've been to Wood River, Illinois, where, thanks to the poorly-run oil
refineries spilling so much petroleum over the years that the ground
water contains so much gasoline that it BURNS. They get their water
from a LONG way off now. ANY replies or comments to this, kindly do it
off list, please. Off-topic, I know. No more to follow here.)

--
Wes Will
N9KDY

43523. RE: [TS-520_820_530_830] Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-22 02:32:44 UTC
From: Rob
Topic: 43474 Message: 43523

Written by an Aussie too.... <grin>

73's,

Rob VK3BRS

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Wes Will
Sent: Monday, 22 July 2013 6:25 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: Grounding from shack to mains ground rod

>
http://www.novaris.com.au/images/stories/Sales%20Kit/SK09/Radio%20Comms.pdf

THANK YOU. I had lost that article or a link to it, some time ago after a disk crash. Never got around to looking for it again.

The advice there is meant for the big guys and commercial installations, but works for amateurs just as well. Physics doesn't play favourites.

The best (and probably the most-ignored) part of the article is the bit about bonding the coax sheath to the grounding strap or to the grounded tower structure, at the TOP of the mast/tower (right at the antennas), at the BOTTOM of the mast BEFORE any bends to horizontal, and then again at the ENTRANCE to the building.

The coax sheath/braid is grounded THREE times.

Most people do only one, at the shack entrance....

It isn't enough, not if you're serious about trying to keep the sparks out of your house. An antenna mast is a really big and attractive (pun intended of course) target for a lightning bolt. I don't think that I should be adding that much more risk to my family just for a hobby.

Taking the time and effort to properly ground things only makes sense.

--
Wes Will
N9KDY

[Non-text portions of this message have been removed]

43524. Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-22 03:04:34 UTC
From: Allan
Topic: 43474 Message: 43524

Congratulations Barry. Good Job!! 73, Allan KB5DOH

[Non-text portions of this message have been removed]

43525. Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-22 03:07:34 UTC
From: rkersey tds.net
Topic: 43474 Message: 43525

Hi Mike and All:

Mike, thanks for the tutorial, but I have a science degree and know all about Maxwell's equations in principle. Your rig could also go south in a nuclear attack due to the flipping of the magnetic fields and your car wouldn't run, either. Nor any computers and you can forget data storage, too. Same true for a coronal mass ejection. No argument there.

I don't want to take your time away from answering other, more pressing questions.
My questions would be, am I better off taking the antennas down, as I described, or just having the grounding system you described? Another questions I have is, do you know anybody who's had his rig destroyed by the kind of EM fields you described? How frequent is that versus voltages coming in on an antenna line or whatever during a lightning strike? I'm sure it has happened, but how frequently compared to other varieties of lightning damage?

Best Regards,
Roy Kersey
KI4HAG

[Non-text portions of this message have been removed]

43526. Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-22 04:36:51 UTC
From: w5rkl
Topic: 43474 Message: 43526

I tried sending this reply 3 times this evening and Yahoo's server didn't seem to cooperate so here is it for the 4th time.

Roy,

You're asking me a question that I can't answer. I can't say with any certainty the number of home electronic devices/radios/ham gear that have been damaged/destroyed by a lightning bolt's EMP field. No one can. I could be wrong but I don't know of any statistics that covers the percentage of damage to electronic devices, including ham gear, that occurs due to a lightning EMP field. I can only tell you experiences I have had, what I have learned over the years about lightning and the importance of grounding, and what others have told me about their experiences. My neighbor, for example, is not a ham, does not have any outside antennas, but he lost a few electronic devices due to a lighting strike that hit a pine tree just outside his house. The damage occurred by the lightning's EMP mag field. Having said that, my inverted vee hangs from a pine tree limb some 20 feet from the shack and one end runs to the chain link fence about 8 feet from the shack. Lighting hit the pine tree last summer but I didn't sustain any damage to any gear in the shack. Why did my neighbor have damage and I didn't? I can't honestly say why. I can only say that it appears the charge rapidly dissipated into the ground through the coax shield that's connected to the PL-239 that was laying on the ground. Does that mean you will have the same thing happen to you? No. I don't have a crystal ball, no one has, that can tell me or you when and/or if you or I will ever be hit. Lighting is part of nature and will continue to be long after you and I are gone. We do what we can to deal with it and if that means you disconnect the antenna feed line as it enters your house/shack and toss the feed line out into the yard and lower your antenna while the storm approaches, then do that. I've been doing that for years. I have a dual SO-239 screw type barrel connector in series with the coax feed line outside the shack. Makes disconnecting the feed line very easy. I even lower the inverted vee at times when severe storms are approaching. We have some really bad storms here at times but a that doesn't stop me from being a ham with outside antennas! It's nothing more than a slight inconvenience during a thunderstorms but I don't worry about that because I don't operate during a thunderstorm anyway.

I could be wrong but I seem to recall you said you have a vertical. I don't know if you are aware but DX Engineering sells a mounting plate that allows a vertical antenna to be lowered down on the ground when storms are approaching and when the storm passes, the vertical is raised back vertically again. See the following link for details:

http://www.dxengineering.com/search/department/antennas/product-line/dx-engineering-tilt-base-mounting-plates?autoview=SKU

In addition to installing proper grounds and if you feel better by disconnecting the antenna feed line outside the shack and tossing it out in the yard and use simple "Common Sense", those are the best things you can do.

73
Mike W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "rkersey tds.net" <rkersey@...> wrote:
>
> Hi Mike and All:
>
> Mike, thanks for the tutorial, but I have a science degree and know all
> about Maxwell's equations in principle. Your rig could also go south in a
> nuclear attack due to the flipping of the magnetic fields and your car
> wouldn't run, either. Nor any computers and you can forget data storage,
> too. Same true for a coronal mass ejection. No argument there.
>
> I don't want to take your time away from answering other, more pressing
> questions.
> My questions would be, am I better off taking the antennas down, as I
> described, or just having the grounding system you described? Another
> questions I have is, do you know anybody who's had his rig destroyed by the
> kind of EM fields you described? How frequent is that versus voltages
> coming in on an antenna line or whatever during a lightning strike? I'm
> sure it has happened, but how frequently compared to other varieties of
> lightning damage?
>
> Best Regards,
> Roy Kersey
> KI4HAG
>
>
> [Non-text portions of this message have been removed]
>

43527. Re: TS-820S Neutralization

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-22 10:36:32 UTC
From: Terry Wagoner
Topic: 43494 Message: 43527

No apology due. If I were new I would be looking at and evaluating all the resources at my disposal.

Just want all new KW hybrid owners to be aware of the kind of advice that I see routinely given on these other sites. I go there from time to time to try and help and almost always get in arguments with one or more of these fellows who think sniffing, tapping, and spraying contact cleaner fixes all.

Steve, Carl, and Sue (current KW owners or former KW owners) typically give sound advice but there are so many more that respond exactly as I stated in my 3 examples. I did not make those up.

I too wish you lived close. You would be welcome in my shack at any time.

Have fun with your TS820 rig.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@...> wrote:
>
> This group is the best resource I have, Terry, and if it wasn't for you guys I would have sold my 820 a while back because it sure is complex for a first rig. I sure like it a lot more than the Yaesu FT-757GX that I also got from my Uncle before he had to go into a nursing home.
>
> I am sure it's me you are calling out here, and I sincerely apologize. I think I was on eHam.net one morning before I posted the question here. Like you mentioned, I have read so much in doing my due diligence so I don't bother you guys that I probably put it there just to get their feedback while I was on there.
>
> I wish I was much nearer you guys so I could be an apprentice of yours. Then I wouldn't have to bother anybody with any questions at all. I just appreciate everybody's help so much and am sorry for any offense.
>
> I know 20 years ago I knew absolutely nothing about IT or Graphic Design and had to start at the level I am on with ham radio now. It's now how I make a decent living, and I am proficient at it. In 20 years I hope to be at that level with ham radio, and it sure will largely be because of you guys and your help.
>
> Barry
> KK4RXN
> Jeremiah 29:11-13 / John 3:16
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Newer Members and New Hybrid Owners:

> >
> > Recently I spent a significant amount of time and many many keystrokes to explain to a new member and new TS-820 owner what neutralization was, why you did it, what happens if you do not do it, different methods to accomplish and pros and cons of each, differences in the instruction manual and service manual, and finally the procedure how to cold neutralize using the Screen Grid switch that Kenwood provided.
> >
> > I find that this person has posted the same question on Eham. He is certainly within his right to do so. Nothing wrong with doing due diligence as long as you are smart enough to separate the BS from the straight advice. Not always easy to do.
> >
> > Here is my problem with multiple postings on this site, Eham, QRZ, Yahoo Amateur Repair and other forums. You can bet that you will almost always get the same typical responses as follows:
> >
> > 1. I dont own a Kenwood TS-820 but I do own an Acme-123 and here is how I neutralize it. WORTHLESS!
> >
> > 2. I owned a new Kenwood TS-820 back in the day and here is how it worked or how I loaded it or how I did it. What is wrong with this one? Couple of things. Do you want to rely on 30 year old recall? This fellow has slept since then. Did this fellow ever have the covers off? Do you think that a brand new rig might exhibit the same operational characteristics as a 30 year old radio now does? Pretty close to WORTHLESS!
> >
> > 3. You need to lift the screen grid leads off the 6146 finals and tape the ends over and cold neutralize. This is absolutely the worst of the three as it is flat wrong, it is BUM DOPE. Worse than WORTHLESS!
> >
> > This fellow has no idea that the hybrids have a Screen Grid switch nor does he know what it does. He also has no idea the the Anodes have potential at all times and heaven forbid you mess around with lifting it. I will let you study the schematic and if you cannot figure out the function of the SG switch from that then measure the SG voltage at pins of the 6146 finals and see what voltage readings you get. It wont be Zero!
> >
> > So my advice to all recently licensed members who may have bought a technically complex Kenwood Hybrid as their first rig I am glad you you bought a Hybrid and found your way to this site. I hope with time you will come to see why this is the best site to obtain accurate information on operational, routine maintenance, and repair questions.
> >
> > You have people here who freely share literally years of Kenwood hybrid specific knowledge and experience with you. These people are Subject Matter Experts (SME). An SME is someone who most recently did it and did it to the prescribed standard. By the way that isnt necessarily the most senior or experienced person as sometimes they have been doing it wrong a long time or have fallen into short cuts or bad practices or bad habits.
> >
> > Those of us trying to help you had no such resource coming up at our finger tips. Also, if you get bum doped on this site you have a much greater chance of someone speaking up and correcting the error.
> >
> > As for me I would appreciate it if you would say in your post that you posted the very

same question on Eham and was told you needed to lift the 6146 screen grid leads and tape them over. Is this correct? I could have simply hit three keys.....NO!
> >
> > It is my own damn fault trying to teach.
> >
> > Just making a pitch for our Forum as the best one in town.
> >
> > I wouldnt take my Cadillac to the Ford dealer. You of course are free to do so.
> >
> >
> > Terry K9TW
> >
>

43528. Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-22 10:42:23 UTC
From: Terry Wagoner
Topic: 43474 Message: 43528

OK I have heard of these test sets but not seen them in use.

I was talking about additional ground rod systems driven with most tower installations that are bonded to the utility neutral. With several ground rods in parallel not sure how you would measure the individual resistance of each rod to ground without lifting leads to measure. Perhaps the test set is measuring injected current in each leg and calculating the resistance and displaying it?

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Wes Will <wwill@...> wrote:
>
> On 07/21/2013 04:18 PM, Terry Wagoner wrote:
> > Wes:
> >
> > If he just checked your neutral at your meter base that is not good
>
> At the time that was the only ground rod in the place. It was the only
> one he checked.
>
> He used one of the new Fluke meters, something like a 1.7 kHz (I looked
> that up, I didn't remember the frequency he said it used) signal
> injected right at the ground rod. It was only good for small systems,
> he said. They had an FOP set on one of the other trucks for big buildings.
>
> Apparently for small systems, the readings they got using the Fluke were
> almost identical to the results that came from doing a full FOP
> nine-measurement set.
>
> AND it was done in a very small fraction of the time it took to drive
> the X and Z rods and measure and maneuver around to find clear spots
> exactly 1-9 times the diagonal length of the ground system.
>
> He said they had a heck of a time sometimes (in cities mostly, since
> that's where most of the big buildings seem to be for some odd reason
> <-;) finding a place to GET to earth at the required distances.
> Concrete everywhere.
>
> But since I'm repeating an anecdote about the concrete, if that
> information is incorrect I'd appreciate knowing it. Sounds plausible,
> but so many things do.
>
> I had heard about the imbalanced ground business and loading splits that
> weren't even, but have never run across one myself. A 60/180 volt
> division sounds quite the recipe for letting out some magic smoke.
>

> --
> Wes Will
> N9KDY
>

43529. Re: TS-520S Drive Tuning

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-22 11:44:17 UTC
From: Terry Wagoner
Topic: 43520 Message: 43529

Your question is the first one I asked when I bought my first Hybrid. It is a natural question.

Kenwood finally got around to answering it in the TS830 instruction manual by stating if the indication goes outside the ALC range (black rectangular box) to adjust the Carrier control for an on-scale reading.

Unfortunately this isnt necessary, but was the easiest thing for them to say rather than go into lengthy discussion of what is being displayed.

The correct answer is to just adjust the Car Level pot to keep meter off the peg (full far right hand edge of the meter scale). What you are seeing is a relative indication and the ALC rectangular black box on the meter scale means nothing at this time. That box only means something when you are modulating the rig in SSB mode. Just bring up the Car Level pot to give yourself a decent level to peak with. That can be at 1200 or 2/3 of full scale or 3/4 of full scale.

If you are concerned then just use the max of the ALC scribed black box. Nothing wrong with this as long as you understand you cannot exceed control grid dissipation.

This topic will result in lots of disagreement. I see videos on You Tube where the presenter places lots of attention on making sure that while peaking the Drive Control you do not exceed the maximum ALC indication or that you keep it in the center of the range or after loading to 100 watts output go back and re-peak and make sure in ALC range. I have read the experts on QRZ cautioning KW owners about exceeding the 8ma max grid current level. All of this is nonsense.

In the 50s/60s we all had Class C grid leak bias CW transmitters with a single or double 6146 final. These rigs had a Grid Current meter position. When we loaded those rigs we had Drive control that was adjusting a tuned circuit to resonance and maximum rf voltage. Some also had a Drive Level control which was typically adjusting the Screen grid voltage of the Driver tube. All the manuals quite appropriately cautioned us to make sure when peaking the Drive not to exceed 3ma or 4ma if one tube and 8ma of 2 tubes. A 6146 tube has a maximum control grid dissipation rating same as the plate does and if you exceed that level you can quickly destroy the tube. The manual also directed that after loading to go back and re-peak the Grid current as it commonly had fallen off.

I think that is why people teach that you must keep ALC inside the black box. I think they are afraid you can exceed the control grid dissipation and damage your finals. THIS IS WRONG.

Your rig is not a Class C CW rig. It is a Class AB1 transmitter. It takes no grid current to drive this rig. All you need on the control grids of your finals is a RF voltage that is swinging the grid. When you peak the Drive control that is what you are doing you are maximizing the voltage swing by adjusting a tuned circuit in the Driver tube Plate circuit to resonance. In actual practice it does take some power as you are supplying the grid circuit losses primarily the charge and discharge at an rf rate the internal electrode

capacitance of the tube. The grid impedance varies from infinity when there is no grid current to approx 500 to 1000 ohms when there is grid current.

OK what is the grid current level? The instant the control grid goes positive with respect to the cathode (this happens when the RF drive voltage exceeds the DC operating bias voltage) and there is a hint of grid current the ALC amplifier transistor turns on and reduces the dc control voltage to the TIF amplifier. The TIF amp supplies the RF drive to your Transmit Mixer. Your ALC meter is measuring this DC control voltage. The ALC amp transistor acts like a variable resistor and when it turns on it pulls the ALC bus voltage down. This is what your ALC meter is displaying. The lower the ALC bus voltage goes the higher the meter indication.

So indirectly your meter is measuring control grid current. With the Car level set for an mid ALC indication this current will be approx 35 ua. With it at far end of black box it will be approx 40 ua. The maximum current is approx 45ua. Note this is micro amperes and not 4ma or 8ma or any such level that could hurt your finals. These are not values I am guessing at. I have measured them on all Hybrids. See Ken K4EAA site for his discussion of the ALC servo system. Go to the TS520S manual page 29 and read the ALC circuit description and it states ALC voltage will begin to be reduced when approx 30ua of grid current begins to flow.

As to going back and rechecking and re-peaking your ALC level after loading as so many do where in the manual does it say to do this? In fact in the TS520 manual it does state at the end of the loading instructions that there may be no ALC indication with 200 ma of plate current. This is because the rigs use RF negative feedback and at this level of plate current there is no ua grid current flowing as the RF drive voltage has been reduced to just below the dc operating bias voltage on the grids. If the grid is not positive with respect to the cathode there can be no grid current.

So short answer is the ALC meter in Tune mode is just a relative indication and no concern about exceeding maximum 6146 grid current. If you want to adjust the Car Level to keep the indication in the black ALC range that is fine but not necessary. Any time you cant get a indication simply increase the Car pot level and any time it goes off full scale simply decrease it.

A good TS520 Driver stage should be able to get full scale (FSD) ALC indication on all bands with exception of on 10 meters. Perhaps 2/3 to 3/4 is the norm there.

Sorry so long. Much confusion and myths and wrong info on this subject.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "SeanH" <smhawkes@...> wrote:
>
> I just can't seem to find the answer for this, in the manual it says to peak the ALC reading with the drive control. The manual says "maximum meter deflection", does that mean full sweep or within the ALC range?
>

43530. Re: Grounding from shack to mains ground rod

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-22 14:03:06 UTC
From: Terry Wagoner
Topic: 43474 Message: 43530

Roy:

Maxwells equations, displacement current, couloumb field have all bewildered me for years trying to figure out how a dipole actually radiates. Have speaking acquaintance, but would be fibbing if I would tell you I really understand the science. A topic better addressed off the list. Warn you no hope for me!

I think we can all debate or quibble about Lightning EMP and different pulse level designators and ESD or other terms. In my mind regardless what we call it the result has to do with the distance from the strike and how much wire is in the air in the pulse magnetic field path. If close enough ie within feet of your electronics then the magnetic field could be intense enough to cause you computer monitor screen colors to distort or worse. Same as bringing a permanent magnet or deguassing coil close to the monitor.

I suppose if close enough the pulse magnetic field could damage the RF amp mosfet in a Hybrid with no rig connections to the outside world at all. I think we are talking nuclear bomb here and not Lightning EMP to get that level of magnetic field.

I think for a KW hybrid there are at least four paths outside of a direct hit and whether we can attribute it to EMP or ESD is academic:

1. Induced in your wire antennas and feed lines as they act as secondary winding of transformer. (As Mike explained)

2. Induced in your 120vac lines as the power line primary and secondary conductors in the air act as a secondary winding of a transformer.

3. Induced in your phone lines and cable tv lines in the air as they act as secondary winding of a transformer.

4. Thru your chassis safety ground due to ground potential rise in the power line neutral. (not induced from pulse flux field)

So only 100% protection for our Kenwood Hybrids (assuming house doesnt burn to ground) is to remove the antenna feed line, unplug it from 120vac recept, and lift the safety neutral off the chassis. Ok.. place in box and put in closet!

Not many of us are going to do any or all. I am one of the lucky ones who have never had a near by strike or any damage in over 50 years.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "rkersey tds.net" <rkersey@...> wrote:
>
> Hi Mike and All:
>
> Mike, thanks for the tutorial, but I have a science degree and know all
> about Maxwell's equations in principle. Your rig could also go south in a

> nuclear attack due to the flipping of the magnetic fields and your car
> wouldn't run, either. Nor any computers and you can forget data storage,
> too. Same true for a coronal mass ejection. No argument there.
>
> I don't want to take your time away from answering other, more pressing
> questions.
> My questions would be, am I better off taking the antennas down, as I
> described, or just having the grounding system you described? Another
> questions I have is, do you know anybody who's had his rig destroyed by the
> kind of EM fields you described? How frequent is that versus voltages
> coming in on an antenna line or whatever during a lightning strike? I'm
> sure it has happened, but how frequently compared to other varieties of
> lightning damage?
>
> Best Regards,
> Roy Kersey
> KI4HAG
>
>
> [Non-text portions of this message have been removed]
>

43531. TS520SE IALC problem back to haunt me!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-22 14:59:32 UTC
From: adrian.langford@ymail.com
Topic: 43531 Message: 43531

Prior to today I had been able to align my 520SE (with Terry's invaluable help!) so that I had full scale ALC on all bands. Before I had no ALC on 10m at all.

Turning on the rig today the ALC was much lower than normal when I tuned up. Where I could get FSD on 7MHz with carrier control around 3 and drive peaked, I now had to wind the carrier full clockwise and only get about 3/4 full scale. Checking each band I found I was getting no ALC on 28, and progressively higher peaked ALC going down bands to 3.5MHz (7 and 3.5 about same).

This had happened once before and when I checked idle plate current it was about 40mA not 60mA. After setting to 60mA the ALC was fine.

So I checked idle current and it was around 45mA. Thinking this would be bound to fix the ALC I increased to 60mA, but I still had same low ALC! Maybe it was just coincidence that last time I had to readjust idle current, the ALC was its old healthy self?

So what could cause a sudden decrease in ALC, and complete loss of it on 10m where it was fine before post-alignment? What's obvious place to look? Could it just be finals have given up? Any reason why the idle current has dropped since last adjusted to 60mA just a few weeks ago when I last saw this problem?

Thanks for your advice.

73 de Adrian G4IQW

43532. Re: Got my General today so the 820 will be up

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-22 13:09:27 UTC
From: Barry
Topic: 43482 Message: 43532

Thanks so much to everybody! We have had so many doggone storms in South Carolina lately that I have had to unplug everything, but for sure as soon as I can get back on I'll see if I can catch up. Hope everybody has a great week,

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, Steve <jstevenorr@...> wrote:
>
> Congrats Barry!
> Work 820 to 820. Give us some frequencies.
> And as others have said, get to work on ur Extra
> 73s
> Steve
> W5SO
>
> J. Steven Orr, CFA
> Communities Foundation of Texas
> 214-750-4238
> Sent from my iPhone
>

43533. Re: TS-820S Neutralization

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-22 12:55:42 UTC
From: Barry
Topic: 43494 Message: 43533

Thanks very much for the encouragement. If we could get rid of all the storms I could actually get on the 820! Hope everybody has a great week.

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> No apology due. If I were new I would be looking at and evaluating all the resources at my disposal.
>
> Just want all new KW hybrid owners to be aware of the kind of advice that I see routinely given on these other sites. I go there from time to time to try and help and almost always get in arguments with one or more of these fellows who think sniffing, tapping, and spraying contact cleaner fixes all.
>
> Steve, Carl, and Sue (current KW owners or former KW owners) typically give sound advice but there are so many more that respond exactly as I stated in my 3 examples. I did not make those up.
>
> I too wish you lived close. You would be welcome in my shack at any time.
>
> Have fun with your TS820 rig.
>
> Terry K9TW

43534. Re: TS520SE lALC problem back to haunt me!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-22 16:29:25 UTC
From: Terry Wagoner
Topic: 43531 Message: 43534

Adrian:

After you adjust the resting plate current to 60ma does it stay there for some time or does it drift pretty quickly? Idle current is a function of cathode emission, control grid operating dc bias voltage, and screen grid voltage. If finals have lots of age emission can be a problem. Otherwise bias voltage and screen grid voltage must be to spec and stable.

If you feel comfortable I would measure the grid bias voltage at the final board on the control grid pin of the tube socket. It is not often that the -C supply floats around, however if the bias voltage pot is dirty it can cause resting plate current to change. If you havent cleaned and exercised this pot it is good idea to do so. Easy to remove the three screws that hold the plate to side of rig to get access to pot to apply the Deoxit and canned air. Try to set it back close to original position so you dont have insufficient bias voltage and the finals run away and be destroyed when you first key rig to adjust to 60ma.

As you know ALC indication is a function of RF drive voltage and dc bias offset at the control grids of your 6146 finals. Assuming that DC bias voltage is set properly then need to measure the RF drive voltage. If RF drive voltage is low suggest you try a new 12By7A Driver tube as a first step.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@..." <adrian@...> wrote:
>
> Prior to today I had been able to align my 520SE (with Terry's invaluable help!) so that I had full scale ALC on all bands. Before I had no ALC on 10m at all.
>
> Turning on the rig today the ALC was much lower than normal when I tuned up. Where I could get FSD on 7MHz with carrier control around 3 and drive peaked, I now had to wind the carrier full clockwise and only get about 3/4 full scale. Checking each band I found I was getting no ALC on 28, and progressively higher peaked ALC going down bands to 3.5MHz (7 and 3.5 about same).
>
> This had happened once before and when I checked idle plate current it was about 40mA not 60mA. After setting to 60mA the ALC was fine.
>
> So I checked idle current and it was around 45mA. Thinking this would be bound to fix the ALC I increased to 60mA, but I still had same low ALC! Maybe it was just coincidence that last time I had to readjust idle current, the ALC was its old healthy self?
>
> So what could cause a sudden decrease in ALC, and complete loss of it on 10m where it was fine before post-alignment? What's obvious place to look? Could it just be finals have given up? Any reason why the idle current has dropped since last adjusted to 60mA just a few weeks ago when I last saw this problem?
>

> Thanks for your advice.
>
> 73 de Adrian G4IQW
>

43535. Re: TS520SE IALC problem back to haunt me!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-22 17:57:30 UTC
From: adrian.langford@ymail.com
Topic: 43531 Message: 43535

Hi Terry

Thanks for such a fast reply!

The idle current stayed at 60mA for the 20 mins or so between me setting it believing it would be the fix, and turning rig off for the day after checking all the bands and scratching my head.

I had to leave home then for work and won't be back till weekend. I will then get rig in bench and do all the grid voltage checks you talked me through last time using my notes from then. The 12BY7A driver is a new one.

Will also clean bias pot first as you suggested, though the idle current varied smoothly as I rotated pot. I will note current position before cycling the wiper.

I left out one data point which may be relevant. I had not had any QSOs on 15m (conditions poor for it since obtaining rig) but yesterday tried a number of times to answer a QRZ without being heard in a pile up. I was putting out usual 100w, but when I checked SWR (I'm using OCD dipole 80-10) I found I had an SWR of over 5:1 (in lower bands this antenna around 1.5:1). I wonder if the reverse power damaged the finals? Problem is I can't remember if I had normal ALC after finding the problem on 15m. The dipole does take a curious path to fit my yard...

Anyway thanks as ever for great advice. Will report back to this group at weekend.

73 de Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Adrian:
>
> After you adjust the resting plate current to 60ma does it stay there for some time or does it drift pretty quickly? Idle current is a function of cathode emission, control grid operating dc bias voltage, and screen grid voltage. If finals have lots of age emission can be a problem. Otherwise bias voltage and screen grid voltage must be to spec and stable.
>
> If you feel comfortable I would measure the grid bias voltage at the final board on the control grid pin of the tube socket. It is not often that the -C supply floats around, however if the bias voltage pot is dirty it can cause resting plate current to change. If you havent cleaned and exercised this pot it is good idea to do so. Easy to remove the three screws that hold the plate to side of rig to get access to pot to apply the Deoxit and canned air. Try to set it back close to original position so you dont have insufficient bias voltage and the finals run away and be destroyed when you first key rig to adjust to 60ma.
>
> As you know ALC indication is a function of RF drive voltage and dc bias offset at the control grids of your 6146 finals. Assuming that DC bias voltage is set properly then need

to measure the RF drive voltage. If RF drive voltage is low suggest you try a new 12By7A Driver tube as a first step.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> >
> > Prior to today I had been able to align my 520SE (with Terry's invaluable help!) so that I had full scale ALC on all bands. Before I had no ALC on 10m at all.
> >
> > Turning on the rig today the ALC was much lower than normal when I tuned up. Where I could get FSD on 7MHz with carrier control around 3 and drive peaked, I now had to wind the carrier full clockwise and only get about 3/4 full scale. Checking each band I found I was getting no ALC on 28, and progressively higher peaked ALC going down bands to 3.5MHz (7 and 3.5 about same).
> >
> > This had happened once before and when I checked idle plate current it was about 40mA not 60mA. After setting to 60mA the ALC was fine.
> >
> > So I checked idle current and it was around 45mA. Thinking this would be bound to fix the ALC I increased to 60mA, but I still had same low ALC! Maybe it was just coincidence that last time I had to readjust idle current, the ALC was its old healthy self?
> >
> > So what could cause a sudden decrease in ALC, and complete loss of it on 10m where it was fine before post-alignment? What's obvious place to look? Could it just be finals have given up? Any reason why the idle current has dropped since last adjusted to 60mA just a few weeks ago when I last saw this problem?
> >
> > Thanks for your advice.
> >
> > 73 de Adrian G4IQW
> >
>

43536. Re: TS520SE IALC problem back to haunt me!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-22 18:15:26 UTC
From: Terry Wagoner
Topic: 43531 Message: 43536

Adrian:

In case you have forgotten to determine how much RF drive voltage level you need here is how you do that.

1. Measure the operating dc bias voltage at the 6146 control grids
2. Assume it is -55 vdc
3. -55/1.414 = 38.89 rms rf volts.
4. 39 x 1.414 = +55 peak RF volts so you can see that on the peak of the positive going half of the RF drive envelope with -55vdc bias the grid never goes positive relative to the cathode. No grid current means no ALC action.
4. So you need greater than 39 rms rf volts to have any hint of ALC indication. Any less than this and zero ALC indication
5. For maximum ALC indication at 100 watts into dummy load you will need approx 46 rms rf volts for maximum ALC indication.
6. 46 x 1.414 = 65 peak rf volts.
7. At the peak of the positive going half of the RF drive level the grid is approx +10 volts with respect to the cathode. Ua grid current flows from cathode to grid and to -C return. ALC amp transistor is turned on. ALC bus voltage is pulled down. ALC meter is driven up scale.

Summary:
A. Must have more than 39rms rf volts to get ALC indication off zero
B. Must have approx 46rms rf volts for full scale ALC indication at 100 watts into 50ohm dummy load.

Terry K9Tw

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Adrian:
>
> After you adjust the resting plate current to 60ma does it stay there for some time or does it drift pretty quickly? Idle current is a function of cathode emission, control grid operating dc bias voltage, and screen grid voltage. If finals have lots of age emission can be a problem. Otherwise bias voltage and screen grid voltage must be to spec and stable.
>
> If you feel comfortable I would measure the grid bias voltage at the final board on the control grid pin of the tube socket. It is not often that the -C supply floats around, however if the bias voltage pot is dirty it can cause resting plate current to change. If you havent cleaned and exercised this pot it is good idea to do so. Easy to remove the three screws that hold the plate to side of rig to get access to pot to apply the Deoxit and canned air. Try to set it back close to original position so you dont have insufficient bias voltage and the finals run away and be destroyed when you first key rig to adjust to 60ma.
>

> As you know ALC indication is a function of RF drive voltage and dc bias offset at the control grids of your 6146 finals. Assuming that DC bias voltage is set properly then need to measure the RF drive voltage. If RF drive voltage is low suggest you try a new 12By7A Driver tube as a first step.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
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> > So I checked idle current and it was around 45mA. Thinking this would be bound to fix the ALC I increased to 60mA, but I still had same low ALC! Maybe it was just coincidence that last time I had to readjust idle current, the ALC was its old healthy self?
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> > So what could cause a sudden decrease in ALC, and complete loss of it on 10m where it was fine before post-alignment? What's obvious place to look? Could it just be finals have given up? Any reason why the idle current has dropped since last adjusted to 60mA just a few weeks ago when I last saw this problem?
> >
> > Thanks for your advice.
> >
> > 73 de Adrian G4IQW
> >
>

43537. Re: TS520SE IALC problem back to haunt me!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-22 18:29:48 UTC
From: Terry Wagoner
Topic: 43531 Message: 43537

It is not possible for "high" SWR to overheat the final tubes as long as you can re-tune the Pi-network for Ip within maximum disspation rating of the tubes. Overheating would come from not tuning the network to resonance and running with higher than maximum plate current.

It is possible for high SWR to cause arc over of the Plate Load capacitor and/or cause heating in the Tank coil due to higher circ current. Arc over would be the more common problem.

As long as you can adjust your Pi-Network controls to load into the mismatch that is being presented should not hurt the load capacitor or the tank coil.

5/1 SWR is getting at the extreme limits of your Pi-network to affect a match.

Do all your testing into a 50 ohm dummy load.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@..." <adrian@...> wrote:
>
> Hi Terry
>
> Thanks for such a fast reply!
>
> The idle current stayed at 60mA for the 20 mins or so between me setting it believing it would be the fix, and turning rig off for the day after checking all the bands and scratching my head.
>
> I had to leave home then for work and won't be back till weekend. I will then get rig in bench and do all the grid voltage checks you talked me through last time using my notes from then. The 12BY7A driver is a new one.
>
> Will also clean bias pot first as you suggested, though the idle current varied smoothly as I rotated pot. I will note current position before cycling the wiper.
>
> I left out one data point which may be relevant. I had not had any QSOs on 15m (conditions poor for it since obtaining rig) but yesterday tried a number of times to answer a QRZ without being heard in a pile up. I was putting out usual 100w, but when I checked SWR (I'm using OCD dipole 80-10) I found I had an SWR of over 5:1 (in lower bands this antenna around 1.5:1). I wonder if the reverse power damaged the finals? Problem is I can't remember if I had normal ALC after finding the problem on 15m. The dipole does take a curious path to fit my yard...
>
> Anyway thanks as ever for great advice. Will report back to this group at weekend.
>
> 73 de Adrian G4IQW

>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Adrian:
> >
> > After you adjust the resting plate current to 60ma does it stay there for some time or does it drift pretty quickly? Idle current is a function of cathode emission, control grid operating dc bias voltage, and screen grid voltage. If finals have lots of age emission can be a problem. Otherwise bias voltage and screen grid voltage must be to spec and stable.
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> >
> > As you know ALC indication is a function of RF drive voltage and dc bias offset at the control grids of your 6146 finals. Assuming that DC bias voltage is set properly then need to measure the RF drive voltage. If RF drive voltage is low suggest you try a new 12By7A Driver tube as a first step.
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> > Terry K9TW
> >
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> > > So what could cause a sudden decrease in ALC, and complete loss of it on 10m where it was fine before post-alignment? What's obvious place to look? Could it just be finals have given up? Any reason why the idle current has dropped since last adjusted to 60mA just a few weeks ago when I last saw this problem?
> > >
> > > Thanks for your advice.

> > >
> > > 73 de Adrian G4IQW
> > >
> >
>

43538. Re: TS520SE IALC problem back to haunt me!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-22 18:32:36 UTC
From: Terry Wagoner
Topic: 43531 Message: 43538

Do you have another "new" Driver tube? If so try it. Or perform Driver stage test in CW mode with SG switch off as I have described previously.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@..." <adrian@...> wrote:
>
> Hi Terry
>
> Thanks for such a fast reply!
>
> The idle current stayed at 60mA for the 20 mins or so between me setting it believing it would be the fix, and turning rig off for the day after checking all the bands and scratching my head.
>
> I had to leave home then for work and won't be back till weekend. I will then get rig in bench and do all the grid voltage checks you talked me through last time using my notes from then. The 12BY7A driver is a new one.
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>
> Anyway thanks as ever for great advice. Will report back to this group at weekend.
>
> 73 de Adrian G4IQW
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> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Adrian:
> >
> > After you adjust the resting plate current to 60ma does it stay there for some time or does it drift pretty quickly? Idle current is a function of cathode emission, control grid operating dc bias voltage, and screen grid voltage. If finals have lots of age emission can be a problem. Otherwise bias voltage and screen grid voltage must be to spec and stable.
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> > As you know ALC indication is a function of RF drive voltage and dc bias offset at the control grids of your 6146 finals. Assuming that DC bias voltage is set properly then need to measure the RF drive voltage. If RF drive voltage is low suggest you try a new 12By7A Driver tube as a first step.
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> > > This had happened once before and when I checked idle plate current it was about 40mA not 60mA. After setting to 60mA the ALC was fine.
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> > > So I checked idle current and it was around 45mA. Thinking this would be bound to fix the ALC I increased to 60mA, but I still had same low ALC! Maybe it was just coincidence that last time I had to readjust idle current, the ALC was its old healthy self?
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> > > So what could cause a sudden decrease in ALC, and complete loss of it on 10m where it was fine before post-alignment? What's obvious place to look? Could it just be finals have given up? Any reason why the idle current has dropped since last adjusted to 60mA just a few weeks ago when I last saw this problem?
> > >
> > > Thanks for your advice.
> > >
> > > 73 de Adrian G4IQW
> > >
> >
>

43539. TS-830s Remote Connector

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-22 20:10:26 UTC
From: ralph_ts_830s
Topic: 43539 Message: 43539

Group,

I have had no success locating the 7 pin remote connector for my TS-830 until now. I recently purchased this cable to use with an amp http://www.ebay.com/itm/360575254804?ssPageName=STRK:MEWNX:IT&_trksid=p3984.m1439.l2649#ht_1299wt_1161
I asked the seller if he would sell me the connectors and/or make up cables for me. He is willing to make cables. I am going to ask him to make two cable 25"'s using a 7 conductor (8 with the shield) cable and leave the other end unfinished so I can adapt it for future uses. In particular, I am planning on using one to interface with a foot-switch. He asked $29.00 and change for the amp cable so I expect the cables he makes for me to be the same or close. This might be pricey but he's got it and I need it. Anybody have a source for these connectors? Looking at the operating manual it looks like I will use pins 2 and 3 for the foot-switch?
Pinout is as follows:
1= Record out (audio)
2= Relay common terminal (not grounded)
3= PTT line
4= Normally open (relay contact)
5= Normally closed (relay contact)
6= ALC input (threshold level approx. 6V) Manual states -6V (up to 6?)
7= Open (no connection)

73
Ralph/KB1ZYI

43540. Re: TS-830s Remote Connector

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-22 21:03:28 UTC
From: n6wk_skcc3
Topic: 43539 Message: 43540

Ralph, didn't notice you needed a cable. I have one here you could have had for the cost of shipping :-)
All wired and ready to go. Been used though..Hi Hi

73,
Gordon
N6WK

--- In TS-520_820_530_830@yahoogroups.com, "ralph_ts_830s" <r_krohne@...> wrote:
>
> Group,
>
> I have had no success locating the 7 pin remote connector for my TS-830 until now. I recently purchased this cable to use with an amp http://www.ebay.com/itm/360575254804?ssPageName=STRK:MEWNX:IT&_trksid=p3984.m1439.l2649#ht_1299wt_1161
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> 7= Open (no connection)
>
> 73
> Ralph/KB1ZYI
>

43541. Re: TS-830s Remote Connector

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-22 22:26:03 UTC
From: ralph_ts_830s
Topic: 43539 Message: 43541

Arrgghh! I found the amp cable before I found this group :-(
Looking more closely at figure 5-4 page 25 of the Instruction Manual, pin #2 would not be correct for a PTT foot-switch. In addition to pin #3, what pin should I use to complete the PTT circuit for my foot-switch?

73,
Ralph/KB1ZYI

--- In TS-520_820_530_830@yahoogroups.com, "n6wk_skcc3" <n6wk@...> wrote:
>
> Ralph, didn't notice you needed a cable. I have one here you could have had for the cost of shipping :-)
> All wired and ready to go. Been used though..Hi Hi
>
> 73,
> Gordon
> N6WK
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "ralph_ts_830s" <r_krohne@> wrote:
> >
> > Group,
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> > I asked the seller if he would sell me the connectors and/or make up cables for me. He is willing to make cables. I am going to ask him to make two cable 25"'s using a 7 conductor (8 with the shield) cable and leave the other end unfinished so I can adapt it for future uses. In particular, I am planning on using one to interface with a foot-switch. He asked $29.00 and change for the amp cable so I expect the cables he makes for me to be the same or close. This might be pricey but he's got it and I need it. Anybody have a source for these connectors? Looking at the operating manual it looks like I will use pins 2 and 3 for the foot-switch?
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> > 73

> > Ralph/KB1ZYI
> >
>

43542. Re: TS520SE IALC problem back to haunt me!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-22 22:38:03 UTC
From: adrian.langford@ymail.com
Topic: 43531 Message: 43542

Thanks Terry - I will print this out along with original thread when I first got the 520SE (at that time aligning the Drive coils Restored ALC to health on all bands including 10m) and work through the grid voltage measurements.

73 Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
>
>
> Adrian:
>
> In case you have forgotten to determine how much RF drive voltage level you need here is how you do that.
>
> 1. Measure the operating dc bias voltage at the 6146 control grids
> 2. Assume it is -55 vdc
> 3. -55/1.414 = 38.89 rms rf volts.
> 4. 39 x 1.414 = +55 peak RF volts so you can see that on the peak of the positive going half of the RF drive envelope with -55vdc bias the grid never goes positive relative to the cathode. No grid current means no ALC action.
> 4. So you need greater than 39 rms rf volts to have any hint of ALC indication. Any less than this and zero ALC indication
> 5. For maximum ALC indication at 100 watts into dummy load you will need approx 46 rms rf volts for maximum ALC indication.
> 6. 46 x 1.414 = 65 peak rf volts.
> 7. At the peak of the positive going half of the RF drive level the grid is approx +10 volts with respect to the cathode. Ua grid current flows from cathode to grid and to -C return. ALC amp transistor is turned on. ALC bus voltage is pulled down. ALC meter is driven up scale.
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> Summary:
> A. Must have more than 39rms rf volts to get ALC indication off zero
> B. Must have approx 46rms rf volts for full scale ALC indication at 100 watts into 50ohm dummy load.
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> Terry K9Tw
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> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
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> > Adrian:
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> > As you know ALC indication is a function of RF drive voltage and dc bias offset at the control grids of your 6146 finals. Assuming that DC bias voltage is set properly then need to measure the RF drive voltage. If RF drive voltage is low suggest you try a new 12By7A Driver tube as a first step.
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> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
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> > > Turning on the rig today the ALC was much lower than normal when I tuned up. Where I could get FSD on 7MHz with carrier control around 3 and drive peaked, I now had to wind the carrier full clockwise and only get about 3/4 full scale. Checking each band I found I was getting no ALC on 28, and progressively higher peaked ALC going down bands to 3.5MHz (7 and 3.5 about same).
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> > >
> > > Thanks for your advice.
> > >
> > > 73 de Adrian G4IQW
> > >
> >
>

43543. Re: TS520SE IALC problem back to haunt me!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-22 22:41:15 UTC
From: adrian.langford@ymail.com
Topic: 43531 Message: 43543

I should be able to try the original driver tube (gave to my son so he'd have momento of thermionics!) so will try that and measure the RF drive with the old and new tube.

Thanks again for your patient help

Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Do you have another "new" Driver tube? If so try it. Or perform Driver stage test in CW mode with SG switch off as I have described previously.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> >
> > Hi Terry
> >
> > Thanks for such a fast reply!
> >
> > The idle current stayed at 60mA for the 20 mins or so between me setting it believing it would be the fix, and turning rig off for the day after checking all the bands and scratching my head.
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> > 73 de Adrian G4IQW
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> > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > >
> > > Adrian:

> > >
> > > After you adjust the resting plate current to 60ma does it stay there for some time or does it drift pretty quickly? Idle current is a function of cathode emission, control grid operating dc bias voltage, and screen grid voltage. If finals have lots of age emission can be a problem. Otherwise bias voltage and screen grid voltage must be to spec and stable.
> > >
> > > If you feel comfortable I would measure the grid bias voltage at the final board on the control grid pin of the tube socket. It is not often that the -C supply floats around, however if the bias voltage pot is dirty it can cause resting plate current to change. If you havent cleaned and exercised this pot it is good idea to do so. Easy to remove the three screws that hold the plate to side of rig to get access to pot to apply the Deoxit and canned air. Try to set it back close to original position so you dont have insufficient bias voltage and the finals run away and be destroyed when you first key rig to adjust to 60ma.
> > >
> > > As you know ALC indication is a function of RF drive voltage and dc bias offset at the control grids of your 6146 finals. Assuming that DC bias voltage is set properly then need to measure the RF drive voltage. If RF drive voltage is low suggest you try a new 12By7A Driver tube as a first step.
> > >
> > > Terry K9TW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> > > >
> > > > Prior to today I had been able to align my 520SE (with Terry's invaluable help!) so that I had full scale ALC on all bands. Before I had no ALC on 10m at all.
> > > >
> > > > Turning on the rig today the ALC was much lower than normal when I tuned up. Where I could get FSD on 7MHz with carrier control around 3 and drive peaked, I now had to wind the carrier full clockwise and only get about 3/4 full scale. Checking each band I found I was getting no ALC on 28, and progressively higher peaked ALC going down bands to 3.5MHz (7 and 3.5 about same).
> > > >
> > > > This had happened once before and when I checked idle plate current it was about 40mA not 60mA. After setting to 60mA the ALC was fine.
> > > >
> > > > So I checked idle current and it was around 45mA. Thinking this would be bound to fix the ALC I increased to 60mA, but I still had same low ALC! Maybe it was just coincidence that last time I had to readjust idle current, the ALC was its old healthy self?
> > > >
> > > > So what could cause a sudden decrease in ALC, and complete loss of it on 10m where it was fine before post-alignment? What's obvious place to look? Could it just be finals have given up? Any reason why the idle current has dropped since last adjusted to 60mA just a few weeks ago when I last saw this problem?
> > > >
> > > > Thanks for your advice.
> > > >
> > > > 73 de Adrian G4IQW

> > > >
> > >
> >
>

43544. Re: [TS-520_820_530_830] Re: TS-830s Remote Connector

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-22 23:06:07 UTC
From: n6wk@...
Topic: 43539 Message: 43544

The metal case of the connector is the ground return for the PTT.

73,
Gordon
N6WK

On 7/22/2013 3:26 PM, ralph_ts_830s wrote:
>
> Arrgghh! I found the amp cable before I found this group :-(
> Looking more closely at figure 5-4 page 25 of the Instruction Manual,
> pin #2 would not be correct for a PTT foot-switch. In addition to pin
> #3, what pin should I use to complete the PTT circuit for my foot-switch?
>
> 73,
> Ralph/KB1ZYI
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "n6wk_skcc3" <n6wk@...>
> wrote:
> >
> > Ralph, didn't notice you needed a cable. I have one here you could
> have had for the cost of shipping :-)
> > All wired and ready to go. Been used though..Hi Hi
> >
> > 73,
> > Gordon
> > N6WK
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "ralph_ts_830s"
> <r_krohne@> wrote:
> > >
> > > Group,
> > >
> > > I have had no success locating the 7 pin remote connector for my
> TS-830 until now. I recently purchased this cable to use with an amp
> http://www.ebay.com/itm/360575254804?ssPageName=STRK:MEWNX:IT&_trksid=p3984.m1439.l2649#
ht_1299wt_1161
> > > I asked the seller if he would sell me the connectors and/or make
> up cables for me. He is willing to make cables. I am going to ask him
> to make two cable 25"'s using a 7 conductor (8 with the shield) cable
> and leave the other end unfinished so I can adapt it for future uses.
> In particular, I am planning on using one to interface with a

> foot-switch. He asked $29.00 and change for the amp cable so I expect
> the cables he makes for me to be the same or close. This might be
> pricey but he's got it and I need it. Anybody have a source for these
> connectors? Looking at the operating manual it looks like I will use
> pins 2 and 3 for the foot-switch?
> > > Pinout is as follows:
> > > 1= Record out (audio)
> > > 2= Relay common terminal (not grounded)
> > > 3= PTT line
> > > 4= Normally open (relay contact)
> > > 5= Normally closed (relay contact)
> > > 6= ALC input (threshold level approx. 6V) Manual states -6V (up to 6?)
> > > 7= Open (no connection)
> > >
> > > 73
> > > Ralph/KB1ZYI
> > >
> >
>
>

--

[Non-text portions of this message have been removed]

43545. Re: [TS-520_820_530_830] TS-520S Drive Tuning

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 00:51:44 UTC
From: John Davidson
Topic: 43520 Message: 43545

It means "maximum deflection" !

From: SeanH <smhawkes@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, July 21, 2013 8:37 PM
Subject: [TS-520_820_530_830] TS-520S Drive Tuning

I just can't seem to find the answer for this, in the manual it says to peak the ALC reading with the drive control. The manual says "maximum meter deflection", does that mean full sweep or within the ALC range?

[Non-text portions of this message have been removed]

43546. TS 820S Display Error

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 03:46:40 UTC
From: Wm Marvin
Topic: 43341 Message: 43546

Hi Gordon Some days back I posted about my 820S with a intermittent display digit i.e 7.150 reads 9.150 on any other band also.

After working on the counter boards, for some days the display worked fine, however it still briefly will change to 9 on the second digit and
has no effect on the TX or RX functions.

You mentioned the bandswitch as a possible culprit. What specific bandswitch section controls the MHz portion of the display?? I have the 820 Service Manual.

Many Thanks & 73

Bill KB9IV

43547. Need to find service for my Kenwood 599D twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 00:21:52 UTC
From: yash@aol.com
Topic: 43547 Message: 43547

I need to get the transmitter t-599D of my twins serviced. Have contacted most all the sites that service the Kenwood Hybrids,seems one one is willing to work on the twins. Does anyone in the group have any suggestions as to
someone who can service the pair,or at least the transmitter?
73
dale WT4T

[Non-text portions of this message have been removed]

43548. Re: TS 820S Display Error

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 04:08:56 UTC
From: n6wk_skcc3
Topic: 43341 Message: 43548

Hi Bill,
It has been years since I worked on an 820. Two things come to mind. One is the contacts for the wafers on the Band switch . I think Wafer #3 is the one you want to look at. The other, which is a very common but less mentioned problem is the little metal spring terminals inside the white connectors. These terminals Break over time and then no longer make contact with the Pin they slide over. I have solved more troubles then I care to remember by replacing these terminals. It is a pain in the butt because the only way to check them is to release each one from the white plastic connector and slide it out to look at it. Very time consuming. It is the main reason I stopped working on the TS-820 radios. I am confident, now that I think about it, that you will find your fix by locating the broken contacts on your radio.

73,
Gordon
N6WK

--- In TS-520_820_530_830@yahoogroups.com, "Wm Marvin" <wmarvin2@...> wrote:
>
> Hi Gordon Some days back I posted about my 820S with a intermittent display digit i.e 7.150 reads 9.150 on any other band also.
>
> After working on the counter boards, for some days the display worked fine, however it still briefly will change to 9 on the second digit and
> has no effect on the TX or RX functions.
>
> You mentioned the bandswitch as a possible culprit. What specific bandswitch section controls the MHz portion of the display?? I have the 820 Service Manual.
>
> Many Thanks & 73
>
> Bill KB9IV
>

43549. Re: [TS-520_820_530_830] Need to find service for my Kenwood 599D twins

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 04:09:33 UTC
From: Mark Gilger
Topic: 43547 Message: 43549

If you go to my web site posted below, download
the Service & Repair document. I know that Jeff,
WA8SAJ works on them and probably several others
on this list so you can choose the one closest to where you live.

http://wb4hfn.com/KENWOOD/Kenwood-Articles.htm

http://wb4hfn.com/KENWOOD/KenwoodHomePage.htm

Mark

At 08:21 PM 7/22/2013, yash@... wrote:
>
>
>I need to get the transmitter t-599D of my twins
>serviced. Have contacted most all the sites that
>service the Kenwood Hybrids,seems one one is
>willing to work on the twins. Does anyone in the
>group have any suggestions as to
>someone who can service the pair,or at least the transmitter?
>73
>dale WT4T
>
>[Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

43550. hybrid tune up procedure

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 07:36:09 UTC
From: km5wx@bellsouth.net
Topic: 43550 Message: 43550

First thanks to all the great hams on this site for all the great info I've received. My question today is, is the tune up procedure the same for the 820s, 530s, 830s all the same or are there differences? Also when I tune my 820 and I get to the step in the manual where the mode switch is in cw position meter set to rf Ikey to peak the load and dip the plate as I turn the plate control it will just continue to dip until the control is way out of the band I'm intending to tune for. I hope I explained that correctly.What am I doing wrong? Also on a 530s when tuning for 20 meters the send switch does not operate. It works just fine on all other bands but does nothing on 20. Thanks again and I hope someone has an answer and not a flame. I've never seen anyone do that on this site that's why I'm here. I've asked a few questions on qrz and it seems some folks would rather bite you than help you. So Peace be with you all and thank you again. 73 Richard KM5WX

43552. Re: TS-520S Drive Tuning

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 11:53:12 UTC
From: Terry Wagoner
Topic: 43520 Message: 43552

This is wrong and bad advice to give to new folks trying to learn how to load their rigs.

Hard to adjust the Driver Tube plate tank circuit to resonance if you are bringing the Car Level up to full scale meter deflection. How do you then see the "PEAK" ???

Are you peaking the ALC reading with the Drive control and then bringing up the Car Pot until you set the meter indication at FSD? If so, this is meaningless. From about 1200 on ALC meter indication there is no increase in RF drive voltage at the 6146 control grids.

You can see this if you operate CW mode. Bring up the Car Level and peak the Drive control for 1200 indication on the meter scale. You should see approx 100 watts output. While key down open the Car Level pot up to run the ALC indication from 1200 to FSD. You will not get anymore RF output. If you do not have an external wattmeter then use the rigs RF detector position.

You need to "PEAK" the ALC indication and to do that you need the meter off the peg to see the peak. You are not looking for a particular ALC indication meter level only a PEAK.

Set the Car Level so at a minimum you have ALC indication at the far right end of the printed ALC box on the meter face and then adjust the Drive Control for a Peak. It is just that simple. As I said in my previous explanation you can use 2/3 or 3/4 meter scale and there is no worry of exceeding the 6146 control grid dissipation as so many seem to be concerned about.

What you are doing is adjusting the Driver tube plate tank circuit to resonance. At resonance you will have maximum impedance in the tank. At maximum tank impedance you will have maximum RF drive voltage.

With the ALC indication "PEAKED" at far right end of printed ALC scale or greater you will have approx 46rms rf volts on the control grids. You will get no more rf drive voltage at control grids by trying to Peak the ALC indication at meter FSD.

The goal of this loading/tuning step is to have the Maximum RF drive voltage on the 6146 control grids. Kenwood didnt provide a control grid rf voltmeter to indicate when you are there. Since there is no dc grid current they did not provide a dc grid current meter. So how do you know when you have maximum RF drive voltage at the control grids? Kenwood does it by measuring the ALC bus voltage. A "Peak" in the ALC indication tells you that you have the Driver tube plate tank circuit tuned to resonance.

For you new folks this is a no brainer.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> It means "maximum deflection" !
>
>

> _____
> From: SeanH <smhawkes@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sunday, July 21, 2013 8:37 PM
> Subject: [TS-520_820_530_830] TS-520S Drive Tuning
>
>
>
> Â
> I just can't seem to find the answer for this, in the manual it says to peak the ALC reading with the drive control. The manual says "maximum meter deflection", does that mean full sweep or within the ALC range?
>
>
>
>
> [Non-text portions of this message have been removed]
>

43553. Re: hybrid tune up procedure

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 12:13:39 UTC
From: Terry Wagoner
Topic: 43550 Message: 43553

At this step with the meter in RF position you should be adjusting the Plate Tune and Plate Load controls for a maximum indication on the panel meter and not a DIP. If you have a low reading adjust the RF sensitivity pot for approx 2/3 to 3/4 deflection on the meter so you have something to work with.

As I said you are not looking for a dip in the RF meter indication. With the meter in RF position you are sampling the rf voltage at your SO-239 connector. Maximum rf voltage = maximum watts output.

The meter does not tell you if you have normal RF output into your dummy load (approx 100 watts at normal Ip). It is just a relative power indication.

This is one of the reasons I recommend newly licensed and new hybrid owner consider buying a wattmeter. Through no fault of your own the understanding of a Tank circuit and what you are doing when you adjust the Plate Tune and Plate Load controls isnt there yet. It will come with time if you have the aptitude and interest to learn. If you feel flamed too bad.

At this point you need a SWR meter to trim your dipoles so why not spend couple extra dollars and get a directional wattmeter that serves both purposes. So much easier to just adjust the Plate Tune and Plate load controls for approx 100 watts output. You can then leave your panel meter in the IP position so that you can simultaneously see that you are not exceeding max IP. Also the meter ballistics of most wattmeters is much better than your panel meter. This means much more sensitive. Making it easier to see a peak on the wattmeter than you can see the dip in IP. Also dip in IP doesnt always correlate to max rf output power. Wont spend time explaining why at this point.

Perhaps someone else will address the 20 meter issue for you.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "km5wx@..." <km5wx@...> wrote:
>
> First thanks to all the great hams on this site for all the great info I've received. My question today is, is the tune up procedure the same for the 820s, 530s, 830s all the same or are there differences? Also when I tune my 820 and I get to the step in the manual where the mode switch is in cw position meter set to rf Ikey to peak the load and dip the plate as I turn the plate control it will just continue to dip until the control is way out of the band I'm intending to tune for. I hope I explained that correctly.What am I doing wrong? Also on a 530s when tuning for 20 meters the send switch does not operate. It works just fine on all other bands but does nothing on 20. Thanks again and I hope someone has an answer and not a flame. I've never seen anyone do that on this site that's why I'm here. I've asked a few questions on qrz and it seems some folks would rather bite you than help you. So Peace be with you all and thank you again. 73 Richard KM5WX
>

43554. Re: TS-520S Drive Tuning

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 05:13:25 UTC
From: SeanH
Topic: 43520 Message: 43554

Thank you Terry for the very useful reply.
--- In TS-520_820_530_830@yahoogroups.com, "SeanH" <smhawkes@...> wrote:
>
> I just can't seem to find the answer for this, in the manual it says to peak the ALC reading with the drive control. The manual says "maximum meter deflection", does that mean full sweep or within the ALC range?
>

43555. Worked Czech Republic, France and Poland with the 820 on $12 of wire

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 12:26:32 UTC
From: Barry
Topic: 43555 Message: 43555

I worked the Czech Republic, France and Poland last night on the 820 after researching several different dipoles, and with $12 of 14 gauge wire. 44' for each leg and maybe 25' or so for feedline allowed me to throw it up over the house and spread it out pretty well over my front and back yard, and it's up about 14' or so.

That's my first homebrew antenna, and it's not perfect - SWR was a little high, so I'm going to keep working with it - but the very first contact was the Czech Republic. He gave me a 5-7, and I'd have to give him no better than that... but I was very pleased to have done this well last night.

I think my 820 is in better shape at 30+ years old than I was.

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

43556. Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 14:54:44 UTC
From: Don D
Topic: 43556 Message: 43556

Hi All

Need some help to determine if my power supply is kaput
It has been tampered with before as the rectifier unit was worked before me
When i turn it on,all i get is front panel lamps and fan
I get no 12.6 volts on the transformer

73
Don/Ve2ud

43557. Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 15:28:54 UTC
From: scott10k
Topic: 43555 Message: 43557

Hi Barry,
Congratulations-good work! I think dipoles are great-you can experiment with them, put them into different configurations, and they don't cost much. Now you can try to get your dipole up a little higher and your SWR may go down, plus you can trim the ends. You can also configure it as an inverted Vee if that would help get it up higher. Good work and keep it up!
73s, Scott, N6CIC

--- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@...> wrote:
>
> I worked the Czech Republic, France and Poland last night on the 820 after researching several different dipoles, and with $12 of 14 gauge wire. 44' for each leg and maybe 25' or so for feedline allowed me to throw it up over the house and spread it out pretty well over my front and back yard, and it's up about 14' or so.
>
> That's my first homebrew antenna, and it's not perfect - SWR was a little high, so I'm going to keep working with it - but the very first contact was the Czech Republic. He gave me a 5-7, and I'd have to give him no better than that... but I was very pleased to have done this well last night.
>
> I think my 820 is in better shape at 30+ years old than I was.
>
> Barry
> KK4RXN
> Jeremiah 29:11-13 / John 3:16
>

43558. Re: [TS-520_820_530_830] Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 15:29:58 UTC
From: W5RKL
Topic: 43556 Message: 43558

Don,

What hybrid are you referring to? When asking about problems with your hybrids you must provide the model of hybrid you are referring to.

Are you saying that you measured the AC voltage on the 12VAC winding and it's zero?

Did you check ALL of the Rectifier Unit voltages before thinking the Rectifier Unit is bad?

Did you check to see if the driver and both final tube filaments are lit (Heater switch turned ON)

If the driver and both final tube filaments are lit and the dial lamps are illuminating then the 12VAC winding is fine.

The fan runs off of the 100VAC winding of the power transformer and if the fan is running then that winding is good.

You need to do more testing/measuring of the Rectifier Unit voltages to determine whether or not one or more power supplies have failed.

73
Mike W5RKL

On 7/23/2013 9:54 AM, Don D wrote:
>
>
> Hi All
>
> Need some help to determine if my power supply is kaput
> It has been tampered with before as the rectifier unit was worked
> before me
> When i turn it on,all i get is front panel lamps and fan
> I get no 12.6 volts on the transformer
>
> 73
> Don/Ve2ud
>
>

[Non-text portions of this message have been removed]

43559. Re: [TS-520_820_530_830] Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 15:34:57 UTC
From: Don
Topic: 43556 Message: 43559

Sorry Mike forgot again

It's a ts830s

I will print this out and get back to you

73
Don

On 23/07/2013 11:29 AM, W5RKL wrote:
>
> Don,
>
> What hybrid are you referring to? When asking about problems with your
> hybrids you must provide the model of hybrid you are referring to.
>
> Are you saying that you measured the AC voltage on the 12VAC winding and
> it's zero?
>
> Did you check ALL of the Rectifier Unit voltages before thinking the
> Rectifier Unit is bad?
>
> Did you check to see if the driver and both final tube filaments are lit
> (Heater switch turned ON)
>
> If the driver and both final tube filaments are lit and the dial lamps
> are illuminating then the 12VAC winding is fine.
>
> The fan runs off of the 100VAC winding of the power transformer and if
> the fan is running then that winding is good.
>
> You need to do more testing/measuring of the Rectifier Unit voltages to
> determine whether or not one or more power supplies have failed.
>
> 73
> Mike W5RKL
>
> On 7/23/2013 9:54 AM, Don D wrote:
> >
> >
> > Hi All
> >
> > Need some help to determine if my power supply is kaput
> > It has been tampered with before as the rectifier unit was worked
> > before me
> > When i turn it on,all i get is front panel lamps and fan

> > I get no 12.6 volts on the transformer
> >
> > 73
> > Don/Ve2ud
> >
> >
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

43560. Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 14:53:15 UTC
From: Doug Wiles
Topic: 43555 Message: 43560

Congratulations!

I got the same euphoria over my first QSO with the Marshall Islands on my 35 year old TS-820 when she came out of the shop earlier this year. Purchased it in the Spring of '78 while stationed in Germany. It was such an improvement over the Tempo I I was using that I thought it would be my last rig! Well. Not quite, but the performance puts the 820 up there with the best, and she's still going strong today!

Doug, WF4B

43561. Re: [TS-520_820_530_830] Worked Czech Republic, France and Poland with the 820 on $12 of wire

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 15:40:05 UTC
From: W5RKL
Topic: 43555 Message: 43561

Barry,

Congratulations on working some DX. It's fun working DX.

Having said that. you did say what type of wire antenna you are using.
If it's a dipole, did you use the formula

468 / <freq in Mhz>

to achieve the overall "ball park" length of the antenna?

You also said the SWR was high. Did you trim/adjust the length of both
sides of the antenna equally for the lowest SWR to achieve maximum power
transfer to the antenna?

If you have not adjusted the length of both side for the lowest SWR then
I recommend doing that. Your antenna will work much more efficient by
doing that.

73
Mike W5RKL

On 7/23/2013 7:26 AM, Barry wrote:
>
> I worked the Czech Republic, France and Poland last night on the 820
> after researching several different dipoles, and with $12 of 14 gauge
> wire. 44' for each leg and maybe 25' or so for feedline allowed me to
> throw it up over the house and spread it out pretty well over my front
> and back yard, and it's up about 14' or so.
>
> That's my first homebrew antenna, and it's not perfect - SWR was a
> little high, so I'm going to keep working with it - but the very first
> contact was the Czech Republic. He gave me a 5-7, and I'd have to give
> him no better than that... but I was very pleased to have done this
> well last night.
>
> I think my 820 is in better shape at 30+ years old than I was.
>
> Barry
> KK4RXN
> Jeremiah 29:11-13 / John 3:16
>
>

[Non-text portions of this message have been removed]

43562. Re: [TS-520_820_530_830] Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 15:50:03 UTC
From: W5RKL
Topic: 43556 Message: 43562

Don,

If the dial lamps, filaments, and fan are working/running, the Rectifier Unit is providing the correct voltages, but the digital display is dark, then I suspect the PLL Unit has changed states to "UNLOCK". This could be caused by a number of things such as bad/corroded connections in PC board plugs, bad/corroded grounds at the PC board mounting screws, bad connection in the remote VFO DIN socket switch on the rear panel (embedded remote VFO DIN socket switch controls the application of 9VDC to the internal VFO), or loss of required RF signals to the PLL Unit.

But first, as I said, you should check the Rectifier Unit for all the proper voltages before doing anything else.

73
Mike W5RKL

On 7/23/2013 10:34 AM, Don wrote:
>
> Sorry Mike forgot again
>
> It's a ts830s
>
> I will print this out and get back to you
>
> 73
> Don
>
> On 23/07/2013 11:29 AM, W5RKL wrote:
> >
> > Don,
> >
> > What hybrid are you referring to? When asking about problems with your
> > hybrids you must provide the model of hybrid you are referring to.
> >
> > Are you saying that you measured the AC voltage on the 12VAC winding and
> > it's zero?
> >
> > Did you check ALL of the Rectifier Unit voltages before thinking the
> > Rectifier Unit is bad?
> >
> > Did you check to see if the driver and both final tube filaments are lit
> > (Heater switch turned ON)
> >
> > If the driver and both final tube filaments are lit and the dial lamps
> > are illuminating then the 12VAC winding is fine.

> >
> > The fan runs off of the 100VAC winding of the power transformer and if
> > the fan is running then that winding is good.
> >
> > You need to do more testing/measuring of the Rectifier Unit voltages to
> > determine whether or not one or more power supplies have failed.
> >
> > 73
> > Mike W5RKL
> >
> > On 7/23/2013 9:54 AM, Don D wrote:
> > >
> > >
> > > Hi All
> > >
> > > Need some help to determine if my power supply is kaput
> > > It has been tampered with before as the rectifier unit was worked
> > > before me
> > > When i turn it on,all i get is front panel lamps and fan
> > > I get no 12.6 volts on the transformer
> > >
> > > 73
> > > Don/Ve2ud
> > >
> > >
> >
> > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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43563. Re: [TS-520_820_530_830] Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 16:04:00 UTC
From: Don
Topic: 43556 Message: 43563

Mike

I had my meter on dc and not ac so the 12vac is ok duh
Ac-800 i get 344 Ac-400--278 Ac 300-246 Ac-200-190 Ac-100-88
Ac-14-9,5 and HV- nil
The driver and the finals light up ok

Did not say the rec board was bad,just that there was a problem there
before and looks
likeR14 was replaced

73
Don/Ve2ud

On 23/07/2013 11:34 AM, Don wrote:
>
> Sorry Mike forgot again
>
> It's a ts830s
>
> I will print this out and get back to you
>
> 73
> Don
>
> On 23/07/2013 11:29 AM, W5RKL wrote:
> >
> > Don,
> >
> > What hybrid are you referring to? When asking about problems with your
> > hybrids you must provide the model of hybrid you are referring to.
> >
> > Are you saying that you measured the AC voltage on the 12VAC winding and
> > it's zero?
> >
> > Did you check ALL of the Rectifier Unit voltages before thinking the
> > Rectifier Unit is bad?
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> > Did you check to see if the driver and both final tube filaments are lit
> > (Heater switch turned ON)
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> > If the driver and both final tube filaments are lit and the dial lamps
> > are illuminating then the 12VAC winding is fine.
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> > The fan runs off of the 100VAC winding of the power transformer and if
> > the fan is running then that winding is good.

> >
> > You need to do more testing/measuring of the Rectifier Unit voltages to
> > determine whether or not one or more power supplies have failed.
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> > 73
> > Mike W5RKL
> >
> > On 7/23/2013 9:54 AM, Don D wrote:
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> > [Non-text portions of this message have been removed]
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43564. Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 16:06:28 UTC
From: adrian.langford@ymail.com
Topic: 43555 Message: 43564

Hi Barry

What band is the dipole cut for? When I do the 492/44 I get 11MHz so I'm misunderstanding something!

73 de Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "scott10k" <scottandalene@...> wrote:
>
> Hi Barry,
> Congratulations-good work! I think dipoles are great-you can experiment with them, put them into different configurations, and they don't cost much. Now you can try to get your dipole up a little higher and your SWR may go down, plus you can trim the ends. You can also configure it as an inverted Vee if that would help get it up higher. Good work and keep it up!
> 73s, Scott, N6CIC
>
> --- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@> wrote:
> >
> > I worked the Czech Republic, France and Poland last night on the 820 after researching several different dipoles, and with $12 of 14 gauge wire. 44' for each leg and maybe 25' or so for feedline allowed me to throw it up over the house and spread it out pretty well over my front and back yard, and it's up about 14' or so.
> >
> > That's my first homebrew antenna, and it's not perfect - SWR was a little high, so I'm going to keep working with it - but the very first contact was the Czech Republic. He gave me a 5-7, and I'd have to give him no better than that... but I was very pleased to have done this well last night.
> >
> > I think my 820 is in better shape at 30+ years old than I was.
> >
> > Barry
> > KK4RXN
> > Jeremiah 29:11-13 / John 3:16
> >
>

43565. Re: [TS-520_820_530_830] Worked Czech Republic, France and Poland with the 820 on $12 of wire

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 16:08:03 UTC
From: John Davidson
Topic: 43555 Message: 43565

Sounds like Barry has an EDZ made for 20M, or 2X5/8 wave elements centerfed.You need to feed it with a 3:1 balun if you have 50 ohm feedline but I don't think that is possible with a commercially available transformer.
I have a 90 ft dipole that has some gain on 30 and 20M but ZI use balanced line and a MFJ 974 balanced tuner and it works great..

From: W5RKL <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, July 23, 2013 11:40 AM
Subject: Re: [TS-520_820_530_830] Worked Czech Republic, France and Poland with the 820 on $12 of wire

Barry,

Congratulations on working some DX. It's fun working DX.

Having said that. you did say what type of wire antenna you are using.
If it's a dipole, did you use the formula

468 / <freq in Mhz>

to achieve the overall "ball park" length of the antenna?

You also said the SWR was high. Did you trim/adjust the length of both sides of the antenna equally for the lowest SWR to achieve maximum power transfer to the antenna?

If you have not adjusted the length of both side for the lowest SWR then I recommend doing that. Your antenna will work much more efficient by doing that.

73
Mike W5RKL

On 7/23/2013 7:26 AM, Barry wrote:
>
> I worked the Czech Republic, France and Poland last night on the 820
> after researching several different dipoles, and with $12 of 14 gauge
> wire. 44' for each leg and maybe 25' or so for feedline allowed me to
> throw it up over the house and spread it out pretty well over my front
> and back yard, and it's up about 14' or so.
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> That's my first homebrew antenna, and it's not perfect - SWR was a
> little high, so I'm going to keep working with it - but the very first
> contact was the Czech Republic. He gave me a 5-7, and I'd have to give

> him no better than that... but I was very pleased to have done this
> well last night.
>
> I think my 820 is in better shape at 30+ years old than I was.
>
> Barry
> KK4RXN
> Jeremiah 29:11-13 / John 3:16
>
>

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[Non-text portions of this message have been removed]

43566. Re: [TS-520_820_530_830] Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 16:17:11 UTC
From: John Davidson
Topic: 43555 Message: 43566

Where did you get 492 ?????
A halfwave wire dipole is 468/F=feet.
This antenna is definately not a halfwave, more like 2X 5/8 waves on twenty meters !(EDZ ant)

From: "adrian.langford@ymail.com" <adrian@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, July 23, 2013 12:06 PM
Subject: [TS-520_820_530_830] Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

Hi Barry

What band is the dipole cut for? When I do the 492/44 I get 11MHz so I'm misunderstanding something!

73 de Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "scott10k" <scottandalene@...> wrote:
>
> Hi Barry,
> Congratulations-good work! I think dipoles are great-you can experiment with them, put them into different configurations, and they don't cost much. Now you can try to get your dipole up a little higher and your SWR may go down, plus you can trim the ends. You can also configure it as an inverted Vee if that would help get it up higher. Good work and keep it up!
> 73s, Scott, N6CIC
>
> --- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@> wrote:
> >
> > I worked the Czech Republic, France and Poland last night on the 820 after researching several different dipoles, and with $12 of 14 gauge wire. 44' for each leg and maybe 25' or so for feedline allowed me to throw it up over the house and spread it out pretty well over my front and back yard, and it's up about 14' or so.
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> > I think my 820 is in better shape at 30+ years old than I was.
> >
> > Barry
> > KK4RXN

> > Jeremiah 29:11-13 / John 3:16
> >
>

[Non-text portions of this message have been removed]

43567. Re: [TS-520_820_530_830] Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 16:29:14 UTC
From: John Davidson
Topic: 43555 Message: 43567

You new guys really are something else, when you have your first contacts on the air with the South Seashell Islands or Lower Mongolia. :D
I remember my first REAL THRILL of DX was working from MI to just West of St Louis, MO with my one tube Home Brew transmitter running 6W (DC input) on 80Meters. WOW it was a big deal for a high school kid with no income or rich relatives then.
My next biggest Thrill was working all the way to the West Coast of Oregon with my next rig, a WW2 surplus 80 Meter ARC5 with a homebrew power supply and regulator made from scrap TV parts.
It was about 8 years later when I started working outside of N. America when I got on 10M.

From: Doug Wiles <dougwiles@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, July 23, 2013 10:53 AM
Subject: [TS-520_820_530_830] Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

Congratulations!

I got the same euphoria over my first QSO with the Marshall Islands on my 35 year old TS-820 when she came out of the shop earlier this year. Purchased it in the Spring of '78 while stationed in Germany. It was such an improvement over the Tempo I I was using that I thought it would be my last rig! Well. Not quite, but the performance puts the 820 up there with the best, and she's still going strong today!

Doug, WF4B

[Non-text portions of this message have been removed]

43568. Re: [TS-520_820_530_830] Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 16:40:11 UTC
From: Jim S
Topic: 43555 Message: 43568

This has been discussed at length on QRZ forum. See this link:

http://forums.qrz.com/archive/index.php/t-60285.html

Jim AG3Y

On 7/23/2013 12:17 PM, John Davidson wrote:
>
> Where did you get 492 ?????
> A halfwave wire dipole is 468/F=feet.
> This antenna is definately not a halfwave, more like 2X 5/8 waves on
> twenty meters !(EDZ ant)
>
> _____
> From: "adrian.langford@... <mailto:adrian.langford%40ymail.com>"
> <adrian@... <mailto:adrian%40qualitative.co.uk>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Tuesday, July 23, 2013 12:06 PM
> Subject: [TS-520_820_530_830] Re: Worked Czech Republic, France and
> Poland with the 820 on $12 of wire
>
>
>
> Hi Barry
>
> What band is the dipole cut for? When I do the 492/44 I get 11MHz so
> I'm misunderstanding something!
>
> 73 de Adrian G4IQW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "scott10k"
> <scottandalene@...> wrote:
> >
> > Hi Barry,
> > Congratulations-good work! I think dipoles are great-you can
> experiment with them, put them into different configurations, and they
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> and your SWR may go down, plus you can trim the ends. You can also
> configure it as an inverted Vee if that would help get it up higher.
> Good work and keep it up!
> > 73s, Scott, N6CIC
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> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Barry"
> <bonnevilleblb@> wrote:
> > >
> > > I worked the Czech Republic, France and Poland last night on the
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> me to throw it up over the house and spread it out pretty well over my
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> little high, so I'm going to keep working with it - but the very first
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> him no better than that... but I was very pleased to have done this
> well last night.
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> > > I think my 820 is in better shape at 30+ years old than I was.
> > >
> > > Barry
> > > KK4RXN
> > > Jeremiah 29:11-13 / John 3:16
> > >
> >
>
> [Non-text portions of this message have been removed]
>
>

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43569. Re: [TS-520_820_530_830] Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 16:50:21 UTC
From: Jim S
Topic: 43555 Message: 43569

Don't know if the previous reply got through or not.

This issue has been discussed at length on the QRZ forum. See here:

http://forums.qrz.com/archive/index.php/t-60285.html

73, Jim AG3Y

On 7/23/2013 12:17 PM, John Davidson wrote:
>
> Where did you get 492 ?????
> A halfwave wire dipole is 468/F=feet.
> This antenna is definately not a halfwave, more like 2X 5/8 waves on
> twenty meters !(EDZ ant)
>
> _____
> From: "adrian.langford@... <mailto:adrian.langford%40ymail.com>"
> <adrian@... <mailto:adrian%40qualitative.co.uk>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Tuesday, July 23, 2013 12:06 PM
> Subject: [TS-520_820_530_830] Re: Worked Czech Republic, France and
> Poland with the 820 on $12 of wire
>
>
>
> Hi Barry
>
> What band is the dipole cut for? When I do the 492/44 I get 11MHz so
> I'm misunderstanding something!
>
> 73 de Adrian G4IQW
>

[Non-text portions of this message have been removed]

43570. Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 16:36:04 UTC
From: Barry
Topic: 43555 Message: 43570

Definitely experimenting - this is 50 feet of 14 gauge double speaker wire spliced into another 15 feet to go into the tuner, so I split the speaker wire so it is in a Y configuration. The upper part of the Y makes up 2 44' legs. One 44' leg goes to the front yard, and the other 44' of the leg goes to my backyard, and it is resting on my roof.

The Norcal dipole info I was going by had 44' legs, so I wrapped the remainder (6') of each of the 2 legs several times into PVC couplers (rather than cutting it off yet). Polyester rope goes into each PVC coupler and back to a tree to anchor it, about 7' off the ground.

The spliced in part of the double speaker wire, approximately 16' attached at the end of the Y legs, goes into the house into the MFJ 949E tuner, which allows for both wires to attach at the back.

It is probably at most 14' high since that's the peak of my roof. For now until I have my trees trimmed after a storm felled my highest one last week I have to wait to try to get it any higher.

I heard more on this setup and talked to more people DX than I ever have, but I've only had an 88' endfed antenna previously.

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> Sounds like Barry has an EDZ made for 20M, or 2X5/8 wave elements centerfed.You need to feed it with a 3:1 balun if you have 50 ohm feedline but I don't think that is possible with a commercially available transformer.
> I have a 90 ft dipole that has some gain on 30 and 20M but ZI use balanced line and a MFJ 974 balanced tuner and it works great..

43571. Re: [TS-520_820_530_830] Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 19:11:21 UTC
From: W5RKL
Topic: 43556 Message: 43571

Don,

Don't measure the Rectifier Unit's high voltage output at the "HV" terminal. The "HV" terminal is for the "HV" metering circuit, the voltage is very low at that terminal. Measure the Rectifier Unit's actual DC high voltage at the Rectifier Unit's "800" terminal, that's where you will see approximately 920VDC (no load voltage/standby voltage).

If R14 on the Rectifier Unit is bad, for example it's burnt open, there will be loss of bias voltage in the 830. Problems in the bias supply not only affect the driver tube and the other circuits that use the -C supply, but also the final tubes. For example, loss of the bias supply (Rectifier Unit's -C supply) can result in both final tubes conducting to saturation levels, even in standby (transmitter is not keyed) which will turn the final tube plate RED, not to mention that D7 can also fail adding to the loss of bias voltage from the Rectifier Unit.

Also, ALL of the hybrid high voltage power supplies are "Voltage Doubling" supplies. Therefore, you will not see 800 volts on the transformer AC terminals as you might expect, the AC voltage will be much less. I recommend you study power supplies in the ARRL handbook so you understand how power supply in general and especially voltage doubling supplies, work. You should also study capacitors as well, especially connecting capacitors in series.

Capacitors connected in series do NOT calculate the same as resistors in series. For example, the 2 HV filter capacitors are connected in series which results in a total capacitance of "50ufd", not "200ufd" as you might think. The following formula will calculate the total capacitance of 2 capacitors connected in series:

C1 x C2 / C1 + C2 = Tc

In the case of the 2 HV capacitors in the Kenwood hybrids (2 x 100ufd at 500VDC each capacitor);

100 x 100 / 100 + 100 = 50ufd

The total safe working voltage of the 2 capacitors in series is 1000VDC

500 + 500 = 1000VDC

If 2 capacitors of different values, such as 30ufd (250VDC) and 50ufd (450VDC), are connected in series, the same formula and the same addition of the individual capacitor's working voltage is used resulting in:

30 x 50 / 30 + 50 = 18.75ufd

The safe maximum working voltage is:

250 + 450 = 700VDC

There is another formula to calculate the approximate voltage that is applied across each capacitor connected in series that's connected to a source voltage and that formula is:

Cv = TC / IC x Sv

Cv = Voltage across each capacitor
TC = Total Capacitance of the capacitors connected in series
IC = Individual Capacitance value
Sv = Source voltage

I mean no disrespect to anyone but the above formulas are all part of what I have been referring to many times on this group as learning "Basic Electronics" and every ham should have studied and thoroughly understood these topics, as well as many other topics, before taking the license exam.

73
Mike W5RKL

On 7/23/2013 11:04 AM, Don wrote:
>
> Mike
>
> I had my meter on dc and not ac so the 12vac is ok duh
> Ac-800 i get 344 Ac-400--278 Ac 300-246 Ac-200-190 Ac-100-88
> Ac-14-9,5 and HV- nil
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> > It's a ts830s
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> > I will print this out and get back to you
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> > Don
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> > On 23/07/2013 11:29 AM, W5RKL wrote:
> > >

> > > Don,
> > >
> > > What hybrid are you referring to? When asking about problems with your
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> > >
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> > > >
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> > > > Need some help to determine if my power supply is kaput
> > > > It has been tampered with before as the rectifier unit was worked
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> > > > Don/Ve2ud
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> > > > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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43572. Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 20:08:12 UTC
From: Terry Wagoner
Topic: 43555 Message: 43572

The Norcal dipole is a shortened dipole and is using the speaker feed line a part of the radiator. All shortened diodes represent a compromise. I think you may be better off with a G5RV but go ahead and experiment with this antenna. You will not be trimming it to resonance as it is not a resonant dipole.

I assume your goal is a multband wire antenna. Ideally best one is 135 feet of wire in flat top fed with approx 45 feet of ladder line or open wire line to your T match tuner. This antenna will work very well on 80 thru 10 meters.

Most of the 88 foot designs I have seen are a compromise. I think Tom Rauch did some testing on them and posted results on his website.

If you do not have room for 135 feet in flat top or inverted vee config then just use as much wire as you can get in the flat top portion and whatever length of feedline you need to get to the shack. Some lengths of feeline will work better than others and you can read up on which lengths to avoid.

Some folks transition with a balun to coax at house entry point.

You dont care about SWR. SWR will be all over the place. Tuner is there to present match to your rig.

Ideally you should use ladder line or open wire feeders to the center insulator of the antenna, but I have used 300 ohm twin lead, zip cord, twisted pair etc. Ladder line is the easiest to run directly from center insulator directly to the tuner.

If you do transition to coax at house entry point make it as short a run as possible and use a good low loss coax and some folks parallel up two pieces as there will be very high SWR in this transition feedline.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@...> wrote:
>
>
>
> Definitely experimenting - this is 50 feet of 14 gauge double speaker wire spliced into another 15 feet to go into the tuner, so I split the speaker wire so it is in a Y configuration. The upper part of the Y makes up 2 44' legs. One 44' leg goes to the front yard, and the other 44' of the leg goes to my backyard, and it is resting on my roof.
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> --- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@> wrote:
> >
> > Sounds like Barry has an EDZ made for 20M, or 2X5/8 wave elements centerfed.You need to feed it with a 3:1 balun if you have 50 ohm feedline but I don't think that is possible with a commercially available transformer.
> > I have a 90 ft dipole that has some gain on 30 and 20M but ZI use balanced line and a MFJ 974 balanced tuner and it works great..
>

43573. Re: hybrid tune up procedure

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 20:09:33 UTC
From: <km5wx@...>
Topic: 43550 Message: 43573

Thanks Terry, That's why I asked here where I needed to cause I don't feel I'll be flamed. I understand what I was doing wrong. If it pegs the meter should I reduce carrier control a little? I have a power meter and some other test equipment, vom, vtvm, I want a signal generator but can't afford it. I wish you lived near me so you could teach me about the electronics in these rigs. I'm interested in these and older rigs and want to be able to repair them myself. Any idea why the send switch on the 530 works on all bands but 20 meters? I appreciate your knowledge. Thanks again and Peace be with you! 73 Richard KM5WX

[Non-text portions of this message have been removed]

43574. Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 20:32:14 UTC
From: Barry
Topic: 43555 Message: 43574

Great info!

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> The Norcal dipole is a shortened dipole and is using the speaker feed line a part of the radiator. All shortened diodes represent a compromise. I think you may be better off with a G5RV but go ahead and experiment with this antenna. You will not be trimming it to resonance as it is not a resonant dipole.
>
> I assume your goal is a multband wire antenna. Ideally best one is 135 feet of wire in flat top fed with approx 45 feet of ladder line or open wire line to your T match tuner. This antenna will work very well on 80 thru 10 meters.
>
> Most of the 88 foot designs I have seen are a compromise. I think Tom Rauch did some testing on them and posted results on his website.
>
> If you do not have room for 135 feet in flat top or inverted vee config then just use as much wire as you can get in the flat top portion and whatever length of feedline you need to get to the shack. Some lengths of feeline will work better than others and you can read up on which lengths to avoid.
>
> Some folks transition with a balun to coax at house entry point.
>
> You dont care about SWR. SWR will be all over the place. Tuner is there to present match to your rig.
>
> Ideally you should use ladder line or open wire feeders to the center insulator of the antenna, but I have used 300 ohm twin lead, zip cord, twisted pair etc. Ladder line is the easiest to run directly from center insulator directly to the tuner.
>
> If you do transition to coax at house entry point make it as short a run as possible and use a good low loss coax and some folks parallel up two pieces as there will be very high SWR in this transition feedline.
>
> Terry K9TW

43575. Re: TS-830s External PTT, and Line In Jack mod...

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 19:54:27 UTC
From: Carl Payne
Topic: 43575 Message: 43575

Other things I am imagining that I could do with these modifications:

Play prerecorded cq calls or contest exchanges, or any audio out of the computer that I had a use for, such as replaying a recording of someones audio back to them, or a funny sound effect or two if chatting with a friend.

Record audio from the radio onto the computer.

Phone Patch, or "cross radio repeat" would be possible.

Endless options I guess, I am just excited thinking about the possibilities.

Thanks for any input,
Carl - N8FU

On Tue, Jul 23, 2013 at 3:49 PM, Carl Payne <culinarytracker@...>wrote:

> I have been brainstorming over ways to get my TS-830s as computer
> interfaced as possible, and here are a couple ideas I've had. I would
> greatly appreciate it if someone would let me know if I am over simplifying
> this, or missing something.
>
> I would like to eventually have a foot-switch for PTT, for running a nice
> boom mounted microphone through a mixer, and potentially for computer
> keying of the ptt as well. I really don't like the idea of having a mess of
> things hooked up to the mic jack on the front. So my thought was to take
> some shielded cable, and solder it on somewhere on the back of the mic
> jack, to pick up the ptt and ground, then run it to one of the spare holes
> on the back panel. I was thinking a 1/8' mono jack would fit nicely in the
> spare hole. Is it really this simple?
>
> The only other thing the rig is missing is an audio line in jack. So I
> figured the same thing should work for that, using the other empty hole in
> the back. Just pick up the mic input and ground off of the mic jack inside
> the rig, and run it to a 1/8' mono jack on the back.
>
> I also have a TS-520S, and it seems like these two additions would make it
> just as capable as using the 520's phone patch connectors to run digi with
> VOX.
>
> I'm new to hooking up external things like this to the radio, so I am sure
> I am missing something. But it seems to me that these are the only two
> things missing on the TS-830s and the usual way around this is to make an
> interface at the mic jack on front of the rig. I am thinking that these two
> jacks would give me everything I need to plug straight into the computers

> sound card and run digital modes. I'm thinking the PTT jack would be mostly
> for a foot switch when I get the microphone and mixer set up, but should be
> usable with a TNC interface as well. I figure it's just as easy to let the
> VOX do the work for digi modes, but maybe I could even add a splitter
> adapter to have both working simultaneously?
>
>
> Other Thoughts:
> Is there a way to create a line out that is separate from the radios
> volume control? So that I could do psk or whatever digi mode without having
> to hear it through my speakers?
>
> Would the computers audio out match up well with a home-brew line in jack
> that I am thinking about?
>
> Is it much better to use a TNC such as rig-blaster or signalink vs. just
> going straight to the sound-card?
>
> I'm also interested in the idea of hooking up a small SDR receiver to the
> IF out jack that I have seen on some YouTube videos. Looks pretty cool.
>
> And last but not least, is there a much better use for the extra empty
> holes on the back panel that I am not thinking of? And is this all just a
> pipe dream that is too good to be true?
>
>
> I appreciate any advice I can get on these topics,
> Carl - N8FU
>
>

[Non-text portions of this message have been removed]

43576. TS-830s External PTT, and Line In Jack mod...

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 19:49:10 UTC
From: Carl Payne
Topic: 43575 Message: 43576

I have been brainstorming over ways to get my TS-830s as computer interfaced as possible, and here are a couple ideas I've had. I would greatly appreciate it if someone would let me know if I am over simplifying this, or missing something.

I would like to eventually have a foot-switch for PTT, for running a nice boom mounted microphone through a mixer, and potentially for computer keying of the ptt as well. I really don't like the idea of having a mess of things hooked up to the mic jack on the front. So my thought was to take some shielded cable, and solder it on somewhere on the back of the mic jack, to pick up the ptt and ground, then run it to one of the spare holes on the back panel. I was thinking a 1/8' mono jack would fit nicely in the spare hole. Is it really this simple?

The only other thing the rig is missing is an audio line in jack. So I figured the same thing should work for that, using the other empty hole in the back. Just pick up the mic input and ground off of the mic jack inside the rig, and run it to a 1/8' mono jack on the back.

I also have a TS-520S, and it seems like these two additions would make it just as capable as using the 520's phone patch connectors to run digi with VOX.

I'm new to hooking up external things like this to the radio, so I am sure I am missing something. But it seems to me that these are the only two things missing on the TS-830s and the usual way around this is to make an interface at the mic jack on front of the rig. I am thinking that these two jacks would give me everything I need to plug straight into the computers sound card and run digital modes. I'm thinking the PTT jack would be mostly for a foot switch when I get the microphone and mixer set up, but should be usable with a TNC interface as well. I figure it's just as easy to let the VOX do the work for digi modes, but maybe I could even add a splitter adapter to have both working simultaneously?

Other Thoughts:
Is there a way to create a line out that is separate from the radios volume control? So that I could do psk or whatever digi mode without having to hear it through my speakers?

Would the computers audio out match up well with a home-brew line in jack that I am thinking about?

Is it much better to use a TNC such as rig-blaster or signalink vs. just going straight to the sound-card?

I'm also interested in the idea of hooking up a small SDR receiver to the IF out jack that I have seen on some YouTube videos. Looks pretty cool.

And last but not least, is there a much better use for the extra empty holes on the back panel that I am not thinking of? And is this all just a pipe dream that is too good to be true?

I appreciate any advice I can get on these topics,
Carl - N8FU

[Non-text portions of this message have been removed]

43577. Re: [TS-520_820_530_830] Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 21:01:50 UTC
From: John Davidson
Topic: 43555 Message: 43577

Now my question is why are we mixing ivory tower theoretical formulas with formulas used in practical construction of real antennas ?? It tends to confuse the new guys who never had tried to fabricate a simple antenna.

From: Jim S <jimstan@...>
To: TS-520_820_530_830@yahoogroups.com
Cc: John Davidson <k8jd@...>
Sent: Tuesday, July 23, 2013 12:40 PM
Subject: Re: [TS-520_820_530_830] Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

This has been discussed at length on QRZ forum. See this link:

http://forums.qrz.com/archive/index.php/t-60285.html

Jim AG3Y

On 7/23/2013 12:17 PM, John Davidson wrote:
>
> Where did you get 492 ?????
> A halfwave wire dipole is 468/F=feet.
> This antenna is definately not a halfwave, more like 2X 5/8 waves on
> twenty meters !(EDZ ant)
>
> ---
> From: "adrian.langford@... <mailto:adrian.langford%40ymail.com>"
> <adrian@... <mailto:adrian%40qualitative.co.uk>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Tuesday, July 23, 2013 12:06 PM
> Subject: [TS-520_820_530_830] Re: Worked Czech Republic, France and
> Poland with the 820 on $12 of wire
>
>
>
> Hi Barry
>
> What band is the dipole cut for? When I do the 492/44 I get 11MHz so
> I'm misunderstanding something!
>
> 73 de Adrian G4IQW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "scott10k"

> <scottandalene@...> wrote:
> >
> > Hi Barry,
> > Congratulations-good work! I think dipoles are great-you can
> experiment with them, put them into different configurations, and they
> don't cost much. Now you can try to get your dipole up a little higher
> and your SWR may go down, plus you can trim the ends. You can also
> configure it as an inverted Vee if that would help get it up higher.
> Good work and keep it up!
> > 73s, Scott, N6CIC
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Barry"
> <bonnevilleblb@> wrote:
> > >
> > > I worked the Czech Republic, France and Poland last night on the
> 820 after researching several different dipoles, and with $12 of 14
> gauge wire. 44' for each leg and maybe 25' or so for feedline allowed
> me to throw it up over the house and spread it out pretty well over my
> front and back yard, and it's up about 14' or so.
> > >
> > > That's my first homebrew antenna, and it's not perfect - SWR was a
> little high, so I'm going to keep working with it - but the very first
> contact was the Czech Republic. He gave me a 5-7, and I'd have to give
> him no better than that... but I was very pleased to have done this
> well last night.
> > >
> > > I think my 820 is in better shape at 30+ years old than I was.
> > >
> > > Barry
> > > KK4RXN
> > > Jeremiah 29:11-13 / John 3:16
> > >
> > >
>
> [Non-text portions of this message have been removed]
>
>

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[Non-text portions of this message have been removed]

43578. Re: [TS-520_820_530_830] Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 21:06:52 UTC
From: John Davidson
Topic: 43555 Message: 43578

I guess the theory behind how certain formulas are derived is important in training engineers but I like the direct approach to providing basic info on building dipoles etc.....

From: John Davidson <k8jd@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, July 23, 2013 5:01 PM
Subject: Re: [TS-520_820_530_830] Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

Now my question is why are we mixing ivory tower theoretical formulas with formulas used in practical construction of real antennas ?? It tends to confuse the new guys who never had tried to fabricate a simple antenna.

From: Jim S <jimstan@...>
To: TS-520_820_530_830@yahoogroups.com
Cc: John Davidson <k8jd@...>
Sent: Tuesday, July 23, 2013 12:40 PM
Subject: Re: [TS-520_820_530_830] Re: Worked Czech Republic,

This has been discussed at length on QRZ forum. See this link:

http://forums.qrz.com/archive/index.php/t-60285.html

Jim AG3Y

On 7/23/2013 12:17 PM, John Davidson wrote:
>
> Where did you get 492 ?????
> A halfwave wire dipole is 468/F=feet.
> This antenna i
> > Hi Barry,%40yahoogroups.

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43579. Re: [TS-520_820_530_830] Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 21:10:06 UTC
From: Don
Topic: 43556 Message: 43579

Mike
Thanks for that info
There is 929 volts VDC on the units 800 terminal,so the problem lies in another area
R14 is good also
I did have a problem with loading and arching before the rig went silent

73
Don/Ve2ud

On 23/07/2013 3:11 PM, W5RKL wrote:
>
> Don,
>
> Don't measure the Rectifier Unit's high voltage output at the "HV"
> terminal. The "HV" terminal is for the "HV" metering circuit, the
> voltage is very low at that terminal. Measure the Rectifier Unit's
> actual DC high voltage at the Rectifier Unit's "800" terminal, that's
> where you will see approximately 920VDC (no load voltage/standby voltage).
>
> If R14 on the Rectifier Unit is bad, for example it's burnt open, there
> will be loss of bias voltage in the 830. Problems in the bias supply not
> only affect the driver tube and the other circuits that use the -C
> supply, but also the final tubes. For example, loss of the bias supply
> (Rectifier Unit's -C supply) can result in both final tubes conducting
> to saturation levels, even in standby (transmitter is not keyed) which
> will turn the final tube plate RED, not to mention that D7 can also fail
> adding to the loss of bias voltage from the Rectifier Unit.
>
> Also, ALL of the hybrid high voltage power supplies are "Voltage
> Doubling" supplies. Therefore, you will not see 800 volts on the
> transformer AC terminals as you might expect, the AC voltage will be
> much less. I recommend you study power supplies in the ARRL handbook so
> you understand how power supply in general and especially voltage
> doubling supplies, work. You should also study capacitors as well,
> especially connecting capacitors in series.
>
> Capacitors connected in series do NOT calculate the same as resistors in
> series. For example, the 2 HV filter capacitors are connected in series
> which results in a total capacitance of "50ufd", not "200ufd" as you
> might think. The following formula will calculate the total capacitance
> of 2 capacitors connected in series:
>
> C1 x C2 / C1 + C2 = Tc
>

> In the case of the 2 HV capacitors in the Kenwood hybrids (2 x 100ufd at
> 500VDC each capacitor);
>
> 100 x 100 / 100 + 100 = 50ufd
>
> The total safe working voltage of the 2 capacitors in series is 1000VDC
>
> 500 + 500 = 1000VDC
>
> If 2 capacitors of different values, such as 30ufd (250VDC) and 50ufd
> (450VDC), are connected in series, the same formula and the same
> addition of the individual capacitor's working voltage is used
> resulting in:
>
> 30 x 50 / 30 + 50 = 18.75ufd
>
> The safe maximum working voltage is:
>
> 250 + 450 = 700VDC
>
> There is another formula to calculate the approximate voltage that is
> applied across each capacitor connected in series that's connected to a
> source voltage and that formula is:
>
> Cv = TC / IC x Sv
>
> Cv = Voltage across each capacitor
> TC = Total Capacitance of the capacitors connected in series
> IC = Individual Capacitance value
> Sv = Source voltage
>
> I mean no disrespect to anyone but the above formulas are all part of
> what I have been referring to many times on this group as learning
> "Basic Electronics" and every ham should have studied and thoroughly
> understood these topics, as well as many other topics, before taking the
> license exam.
>
> 73
> Mike W5RKL
>
> On 7/23/2013 11:04 AM, Don wrote:
> >
> > Mike
> >
> > I had my meter on dc and not ac so the 12vac is ok duh
> > Ac-800 i get 344 Ac-400--278 Ac 300-246 Ac-200-190 Ac-100-88
> > Ac-14-9,5 and HV- nil
> > The driver and the finals light up ok
> >
> > Did not say the rec board was bad,just that there was a problem there

> > before and looks
> > likeR14 was replaced
> >
> > 73
> > Don/Ve2ud
> >
> > On 23/07/2013 11:34 AM, Don wrote:
> > >
> > > Sorry Mike forgot again
> > >
> > > It's a ts830s
> > >
> > > I will print this out and get back to you
> > >
> > > 73
> > > Don
> > >
> > > On 23/07/2013 11:29 AM, W5RKL wrote:
> > > >
> > > > Don,
> > > >
> > > > What hybrid are you referring to? When asking about problems
> with your
> > > > hybrids you must provide the model of hybrid you are referring to.
> > > >
> > > > Are you saying that you measured the AC voltage on the 12VAC
> > winding and
> > > > it's zero?
> > > >
> > > > Did you check ALL of the Rectifier Unit voltages before thinking the
> > > > Rectifier Unit is bad?
> > > >
> > > > Did you check to see if the driver and both final tube filaments
> > are lit
> > > > (Heater switch turned ON)
> > > >
> > > > If the driver and both final tube filaments are lit and the dial
> lamps
> > > > are illuminating then the 12VAC winding is fine.
> > > >
> > > > The fan runs off of the 100VAC winding of the power transformer
> and if
> > > > the fan is running then that winding is good.
> > > >
> > > > You need to do more testing/measuring of the Rectifier Unit
> > voltages to
> > > > determine whether or not one or more power supplies have failed.
> > > >
> > > > 73
> > > > Mike W5RKL

> > > >
> > > > On 7/23/2013 9:54 AM, Don D wrote:
> > > > >
> > > > >
> > > > > Hi All
> > > > >
> > > > > Need some help to determine if my power supply is kaput
> > > > > It has been tampered with before as the rectifier unit was worked
> > > > > before me
> > > > > When i turn it on,all i get is front panel lamps and fan
> > > > > I get no 12.6 volts on the transformer
> > > > >
> > > > > 73
> > > > > Don/Ve2ud
> > > > >
> > > > >
> > > >
> > > > [Non-text portions of this message have been removed]
> > > >
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43580. Re: [TS-520_820_530_830] Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 21:39:34 UTC
From: Ken Winterling
Topic: 43556 Message: 43580

Don,

If you had arcing "with loading" I also suggest you check the variable caps on the load, plate, etc. to make sure none of the movable plates short to the stationary plates during any part of their rotation. You need rotate each cap through its entire range while checking the surfaces very carefully under a good light. You may find some "spot welds" on the plates. The pitting caused by the arcing will make a plate more susceptible to future arcing due to the sharp peaks at the edges of the "craters". It can be difficult to smooth them out but it can be done if you take your time.

Ken
WA2LBI

On Tue, Jul 23, 2013 at 5:10 PM, Don <ve2ud@...> wrote:

> **
>
>
> Mike
> Thanks for that info
> There is 929 volts VDC on the units 800 terminal,so the problem lies in
> another area
> R14 is good also
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> > Cv = Voltage across each capacitor
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> > Sv = Source voltage
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> > > > > > 73
> > > > > > Mike W5RKL
> > > > > >
> > > > > > On 7/23/2013 9:54 AM, Don D wrote:
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> > > > > > > Hi All
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> > > > > > >
> > > > > > > 73
> > > > > > > Don/Ve2ud
>

[Non-text portions of this message have been removed]

43581. Re: hybrid tune up procedure

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 21:45:04 UTC
From: Terry Wagoner
Topic: 43550 Message: 43581

Yes if the meter pegs just reduce the Car Level control to get the meter pointer off the peg. Bring it down to 2/3 to 3/4 of full scale with the Car Level pot and then peak it with the Drive Control. That means turn the Drive control back and forth until you see the maximum meter deflection. If you are tuning up at 7.200 mhz into dummy load for example the meter should peak around 1200 on the Drive control if your Coil Pack alignment has been done properly.

I assume you mean you have no ALC indication in Tune mode on 20 meters. If so have you tried running the Car Level pot to full CW position? If not try that first. It could be as simple as a misaligned 20 meter Drive Coil or something potentially worse like a bad band switch contact. If bringing Car Level up to full CW position does not result in any level of ALC in Tune mode come back and ask again.

Do you have the owners instruction manual? If so you can read in the Maintenance section how to peak the 20 Meter Drive Coil.

You can also try cleaning the bandswitch contacts.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, <km5wx@...> wrote:
>
> Thanks Terry, That's why I asked here where I needed to cause I don't feel I'll be flamed. I understand what I was doing wrong. If it pegs the meter should I reduce carrier control a little? I have a power meter and some other test equipment, vom, vtvm, I want a signal generator but can't afford it. I wish you lived near me so you could teach me about the electronics in these rigs. I'm interested in these and older rigs and want to be able to repair them myself. Any idea why the send switch on the 530 works on all bands but 20 meters? I appreciate your knowledge. Thanks again and Peace be with you! 73 Richard KM5WX
>
> [Non-text portions of this message have been removed]
>

43582. Re: [TS-520_820_530_830] Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 21:59:09 UTC
From: Don
Topic: 43556 Message: 43582

Hi Ken

Thanks for your reply
I did bring it back from the dead with Terry's help,but i turned it on
the other day and all went silent[no readout,no sound]
I thought maybe the power supply had shorted out,but that is not the
case as per mike's help.
This rig has been not quite a nightmare,but a real learning
experience.Ebay special.
As i do have a few Hybrid rigs i can take my time with it.
I started the teck stuff very late in life as i was mostly a DX
chaser,but i now enjoy this part of the hobby more than operating.
I think the problem might lie in the final cage area,,but will take my
time for sure,as time i have

73
Don/Ve2ud

On 23/07/2013 5:39 PM, Ken Winterling wrote:
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> If you had arcing "with loading" I also suggest you check the variable
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> on the load, plate, etc. to make sure none of the movable plates short to
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> each cap through its entire range while checking the surfaces very
> carefully under a good light. You may find some "spot welds" on the
> plates. The pitting caused by the arcing will make a plate more
> susceptible to future arcing due to the sharp peaks at the edges of the
> "craters". It can be difficult to smooth them out but it can be done if
> you take your time.
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> Ken
> WA2LBI
>
> On Tue, Jul 23, 2013 at 5:10 PM, Don <ve2ud@...
> <mailto:ve2ud%40travel-net.com>> wrote:
>
> > **
> > >
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> > > There is 929 volts VDC on the units 800 terminal,so the problem lies in
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> > R14 is good also
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> > On 23/07/2013 3:11 PM, W5RKL wrote:
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> > > where you will see approximately 920VDC (no load voltage/standby
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> > > If R14 on the Rectifier Unit is bad, for example it's burnt open,
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> > > (Rectifier Unit's -C supply) can result in both final tubes conducting
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> > > will turn the final tube plate RED, not to mention that D7 can
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> > > Also, ALL of the hybrid high voltage power supplies are "Voltage
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> > > much less. I recommend you study power supplies in the ARRL
> handbook so
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> > > Capacitors connected in series do NOT calculate the same as
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> > > might think. The following formula will calculate the total
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> > >
> > > C1 x C2 / C1 + C2 = Tc
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> > > In the case of the 2 HV capacitors in the Kenwood hybrids (2 x
> 100ufd at
> > > 500VDC each capacitor);
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> > > 100 x 100 / 100 + 100 = 50ufd
> > >
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> > > If 2 capacitors of different values, such as 30ufd (250VDC) and 50ufd
> > > (450VDC), are connected in series, the same formula and the same
> > > addition of the individual capacitor's working voltage is used
> > > resulting in:
> > >
> > > 30 x 50 / 30 + 50 = 18.75ufd
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> > > The safe maximum working voltage is:
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> > > 250 + 450 = 700VDC
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> > > There is another formula to calculate the approximate voltage that is
> > > applied across each capacitor connected in series that's connected
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> > > Cv = Voltage across each capacitor
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> > > I mean no disrespect to anyone but the above formulas are all part of
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> > > "Basic Electronics" and every ham should have studied and thoroughly
> > > understood these topics, as well as many other topics, before
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> > > license exam.
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> > > Mike W5RKL
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> > > > On 23/07/2013 11:34 AM, Don wrote:
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> > > > > On 23/07/2013 11:29 AM, W5RKL wrote:
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> >
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

43583. Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 23:11:31 UTC
From: Terry Wagoner
Topic: 43556 Message: 43583

Have you gone to audio board and measured the 12vdc, 9vdc and 3.6vdc RF-1 voltages yet. If not it is next logical step. OK to measure power supply voltages, but the radio likes to see these voltages where they are used at and not where they are produced at.

If all the low voltage supplies are good then I would focus on restoring the Receiver first and not the Transmitter. Arcing over the Plate load capacitor plates will not cause no RX mode. No reason to open PA cage at this juncture.

When you say no Receive that means a lot of different things to different people. No audio?, no off air signals?, no marker signal?. Pretty easy to check the major receiver blocks after you confirm low voltage regulators are working.

You can start at front end or at audio output. Usually easiest to see if audio stage is working. If you do not have an audio generator or signal tracer you can use just about any audio source you have (MP-3 player, lap top etc to inject audio signal at the AF Gain pot to test the Audio stage.

As a rule I always get receiver going and then move on to the transmitter. Just my approach.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Hi Ken
>
> Thanks for your reply
> I did bring it back from the dead with Terry's help,but i turned it on
> the other day and all went silent[no readout,no sound]
> I thought maybe the power supply had shorted out,but that is not the
> case as per mike's help.
> This rig has been not quite a nightmare,but a real learning
> experience.Ebay special.
> As i do have a few Hybrid rigs i can take my time with it.
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> > > > > > On 23/07/2013 11:29 AM, W5RKL wrote:

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> > > >

> >
> > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
>

43584. Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 23:35:42 UTC
From: Terry Wagoner
Topic: 43555 Message: 43584

It was very common back in the day for antenna primers to explain that 492 was used to determine the electrical length and that you needed a constant to take into account the length to diameter ratio and practical height that hams use when erecting a dipole. K was typically considered to be 0.95. So using 468 or 467 is used to determine the actual physical length of a half wave dipole. Add 5 or 6 inches to each end to allow pruning and that is all a new person needs to know.

This isnt "Engineer Training" this is fundamental Novice class license training. Nothing wrong with a brief explanation of where 468 comes from. This use to be a technical hobby.

The real problem is you all rushed off to tell this fellow how to tune his dipole to resonance to address his 5:1 swr. The minute you saw 88 feet you should have realized he was most likely trying to build a Cebik multiband doublet. Has been many articles in the literature on this antenna as well as the 44 foot version.

Yes it does function as an extended double zepp on 20 meters and does have some gain on that band.

He did pretty good for his first antenna and very modest investment. I would never have thought to build one. In my day a half wave dipole on 40 meters was first antenna we all built and used it as 3/2 on 15 meters. Of course then we were crystal bound and first rig wasnt a Kenwood hybrid. A multiband doublet wasnt thought of until much later.

As I said he can probably improve on its performance if he replaces the speaker wire feedline and goes with 450 ohm ladder line with a 4:1 current balun at the house and a short run of RG-213 to his T-match. Just some enhancements that may not realize much performance improvement based on how well it has worked for him. I also agree with the other fellow who suggested some additional height. YES I know propagation is a major player here.

He is having fun and I hope learning in the process.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> I guess the theory behind how Â certain formulas are derived is important in training engineers but I like the direct approach to providing basic info Â on building dipoles etc.....Â
>
>
> _____
> From: John Davidson <k8jd@...>
> To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
> Sent: Tuesday, July 23, 2013 5:01 PM
> Subject: Re: [TS-520_820_530_830] Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

>
>
>
> Â
> Now my question is why are we mixing ivory tower Â theoretical formulas with formulas used in practical construction of real antennas ?? It tends to confuse the Â new guys who never had tried to fabricate a simple antenna.
>
> _____
> From: Jim S <jimstan@...>
> To: TS-520_820_530_830@yahoogroups.com
> Cc: John Davidson <k8jd@...>
> Sent: Tuesday, July 23, 2013 12:40 PM
> Subject: Re: [TS-520_820_530_830] Re: Worked Czech Republic,Â
>
> Â
> This has been discussed at length on QRZ forum. See this link:
>
> http://forums.qrz.com/archive/index.php/t-60285.html
>
> Jim AG3Y
>
> On 7/23/2013 12:17 PM, John Davidson wrote:
> >
> > Where did you get 492 ?????
> > A halfwave wire dipole is 468/F=feet.
> > This antenna i
> > > Hi Barry,%40yahoogroups.
>
>
> Visit Your Group
>
> Switch to: Text-Only, Daily Digest â□¢ Unsubscribe â□¢ Terms of Use â□¢ Send us Feedback
> .
>
>
>
> [Non-text portions of this message have been removed]
>

43585. Re: [TS-520_820_530_830] Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 23:36:24 UTC
From: Don
Topic: 43556 Message: 43585

Terry
As always thanks for your help
Don/ve2ud

On 23/07/2013 7:11 PM, Terry Wagoner wrote:
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> the Audio stage.
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> As a rule I always get receiver going and then move on to the
> transmitter. Just my approach.
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43586. Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-23 23:56:23 UTC
From: Terry Wagoner
Topic: 43556 Message: 43586

Don:

Just close the loop for all of us and I am not saying you dont need to check for Plate Load cap for arcing at some point if you did hear arcing and frying sound. Just would not be high on my list now unless you know you had a coax or connector or antenna feed point problem that resulted in a very high impedance being presented to your SO-239.

Loading rig into 50ohms should see approx 71rms volt or approx 200 P-P volts across your Plate load cap. The plate spacing is designed for this voltage level. If you introduce a high impedance due to a bad connection say 5000 ohms the voltage will be 10x that or approx 707rms volts or approx 2000 P-P volts. Plate load cap wont like that.

Terry K9TW

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43587. Re: [TS-520_820_530_830] Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-24 00:06:55 UTC
From: Jim S
Topic: 43555 Message: 43587

Height is really the prime determining factor on how well you are going to "reach out" with almost any kind of antenna. I dare say that a dipole at 100 feet would probably equal almost anything that could be put up at lower heights. But of course, not that many can afford a 100 foot tower, and anyone who can is probably going to put at least a three element yagi on the top of it, just to get that extra boost in ERP .

Thanks, Terry, for backing me up on the thought of feeding a "newbie" with a little more information. It may be more than he asked for now, but the knowledge should be helpful to him in the future.

73, Jim AG3Y

On 7/23/2013 7:35 PM, Terry Wagoner wrote:
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> It was very common back in the day for antenna primers to explain that
> 492 was used to determine the electrical length and that you needed a
> constant to take into account the length to diameter ratio and
> practical height that hams use when erecting a dipole. K was typically
> considered to be 0.95. So using 468 or 467 is used to determine the
> actual physical length of a half wave dipole. Add 5 or 6 inches to
> each end to allow pruning and that is all a new person needs to know.
>
> This isnt "Engineer Training" this is fundamental Novice class license
> training. Nothing wrong with a brief explanation of where 468 comes
> from. This use to be a technical hobby.
>
> The real problem is you all rushed off to tell this fellow how to tune
> his dipole to resonance to address his 5:1 swr. The minute you saw 88
> feet you should have realized he was most likely trying to build a
> Cebik multiband doublet. Has been many articles in the literature on
> this antenna as well as the 44 foot version.
>
> Yes it does function as an extended double zepp on 20 meters and does
> have some gain on that band.
>
> He did pretty good for his first antenna and very modest investment. I
> would never have thought to build one. In my day a half wave dipole on
> 40 meters was first antenna we all built and used it as 3/2 on 15
> meters. Of course then we were crystal bound and first rig wasnt a
> Kenwood hybrid. A multiband doublet wasnt thought of until much later.
>
> As I said he can probably improve on its performance if he replaces
> the speaker wire feedline and goes with 450 ohm ladder line with a 4:1

> current balun at the house and a short run of RG-213 to his T-match.
> Just some enhancements that may not realize much performance
> improvement based on how well it has worked for him. I also agree with
> the other fellow who suggested some additional height. YES I know
> propagation is a major player here.
>
> He is having fun and I hope learning in the process.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, John Davidson
> <k8jd@...> wrote:
> >
> > I guess the theory behind how Â certain formulas are derived is
> important in training engineers but I like the direct approach to
> providing basic info Â on building dipoles etc........Â
> >
> >
> > _________________________________
> > From: John Davidson <k8jd@...>
> > To: "TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>"
> <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>>
> > Sent: Tuesday, July 23, 2013 5:01 PM
> > Subject: Re: [TS-520_820_530_830] Re: Worked Czech Republic, France
> and Poland with the 820 on $12 of wire
> >
> >
> >
> > Â
> > Now my question is why are we mixing ivory tower Â theoretical
> formulas with formulas used in practical construction of real antennas
> ?? It tends to confuse the Â new guys who never had tried to fabricate
> a simple antenna.
> >
> > _________________________________
> > From: Jim S <jimstan@...>
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Cc: John Davidson <k8jd@...>
> > Sent: Tuesday, July 23, 2013 12:40 PM
> > Subject: Re: [TS-520_820_530_830] Re: Worked Czech Republic,Â
> >
> > Â
> > This has been discussed at length on QRZ forum. See this link:
> >
> > http://forums.qrz.com/archive/index.php/t-60285.html
> >

> > Jim AG3Y
> >
> > On 7/23/2013 12:17 PM, John Davidson wrote:
> > >
> > > Where did you get 492 ?????
> > > A halfwave wire dipole is 468/F=feet.
> > > This antenna i
> > > > Hi Barry,%40yahoogroups.
> >
> >
> > Visit Your Group
> >
> > Switch to: Text-Only, Daily Digest âEUR¢ Unsubscribe âEUR¢ Terms of
> Use âEUR¢ Send us Feedback
> > .
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
>

[Non-text portions of this message have been removed]

43588. Re: [TS-520_820_530_830] Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-24 00:48:27 UTC
From: Don
Topic: 43556 Message: 43588

Terry
I should mention that i have no IP reading and no HV reading at all
It's just like a fuse has blown.
The fuse is fine as we would not have fan,and panel lamps on ,but i am
sure you will straighten me out on this
Don

On 23/07/2013 7:56 PM, Terry Wagoner wrote:
>
> Don:
>
> Just close the loop for all of us and I am not saying you dont need to
> check for Plate Load cap for arcing at some point if you did hear
> arcing and frying sound. Just would not be high on my list now unless
> you know you had a coax or connector or antenna feed point problem
> that resulted in a very high impedance being presented to your SO-239.
>
> Loading rig into 50ohms should see approx 71rms volt or approx 200 P-P
> volts across your Plate load cap. The plate spacing is designed for
> this voltage level. If you introduce a high impedance due to a bad
> connection say 5000 ohms the voltage will be 10x that or approx 707rms
> volts or approx 2000 P-P volts. Plate load cap wont like that.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> > Terry
> > As always thanks for your help
> > Don/ve2ud
> >
> >
> >
> > On 23/07/2013 7:11 PM, Terry Wagoner wrote:
> > >
> > > Have you gone to audio board and measured the 12vdc, 9vdc and 3.6vdc
> > > RF-1 voltages yet. If not it is next logical step. OK to measure
> power
> > > supply voltages, but the radio likes to see these voltages where they
> > > are used at and not where they are produced at.
> > >
> > > If all the low voltage supplies are good then I would focus on
> > > restoring the Receiver first and not the Transmitter. Arcing over the
> > > Plate load capacitor plates will not cause no RX mode. No reason to

> > > open PA cage at this juncture.
> > >
> > > When you say no Receive that means a lot of different things to
> > > different people. No audio?, no off air signals?, no marker signal?.
> > > Pretty easy to check the major receiver blocks after you confirm low
> > > voltage regulators are working.
> > >
> > > You can start at front end or at audio output. Usually easiest to see
> > > if audio stage is working. If you do not have an audio generator or
> > > signal tracer you can use just about any audio source you have (MP-3
> > > player, lap top etc to inject audio signal at the AF Gain pot to test
> > > the Audio stage.
> > >
> > > As a rule I always get receiver going and then move on to the
> > > transmitter. Just my approach.
> > >
> > > Terry K9TW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > > >
> > > > Hi Ken
> > > >
> > > > Thanks for your reply
> > > > I did bring it back from the dead with Terry's help,but i turned
> it on
> > > > the other day and all went silent[no readout,no sound]
> > > > I thought maybe the power supply had shorted out,but that is not the
> > > > case as per mike's help.
> > > > This rig has been not quite a nightmare,but a real learning
> > > > experience.Ebay special.
> > > > As i do have a few Hybrid rigs i can take my time with it.
> > > > I started the teck stuff very late in life as i was mostly a DX
> > > > chaser,but i now enjoy this part of the hobby more than operating.
> > > > I think the problem might lie in the final cage area,,but will
> take my
> > > > time for sure,as time i have
> > > >
> > > > 73
> > > > Don/Ve2ud
> > > >
> > > >
> > > >
> > > >
> > > > On 23/07/2013 5:39 PM, Ken Winterling wrote:
> > > > >
> > > > > Don,
> > > > >
> > > > > If you had arcing "with loading" I also suggest you check the

> > > variable
> > > > > caps
> > > > > on the load, plate, etc. to make sure none of the movable plates
> > > short to
> > > > > the stationary plates during any part of their rotation. You need
> > > rotate
> > > > > each cap through its entire range while checking the surfaces very
> > > > > carefully under a good light. You may find some "spot welds"
> on the
> > > > > plates. The pitting caused by the arcing will make a plate more
> > > > > susceptible to future arcing due to the sharp peaks at the edges
> > > of the
> > > > > "craters". It can be difficult to smooth them out but it can be
> > > done if
> > > > > you take your time.
> > > > >
> > > > > Ken
> > > > > WA2LBI
> > > > >
> > > > > On Tue, Jul 23, 2013 at 5:10 PM, Don <ve2ud@
> > > > > <mailto:ve2ud%40travel-net.com>> wrote:
> > > > >
> > > > > > **
> > > > > >
> > > > > >
> > > > > > Mike
> > > > > > Thanks for that info
> > > > > > There is 929 volts VDC on the units 800 terminal,so the problem
> > > lies in
> > > > > > another area
> > > > > > R14 is good also
> > > > > > I did have a problem with loading and arching before the rig
> > > went silent
> > > > > >
> > > > > > 73
> > > > > > Don/Ve2ud
> > > > > >
> > > > > >
> > > > > > On 23/07/2013 3:11 PM, W5RKL wrote:
> > > > > >
> > > > > > Don,
> > > > > >
> > > > > > Don't measure the Rectifier Unit's high voltage output at
> the "HV"
> > > > > > terminal. The "HV" terminal is for the "HV" metering
> circuit, the
> > > > > > voltage is very low at that terminal. Measure the
> Rectifier Unit's
> > > > > > actual DC high voltage at the Rectifier Unit's "800"
> terminal,

> > > that's
> > > > > > > where you will see approximately 920VDC (no load
> voltage/standby
> > > > > > voltage).
> > > > > > >
> > > > > > > If R14 on the Rectifier Unit is bad, for example it's
> burnt open,
> > > > > there
> > > > > > > will be loss of bias voltage in the 830. Problems in the bias
> > > > > supply not
> > > > > > > only affect the driver tube and the other circuits that
> use the -C
> > > > > > > supply, but also the final tubes. For example, loss of the
> > > bias supply
> > > > > > > (Rectifier Unit's -C supply) can result in both final tubes
> > > conducting
> > > > > > > to saturation levels, even in standby (transmitter is not
> > > keyed) which
> > > > > > > will turn the final tube plate RED, not to mention that D7 can
> > > > > also fail
> > > > > > > adding to the loss of bias voltage from the Rectifier Unit.
> > > > > > > >
> > > > > > > Also, ALL of the hybrid high voltage power supplies are
> "Voltage
> > > > > > > Doubling" supplies. Therefore, you will not see 800 volts
> on the
> > > > > > > transformer AC terminals as you might expect, the AC voltage
> > > will be
> > > > > > > much less. I recommend you study power supplies in the ARRL
> > > > > handbook so
> > > > > > > you understand how power supply in general and especially
> voltage
> > > > > > > doubling supplies, work. You should also study capacitors
> as well,
> > > > > > > especially connecting capacitors in series.
> > > > > > > >
> > > > > > > Capacitors connected in series do NOT calculate the same as
> > > > > resistors in
> > > > > > > series. For example, the 2 HV filter capacitors are
> connected in
> > > > > series
> > > > > > > which results in a total capacitance of "50ufd", not "200ufd"
> > > as you
> > > > > > > might think. The following formula will calculate the total
> > > > > capacitance
> > > > > > > of 2 capacitors connected in series:
> > > > > > > >
> > > > > > > C1 x C2 / C1 + C2 = Tc
> > > > > > > >
> > > > > > > In the case of the 2 HV capacitors in the Kenwood hybrids (2 x

> > > > > 100ufd at
> > > > > > > > 500VDC each capacitor);
> > > > > > > >
> > > > > > > > 100 x 100 / 100 + 100 = 50ufd
> > > > > > > >
> > > > > > > > The total safe working voltage of the 2 capacitors in
> series is
> > > > > > 1000VDC
> > > > > > > > >
> > > > > > > > 500 + 500 = 1000VDC
> > > > > > > >
> > > > > > > > If 2 capacitors of different values, such as 30ufd (250VDC)
> > > and 50ufd
> > > > > > > > (450VDC), are connected in series, the same formula and
> the same
> > > > > > > > addition of the individual capacitor's working voltage is used
> > > > > > > > resulting in:
> > > > > > > >
> > > > > > > > 30 x 50 / 30 + 50 = 18.75ufd
> > > > > > > >
> > > > > > > > The safe maximum working voltage is:
> > > > > > > >
> > > > > > > > 250 + 450 = 700VDC
> > > > > > > >
> > > > > > > > There is another formula to calculate the approximate voltage
> > > that is
> > > > > > > > applied across each capacitor connected in series that's
> > > connected
> > > > > > > to a
> > > > > > > > source voltage and that formula is:
> > > > > > > >
> > > > > > > > Cv = TC / IC x Sv
> > > > > > > >
> > > > > > > > Cv = Voltage across each capacitor
> > > > > > > > TC = Total Capacitance of the capacitors connected in series
> > > > > > > > IC = Individual Capacitance value
> > > > > > > > Sv = Source voltage
> > > > > > > >
> > > > > > > > I mean no disrespect to anyone but the above formulas are all
> > > part of
> > > > > > > > what I have been referring to many times on this group as
> learning
> > > > > > > > "Basic Electronics" and every ham should have studied and
> > > thoroughly
> > > > > > > > understood these topics, as well as many other topics, before
> > > > > > taking the
> > > > > > > > license exam.
> > > > > > > >
> > > > > > > > 73
> > > > > > > > Mike W5RKL

> > > > > > >
> > > > > > > > On 7/23/2013 11:04 AM, Don wrote:
> > > > > > > > >
> > > > > > > > > Mike
> > > > > > > > >
> > > > > > > > > I had my meter on dc and not ac so the 12vac is ok duh
> > > > > > > > > Ac-800 i get 344 Ac-400--278 Ac 300-246 Ac-200-190 Ac-100-88
> > > > > > > > > Ac-14-9,5 and HV- nil
> > > > > > > > > The driver and the finals light up ok
> > > > > > > > >
> > > > > > > > > Did not say the rec board was bad,just that there was a
> problem
> > > > > > there
> > > > > > > > > before and looks
> > > > > > > > > likeR14 was replaced
> > > > > > > > >
> > > > > > > > > 73
> > > > > > > > > Don/Ve2ud
> > > > > > > > >
> > > > > > > > > On 23/07/2013 11:34 AM, Don wrote:
> > > > > > > > >
> > > > > > > > > Sorry Mike forgot again
> > > > > > > > >
> > > > > > > > > It's a ts830s
> > > > > > > > >
> > > > > > > > > I will print this out and get back to you
> > > > > > > > >
> > > > > > > > > 73
> > > > > > > > > Don
> > > > > > > > >
> > > > > > > > > On 23/07/2013 11:29 AM, W5RKL wrote:
> > > > > > > > >
> > > > > > > > > Don,
> > > > > > > > >
> > > > > > > > > What hybrid are you referring to? When asking about
> problems
> > > > > > with your
> > > > > > > > > hybrids you must provide the model of hybrid you are
> > > > > > referring to.
> > > > > > > > >
> > > > > > > > > Are you saying that you measured the AC voltage on
> the 12VAC
> > > > > > winding and
> > > > > > > > > it's zero?
> > > > > > > > >
> > > > > > > > > Did you check ALL of the Rectifier Unit voltages before
> > > thinking
> > > > > > > the
> > > > > > > > > Rectifier Unit is bad?
> > > > > > > > >

> > > > > > > > > > Did you check to see if the driver and both final tube
> > > filaments
> > > > > > > > > are lit
> > > > > > > > > > (Heater switch turned ON)
> > > > > > > > > >
> > > > > > > > > > If the driver and both final tube filaments are lit and
> > > the dial
> > > > > > > > lamps
> > > > > > > > > > are illuminating then the 12VAC winding is fine.
> > > > > > > > > >
> > > > > > > > > > The fan runs off of the 100VAC winding of the power
> > > transformer
> > > > > > > and if
> > > > > > > > > > the fan is running then that winding is good.
> > > > > > > > > >
> > > > > > > > > > You need to do more testing/measuring of the
> Rectifier Unit
> > > > > > > voltages to
> > > > > > > > > > determine whether or not one or more power supplies
> have
> > > failed.
> > > > > > > > > >
> > > > > > > > > > 73
> > > > > > > > > > Mike W5RKL
> > > > > > > > > >
> > > > > > > > > > On 7/23/2013 9:54 AM, Don D wrote:
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > Hi All
> > > > > > > > > >
> > > > > > > > > > Need some help to determine if my power supply is
> kaput
> > > > > > > > > > It has been tampered with before as the rectifier
> unit
> > > was
> > > > > > > worked
> > > > > > > > > > before me
> > > > > > > > > > When i turn it on,all i get is front panel lamps
> and fan
> > > > > > > > > > I get no 12.6 volts on the transformer
> > > > > > > > > >
> > > > > > > > > > 73
> > > > > > > > > > Don/Ve2ud
> > > > > > > >
> > > > > > > > [Non-text portions of this message have been removed]
> > > > > > >
> > > > > > > > > >

> > > >
> > > > [Non-text portions of this message have been removed]
> > > >
> > >
> > >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
>

[Non-text portions of this message have been removed]

43589. Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-24 02:14:20 UTC
From: Terry Wagoner
Topic: 43555 Message: 43589

Jim:

There will always be different opinions about this subject. Of course there are things that for now they need to take on faith. Even today lite bulbs finally come on for me after all these years.

I could never be happy being an appliance operator. Part of why I run Kenwood hybrids. The newer rigs are starting to approach black box with "no user serviceable parts inside" label which would sure be no fun for me.

New folks cant help being born at time they are and how entry into the hobby has changed. I would not have missed the late 50s and early 60s dragging TV chassis home to strip and build power supplies, converting military surplus rigs, or building kits and the fun Novice days. Can you imagine having a Kenwood Hybrid as your Novice rig. I couldnt afford one until I raised my family!

Not possible to give these fellas the experiences I had early on that gave me a good fundamental foundation. However, I will continue to try to give it to them a spoon at a time. Hopefully some will like the taste and hit the books.

I think it is a dis-service to them to assume they are not interested or have no aptitude and not make it available to them. I am in the camp of making it available to them and letting them decide.

Terry K9TW

> Thanks, Terry, for backing me up on the thought of feeding a "newbie"
> with a little more information. It may be more than he asked for now,
> but the knowledge should be helpful to him in the future.
>
> 73, Jim AG3Y
>
>
>> > >
> > > I guess the theory behind how Â certain formulas are derived is
> > important in training engineers but I like the direct approach to
> > providing basic info Â on building dipoles etc.....Â
> > >
> > >
> > > _____
> > > From: John Davidson <k8jd@>
> > >
> > >
> > >
> > > Â

> > > Now my question is why are we mixing ivory tower Â theoretical
> > formulas with formulas used in practical construction of real antennas
> > ?? It tends to confuse the Â new guys who never had tried to fabricate
> > a simple antenna.
> > >
> > >
> > >
> > > > >
> > >
> > >
> > >

43590. Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-24 02:30:02 UTC
From: Terry Wagoner
Topic: 43556 Message: 43590

Do you mean you have no HV reading on your panel meter?

Are you comfortable measuring HV at top of the plate choke L2 in the PA cage?

With rig off and unplugged and HV caps discharged you can do a quick visual in the PA cage. Look at the Plate choke to see if any signs of discoloration. Look at base of choke and see if the rf bypass capacitor seems to be dark and/or split open. Look at the small VHF choke at right angle at base of big choke to see if it appears discolored or blown in half.

If all look good then energize rig and measure voltage at top of main choke L2. You can connect your meter leads (make sure good positive connections with probe alligator clips so they dont jump off) while rig is unplugged and then power it on and not have to touch the meter to take the reading. Down power and discharge HV caps before removing meter test leads.

If you have good voltage at anodes of the 6146 tubes you most likely have lost your HV voltage divider resistor string R5 thru R8 on the Rect board. If so replace all. Can buy precision resistors from Mouser.

If you have good HV at top of L2 and no Ip likely have lost your four 20 ohm cathode meter shunt resistors on the Final board due to 6146 arc over.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Terry
> I should mention that i have no IP reading and no HV reading at all
> It's just like a fuse has blown.
> The fuse is fine as we would not have fan,and panel lamps on ,but i am
> sure you will straighten me out on this
> Don
>
>
>
> On 23/07/2013 7:56 PM, Terry Wagoner wrote:
> >
> > Don:
> >
> > Just close the loop for all of us and I am not saying you dont need to
> > check for Plate Load cap for arcing at some point if you did hear
> > arcing and frying sound. Just would not be high on my list now unless
> > you know you had a coax or connector or antenna feed point problem
> > that resulted in a very high impedance being presented to your SO-239.
> >
> > Loading rig into 50ohms should see approx 71rms volt or approx 200 P-P
> > volts across your Plate load cap. The plate spacing is designed for

> > this voltage level. If you introduce a high impedance due to a bad
> > connection say 5000 ohms the voltage will be 10x that or approx 707rms
> > volts or approx 2000 P-P volts. Plate load cap wont like that.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > >
> > > Terry
> > > As always thanks for your help
> > > Don/ve2ud
> > >
> > >
> > >
> > > On 23/07/2013 7:11 PM, Terry Wagoner wrote:
> > > >
> > > > Have you gone to audio board and measured the 12vdc, 9vdc and 3.6vdc
> > > > RF-1 voltages yet. If not it is next logical step. OK to measure
> > power
> > > > supply voltages, but the radio likes to see these voltages where they
> > > > are used at and not where they are produced at.
> > > >
> > > > If all the low voltage supplies are good then I would focus on
> > > > restoring the Receiver first and not the Transmitter. Arcing over the
> > > > Plate load capacitor plates will not cause no RX mode. No reason to
> > > > open PA cage at this juncture.
> > > >
> > > > When you say no Receive that means a lot of different things to
> > > > different people. No audio?, no off air signals?, no marker signal?.
> > > > Pretty easy to check the major receiver blocks after you confirm low
> > > > voltage regulators are working.
> > > >
> > > > You can start at front end or at audio output. Usually easiest to see
> > > > if audio stage is working. If you do not have an audio generator or
> > > > signal tracer you can use just about any audio source you have (MP-3
> > > > player, lap top etc to inject audio signal at the AF Gain pot to test
> > > > the Audio stage.
> > > >
> > > > As a rule I always get receiver going and then move on to the
> > > > transmitter. Just my approach.
> > > >
> > > > Terry K9TW
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > > > >
> > > > > Hi Ken
> > > > >

> > > > > Thanks for your reply
> > > > > I did bring it back from the dead with Terry's help,but i turned
> > it on
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> > > > > I thought maybe the power supply had shorted out,but that is not the
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> > > > > This rig has been not quite a nightmare,but a real learning
> > > > > experience.Ebay special.
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> > > > > >
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> > > > > > > **
> > > > > >

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> > > > > > > > of 2 capacitors connected in series:
> > > > > > > >
> > > > > > > > C1 x C2 / C1 + C2 = Tc
> > > > > > > >
> > > > > > > > In the case of the 2 HV capacitors in the Kenwood hybrids (2 x
> > > > > > 100ufd at
> > > > > > > > 500VDC each capacitor);
> > > > > > > >
> > > > > > > > 100 x 100 / 100 + 100 = 50ufd
> > > > > > > >
> > > > > > > > The total safe working voltage of the 2 capacitors in
> > series is
> > > > > > 1000VDC
> > > > > > > >
> > > > > > > > 500 + 500 = 1000VDC
> > > > > > > >
> > > > > > > > If 2 capacitors of different values, such as 30ufd (250VDC)
> > > > and 50ufd
> > > > > > > > (450VDC), are connected in series, the same formula and
> > the same
> > > > > > > > addition of the individual capacitor's working voltage is used
> > > > > > > > resulting in:
> > > > > > > >
> > > > > > > > 30 x 50 / 30 + 50 = 18.75ufd
> > > > > > > >
> > > > > > > > The safe maximum working voltage is:
> > > > > > > >
> > > > > > > > 250 + 450 = 700VDC
> > > > > > > >

> > > > > > > > There is another formula to calculate the approximate voltage
> > > > that is
> > > > > > > > applied across each capacitor connected in series that's
> > > > connected
> > > > > > to a
> > > > > > > > source voltage and that formula is:
> > > > > > > >
> > > > > > > > Cv = TC / IC x Sv
> > > > > > > >
> > > > > > > > Cv = Voltage across each capacitor
> > > > > > > > TC = Total Capacitance of the capacitors connected in series
> > > > > > > > IC = Individual Capacitance value
> > > > > > > > Sv = Source voltage
> > > > > > > >
> > > > > > > > I mean no disrespect to anyone but the above formulas are all
> > > > part of
> > > > > > > > what I have been referring to many times on this group as
> > learning
> > > > > > > > "Basic Electronics" and every ham should have studied and
> > > > thoroughly
> > > > > > > > understood these topics, as well as many other topics, before
> > > > > > taking the
> > > > > > > > license exam.
> > > > > > > >
> > > > > > > > 73
> > > > > > > > Mike W5RKL
> > > > > > > >
> > > > > > > > On 7/23/2013 11:04 AM, Don wrote:
> > > > > > > >
> > > > > > > > Mike
> > > > > > > >
> > > > > > > > I had my meter on dc and not ac so the 12vac is ok duh
> > > > > > > > Ac-800 i get 344 Ac-400--278 Ac 300-246 Ac-200-190 Ac-100-88
> > > > > > > > Ac-14-9,5 and HV- nil
> > > > > > > > The driver and the finals light up ok
> > > > > > > >
> > > > > > > > Did not say the rec board was bad,just that there was a
> > problem
> > > > > > there
> > > > > > > > before and looks
> > > > > > > > likeR14 was replaced
> > > > > > > >
> > > > > > > > 73
> > > > > > > > Don/Ve2ud
> > > > > > > >
> > > > > > > > On 23/07/2013 11:34 AM, Don wrote:
> > > > > > > >
> > > > > > > > Sorry Mike forgot again
> > > > > > > >
> > > > > > > > It's a ts830s

> > > > > > > > > >
> > > > > > > > > > > I will print this out and get back to you
> > > > > > > > > > >
> > > > > > > > > > > 73
> > > > > > > > > > > Don
> > > > > > > > > > >
> > > > > > > > > > > On 23/07/2013 11:29 AM, W5RKL wrote:
> > > > > > > > > > >
> > > > > > > > > > > Don,
> > > > > > > > > > >
> > > > > > > > > > > What hybrid are you referring to? When asking about
> > problems
> > > > > > > > with your
> > > > > > > > > > > hybrids you must provide the model of hybrid you are
> > > > > > referring to.
> > > > > > > > > > >
> > > > > > > > > > > Are you saying that you measured the AC voltage on
> > the 12VAC
> > > > > > > winding and
> > > > > > > > > > > it's zero?
> > > > > > > > > > >
> > > > > > > > > > > Did you check ALL of the Rectifier Unit voltages before
> > > > > thinking
> > > > > > > the
> > > > > > > > > > > Rectifier Unit is bad?
> > > > > > > > > > >
> > > > > > > > > > > Did you check to see if the driver and both final tube
> > > > filaments
> > > > > > are lit
> > > > > > > > > > > (Heater switch turned ON)
> > > > > > > > > > >
> > > > > > > > > > > If the driver and both final tube filaments are lit and
> > > > the dial
> > > > > > lamps
> > > > > > > > > > > are illuminating then the 12VAC winding is fine.
> > > > > > > > > > >
> > > > > > > > > > > The fan runs off of the 100VAC winding of the power
> > > > transformer
> > > > > > and if
> > > > > > > > > > > the fan is running then that winding is good.
> > > > > > > > > > >
> > > > > > > > > > > You need to do more testing/measuring of the
> > Rectifier Unit
> > > > > > voltages to
> > > > > > > > > > > determine whether or not one or more power supplies
> > have
> > > > > failed.
> > > > > > > > > > >
> > > > > > > > > > > 73
> > > > > > > > > > > Mike W5RKL

> > > > > > > > > > >
> > > > > > > > > > > > On 7/23/2013 9:54 AM, Don D wrote:
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > Hi All
> > > > > > > > > > > > >
> > > > > > > > > > > > > Need some help to determine if my power supply is
> > kaput
> > > > > > > > > > > > > It has been tampered with before as the rectifier
> > unit
> > > > > > was
> > > > > > worked
> > > > > > > > > > > > > before me
> > > > > > > > > > > > > When i turn it on,all i get is front panel lamps
> > and fan
> > > > > > > > > > > > > I get no 12.6 volts on the transformer
> > > > > > > > > > > > >
> > > > > > > > > > > > > 73
> > > > > > > > > > > > > Don/Ve2ud
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
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> > > > > > > > >
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43591. Re: [TS-520_820_530_830] Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-24 02:35:46 UTC
From: Don
Topic: 43556 Message: 43591

Yes that's right
Will look at tomorrow

Thanks
Don/Ve2ud

On 23/07/2013 10:30 PM, Terry Wagoner wrote:
>
> Do you mean you have no HV reading on your panel meter?
>
> Are you comfortable measuring HV at top of the plate choke L2 in the
> PA cage?
>
> With rig off and unplugged and HV caps discharged you can do a quick
> visual in the PA cage. Look at the Plate choke to see if any signs of
> discoloration. Look at base of choke and see if the rf bypass
> capacitor seems to be dark and/or split open. Look at the small VHF
> choke at right angle at base of big choke to see if it appears
> discolored or blown in half.
>
> If all look good then energize rig and measure voltage at top of main
> choke L2. You can connect your meter leads (make sure good positive
> connections with probe alligator clips so they dont jump off) while
> rig is unplugged and then power it on and not have to touch the meter
> to take the reading. Down power and discharge HV caps before removing
> meter test leads.
>
> If you have good voltage at anodes of the 6146 tubes you most likely
> have lost your HV voltage divider resistor string R5 thru R8 on the
> Rect board. If so replace all. Can buy precision resistors from Mouser.
>
> If you have good HV at top of L2 and no Ip likely have lost your four
> 20 ohm cathode meter shunt resistors on the Final board due to 6146
> arc over.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> > Terry
> > I should mention that i have no IP reading and no HV reading at all
> > It's just like a fuse has blown.
> > The fuse is fine as we would not have fan,and panel lamps on ,but i am
> > sure you will straighten me out on this

> > Don
> >
> >
> >
> > On 23/07/2013 7:56 PM, Terry Wagoner wrote:
> > >
> > > Don:
> > >
> > > Just close the loop for all of us and I am not saying you dont
> need to
> > > check for Plate Load cap for arcing at some point if you did hear
> > > arcing and frying sound. Just would not be high on my list now unless
> > > you know you had a coax or connector or antenna feed point problem
> > > that resulted in a very high impedance being presented to your SO-239.
> > >
> > > Loading rig into 50ohms should see approx 71rms volt or approx 200
> P-P
> > > volts across your Plate load cap. The plate spacing is designed for
> > > this voltage level. If you introduce a high impedance due to a bad
> > > connection say 5000 ohms the voltage will be 10x that or approx
> 707rms
> > > volts or approx 2000 P-P volts. Plate load cap wont like that.
> > >
> > > Terry K9TW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > > >
> > > > Terry
> > > > As always thanks for your help
> > > > Don/ve2ud
> > > >
> > > >
> > > >
> > > > On 23/07/2013 7:11 PM, Terry Wagoner wrote:
> > > > >
> > > > > Have you gone to audio board and measured the 12vdc, 9vdc and
> 3.6vdc
> > > > > RF-1 voltages yet. If not it is next logical step. OK to measure
> > > power
> > > > > supply voltages, but the radio likes to see these voltages
> where they
> > > > > are used at and not where they are produced at.
> > > > >
> > > > > If all the low voltage supplies are good then I would focus on
> > > > > restoring the Receiver first and not the Transmitter. Arcing
> over the
> > > > > Plate load capacitor plates will not cause no RX mode. No
> reason to

> > > > > open PA cage at this juncture.
> > > > >
> > > > > When you say no Receive that means a lot of different things to
> > > > > different people. No audio?, no off air signals?, no marker
> signal?.
> > > > > Pretty easy to check the major receiver blocks after you
> confirm low
> > > > > voltage regulators are working.
> > > > >
> > > > > You can start at front end or at audio output. Usually easiest
> to see
> > > > > if audio stage is working. If you do not have an audio
> generator or
> > > > > signal tracer you can use just about any audio source you have
> (MP-3
> > > > > player, lap top etc to inject audio signal at the AF Gain pot
> to test
> > > > > the Audio stage.
> > > > >
> > > > > As a rule I always get receiver going and then move on to the
> > > > > transmitter. Just my approach.
> > > > >
> > > > > Terry K9TW
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com
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> > > > > > > > > (450VDC), are connected in series, the same formula and
> > > the same
> > > > > > > > > addition of the individual capacitor's working voltage
> is used
> > > > > > > > > resulting in:
> > > > > > > > >
> > > > > > > > > 30 x 50 / 30 + 50 = 18.75ufd
> > > > > > > > >
> > > > > > > > > The safe maximum working voltage is:

> > > > > > > > > >
> > > > > > > > > > 250 + 450 = 700VDC
> > > > > > > > > >
> > > > > > > > > > There is another formula to calculate the approximate
> voltage
> > > > > that is
> > > > > > > > > > applied across each capacitor connected in series that's
> > > > > connected
> > > > > > > > to a
> > > > > > > > > > source voltage and that formula is:
> > > > > > > > > >
> > > > > > > > > > Cv = TC / IC x Sv
> > > > > > > > > >
> > > > > > > > > > Cv = Voltage across each capacitor
> > > > > > > > > > TC = Total Capacitance of the capacitors connected in
> series
> > > > > > > > > > IC = Individual Capacitance value
> > > > > > > > > > Sv = Source voltage
> > > > > > > > > >
> > > > > > > > > > I mean no disrespect to anyone but the above formulas
> are all
> > > > > part of
> > > > > > > > > > what I have been referring to many times on this group as
> > > learning
> > > > > > > > > > "Basic Electronics" and every ham should have studied and
> > > > > thoroughly
> > > > > > > > > > understood these topics, as well as many other topics,
> before
> > > > > > taking the
> > > > > > > > > > license exam.
> > > > > > > > > >
> > > > > > > > > > 73
> > > > > > > > > > Mike W5RKL
> > > > > > > > > >
> > > > > > > > > > On 7/23/2013 11:04 AM, Don wrote:
> > > > > > > > > >
> > > > > > > > > > Mike
> > > > > > > > > >
> > > > > > > > > > I had my meter on dc and not ac so the 12vac is ok duh
> > > > > > > > > > Ac-800 i get 344 Ac-400--278 Ac 300-246 Ac-200-190
> Ac-100-88
> > > > > > > > > > Ac-14-9,5 and HV- nil
> > > > > > > > > > The driver and the finals light up ok
> > > > > > > > > >
> > > > > > > > > > Did not say the rec board was bad,just that there was a
> > > problem
> > > > > > there
> > > > > > > > > > before and looks
> > > > > > > > > > likeR14 was replaced
> > > > > > > > > >

> > > > > > > > > > 73
> > > > > > > > > > Don/Ve2ud
> > > > > > > > > >
> > > > > > > > > > On 23/07/2013 11:34 AM, Don wrote:
> > > > > > > > > >
> > > > > > > > > > Sorry Mike forgot again
> > > > > > > > > >
> > > > > > > > > > It's a ts830s
> > > > > > > > > >
> > > > > > > > > > I will print this out and get back to you
> > > > > > > > > >
> > > > > > > > > > 73
> > > > > > > > > > Don
> > > > > > > > > >
> > > > > > > > > > On 23/07/2013 11:29 AM, W5RKL wrote:
> > > > > > > > > >
> > > > > > > > > > Don,
> > > > > > > > > >
> > > > > > > > > > What hybrid are you referring to? When asking about
> > > problems
> > > > > > > > > with your
> > > > > > > > > > hybrids you must provide the model of hybrid you are
> > > > > referring to.
> > > > > > > > > >
> > > > > > > > > > Are you saying that you measured the AC voltage on
> > > the 12VAC
> > > > > > > > winding and
> > > > > > > > > > it's zero?
> > > > > > > > > >
> > > > > > > > > > Did you check ALL of the Rectifier Unit voltages
> before
> > > > > > thinking
> > > > > > > > the
> > > > > > > > > > Rectifier Unit is bad?
> > > > > > > > > >
> > > > > > > > > > Did you check to see if the driver and both
> final tube
> > > > > filaments
> > > > > > > > > are lit
> > > > > > > > > > (Heater switch turned ON)
> > > > > > > > > >
> > > > > > > > > > If the driver and both final tube filaments are
> lit and
> > > > > > the dial
> > > > > > > > > lamps
> > > > > > > > > > are illuminating then the 12VAC winding is fine.
> > > > > > > > > >
> > > > > > > > > > The fan runs off of the 100VAC winding of the power
> > > > > > transformer
> > > > > > > > > and if

> > > > > > > > > > > > the fan is running then that winding is good.
> > > > > > > > > > > >
> > > > > > > > > > > > You need to do more testing/measuring of the
> > > Rectifier Unit
> > > > > > > > > > voltages to
> > > > > > > > > > > > determine whether or not one or more power supplies
> > > have
> > > > > failed.
> > > > > > > > > > > >
> > > > > > > > > > > > 73
> > > > > > > > > > > > Mike W5RKL
> > > > > > > > > > > >
> > > > > > > > > > > > On 7/23/2013 9:54 AM, Don D wrote:
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > Hi All
> > > > > > > > > > > > >
> > > > > > > > > > > > > Need some help to determine if my power supply is
> > > kaput
> > > > > > > > > > > > > It has been tampered with before as the rectifier
> > > unit
> > > > > was
> > > > > > > worked
> > > > > > > > > > > > > before me
> > > > > > > > > > > > > When i turn it on,all i get is front panel lamps
> > > and fan
> > > > > > > > > > > > > I get no 12.6 volts on the transformer
> > > > > > > > > > > > >
> > > > > > > > > > > > > 73
> > > > > > > > > > > > > Don/Ve2ud
> > > > > > > >
> > > > > > >
> > > > > > > [Non-text portions of this message have been removed]
> > > > > > >
> > > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > > [Non-text portions of this message have been removed]
> > > > > >
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> > > >
> > > >
> > > > [Non-text portions of this message have been removed]
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> > [Non-text portions of this message have been removed]
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43592. Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-24 02:11:06 UTC
From: buck
Topic: 43555 Message: 43592

"Most of the 88 foot designs I have seen are a compromise."

Actually, an 88 foot antenna, center-fed with balanced line, tuned with a simple tuner and a balun is an EXCELLENT all-band antenna...

Don't know why Barry settled on an 88' length, possibly because that is where his "sky hooks" are... But in any case, he (as someone else noted) has come up with a 20-meter Extended-Double-Zepp, which is one of the best all-band antennas known to man...

Although I have room for the 135' version, I use an 86' flat-top, center-fed with 300 ohm TV lead-in... It is 45' high, using trees for sky-hooks...

It works very well on ALL bands from 160 thru 30 meters, and on 20, 18, 15, 12 and 10 meters, it is one HELLUVA GOOD antenna... My little ol' TS-830S, with about 100 watts output, usually gets the rare DX on first attempt...

Do yourselves a favor... download the "Demo" version of EZnec... Model a 20 meter EDZ, and take a look at the resulting patterns on all bands...

Notice the spherical radiation pattern on 160, 80/75... Most of your radiation goes straight up where it will reflect from the iononsphere and give you excellent local communication... (local being 200-300 miles on 160, and 200-500 miles on 80/75)... 40 and 30 meters are even better, but the EDZ really starts to shine at 20 meters with it's low angle of radation and almost 3 db gain over a dipole... On 18 meters, the pattern is 4-leaf clover with maximum radiation at about 20 degrees... On 15 meters, still the 4-leaf clover, but max radiation is now at 15 degrees... 12 meter pattern is multi-lobed with maximum radiation at 10 degrees... 10 meters, a multi-lobe pattern (10 lobes, looks like a big spider) with max radiation at 10 degrees...

On 20, 18, 15, 12, and 10 meters, you can "pick off" the DX before the "big-boys" can bring their beams around...

Nice going Barry... Glad there is still someone out there that has "figgered out" that antennas are not nearly as complicated as some would have you believe...

buck K7WN

==========

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>

> Most of the 88 foot designs I have seen are a compromise.

43593. Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-24 10:36:44 UTC
From: Terry Wagoner
Topic: 43555 Message: 43593

Glad it is working for you and fun to break the pile ups.

Curious how you load into it and adjust tuner and the 830 Pi-network as you move around the band looking for the pile ups to pick off.

Do you tune slightly off the pile up and key rig and make your on air adjustments?

Wonder how it compares to three element tri-band yagi on receive?

No need to download EZnec
http://www.tomochka.com/na7u/doublet/w4rnlbackup.html

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "buck" <texigan@...> wrote:
>
>
>
> "Most of the 88 foot designs I have seen are a compromise."
>
> Actually, an 88 foot antenna, center-fed with balanced line, tuned with a simple tuner and a balun is an EXCELLENT all-band antenna...
>
> Don't know why Barry settled on an 88' length, possibly because that is where his "sky hooks" are... But in any case, he (as someone else noted) has come up with a 20-meter Extended-Double-Zepp, which is one of the best all-band antennas known to man...
>
> Although I have room for the 135' version, I use an 86' flat-top, center-fed with 300 ohm TV lead-in... It is 45' high, using trees for sky-hooks...
>
> It works very well on ALL bands from 160 thru 30 meters, and on 20, 18, 15, 12 and 10 meters, it is one HELLUVA GOOD antenna... My little ol' TS-830S, with about 100 watts output, usually gets the rare DX on first attempt...
>
> Do yourselves a favor... download the "Demo" version of EZnec... Model a 20 meter EDZ, and take a look at the resulting patterns on all bands...
>
> Notice the spherical radiation pattern on 160, 80/75... Most of your radiation goes straight up where it will reflect from the iononsphere and give you excellent local communication... (local being 200-300 miles on 160, and 200-500 miles on 80/75)... 40 and 30 meters are even better, but the EDZ really starts to shine at 20 meters with it's low angle of radation and almost 3 db gain over a dipole... On 18 meters, the pattern is 4-leaf clover with maximum radiation at about 20 degrees... On 15 meters, still the 4-leaf clover, but max radiation is now at 15 degrees... 12 meter pattern is multi-lobed with maximum radiation at 10 degrees... 10 meters, a multi-lobe pattern (10 lobes, looks like a big

spider) with max radiation at 10 degrees...
>
> On 20, 18, 15, 12, and 10 meters, you can "pick off" the DX before the "big-boys" can bring their beams around...
>
> Nice going Barry... Glad there is still someone out there that has "figgered out" that antennas are not nearly as complicated as some would have you believe...
>
> buck K7WN
>
> ==
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
>
> > Most of the 88 foot designs I have seen are a compromise.
>

43594. Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-24 10:51:52 UTC
From: Terry Wagoner
Topic: 43555 Message: 43594

I forgot to add this which discusses the 88 foot antenna as a "system" and not just the flat top. Have to be able to get the power to the efficient radiator.

I have no personal experience using a 88 ft multiband antenna. Pretty sure I said much of the literature puts it in class of all shortened antennas as being a compromise antennas.

I do have enough experience with AB testing on the receive side of dipoles/doublets versus directive antennas and hard to beat beams of any kind wire or otherwise.

However I am a big fan of experimenting with all kinds of wire antenna configurations and I think I said that and offered suggestions on how he could enhance his existing Cebik doublet.

Hopefully he wont experience any arc over in his MFJ tuner.

http://www.w8ji.com/vswr_reactive_power.htm

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Glad it is working for you and fun to break the pile ups.
>
> Curious how you load into it and adjust tuner and the 830 Pi-network as you move around the band looking for the pile ups to pick off.
>
> Do you tune slightly off the pile up and key rig and make your on air adjustments?
>
> Wonder how it compares to three element tri-band yagi on receive?
>
> No need to download EZnec
> http://www.tomochka.com/na7u/doublet/w4rnlbackup.html
>
> Terry K9TW
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "buck" <texigan@> wrote:
> >
> >
> >
> > "Most of the 88 foot designs I have seen are a compromise."
> >
> > Actually, an 88 foot antenna, center-fed with balanced line, tuned with a simple tuner and a balun is an EXCELLENT all-band antenna...

> >
> > Don't know why Barry settled on an 88' length, possibly because that is where his "sky hooks" are... But in any case, he (as someone else noted) has come up with a 20-meter Extended-Double-Zepp, which is one of the best all-band antennas known to man...
> >
> > Although I have room for the 135' version, I use an 86' flat-top, center-fed with 300 ohm TV lead-in... It is 45' high, using trees for sky-hooks...
> >
> > It works very well on ALL bands from 160 thru 30 meters, and on 20, 18, 15, 12 and 10 meters, it is one HELLUVA GOOD antenna... My little ol' TS-830S, with about 100 watts output, usually gets the rare DX on first attempt...
> >
> > Do yourselves a favor... download the "Demo" version of EZnec... Model a 20 meter EDZ, and take a look at the resulting patterns on all bands...
> >
> > Notice the spherical radiation pattern on 160, 80/75... Most of your radiation goes straight up where it will reflect from the iononsphere and give you excellent local communication... (local being 200-300 miles on 160, and 200-500 miles on 80/75)... 40 and 30 meters are even better, but the EDZ really starts to shine at 20 meters with it's low angle of radation and almost 3 db gain over a dipole... On 18 meters, the pattern is 4-leaf clover with maximum radiation at about 20 degrees... On 15 meters, still the 4-leaf clover, but max radiation is now at 15 degrees... 12 meter pattern is multi-lobed with maximum radiation at 10 degrees... 10 meters, a multi-lobe pattern (10 lobes, looks like a big spider) with max radiation at 10 degrees...
> >
> > On 20, 18, 15, 12, and 10 meters, you can "pick off" the DX before the "big-boys" can bring their beams around...
> >
> > Nice going Barry... Glad there is still someone out there that has "figgered out" that antennas are not nearly as complicated as some would have you believe...
> >
> > buck K7WN
> >
> > ==
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > >
> >
> > > Most of the 88 foot designs I have seen are a compromise.
> >
>

43595. Re: [TS-520_820_530_830] Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-24 12:19:56 UTC
From: Wes Will
Topic: 43555 Message: 43595

On 07/24/2013 05:51 AM, Terry Wagoner wrote:
> I forgot to add this which discusses the 88 foot antenna as a "system"
> and not just the flat top. Have to be able to get the power to the
> efficient radiator.

For those who don't have access to an antenna handbook that covers this (and other) wire dipole antennas, here is a link to the Cebik article on the web as a PDF file. You can download it and have a copy handy at home, or print it, or just read it on the web from here. I keep a copy archived locally, though, because it is such a good reference for these sorts of antennae.

http://www.users.on.net/~bcr/files/backyard%20wire%20antennaes.pdf

This is just to save folks some digging around. It's not the only article by any means, nor possibly not even the best one. It's just one of them, and I find it to be very good for the basic purposes of building one. The drawings are very clear, in particular.

(If I could cabbage on to a three-position antenna switch, I would consider a triple EDZ triangular array, like the one which is shown in this PDF file article, in my back yard. I've got three trees that would probably work for supports. Almost as good as a big beam, without the wind load, which is a SERIOUS thing around my neck of the woods. Last night we were treated to another dose of high winds- 60 mph / 100 kph, and not just gusts. Those were sustained wind speeds, for many minutes at a go. Putting up a big beam antenna around here is just asking for a pile of recyclable aluminum scraps.)

--
Wes Will
N9KDY

43596. Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-24 14:30:29 UTC
From: Terry Wagoner
Topic: 43555 Message: 43596

We should really let this go. I just wanted to help him optimize the Norcal design and get it up in the air more if he can.

This started when someone objected to me saying that a shortened multi-band antenna represents a "compromise". Compromise isnt a dirty word and I stand by my statement.

All multi-band antennas (that includes loops)and shortened versions of them whether they use traps or loading coils or other mechanisms represent a "compromise" over a full size single band antenna. Compromise can be in gain, directivity, bandwidth, ease of feeding, convenience of getting the feedline into the shack etc. Read this a couple of times if you still dont get it.

When you can come up with a coax fed multi-band antenna for 160 thru 10 meters that matches performance with full size single band antennas you will be a rich man. We have all been searching for that antenna.

I do not dispute that the 88' multi-band antenna if trimmed appropriately can approximate a EDZ on 20 meters and exhibit some gain. Most multi-band antennas if erected high enough do exhibit gain on the higher bands. The lower bands is where the challenges start to manifest themselves more.

As to the owner performance reports for these antennas most if not all are subjective and often fail to give any credit for propagation. If you dont believe that then how do you explain being able to copy 10 meter 100mw beacon carriers on just about any antenna? Ok maybe not on a coat hanger.

I stand by my comment that a shortened multi-band antennas represents a "compromise" antenna. You put up what you can based on the limits of your lot size and your budget. About the only area where hams can still experiment with a modest budget and have some fun.

This never was about a 20 meter EDZ. Not sure how it got to this point. I think because someone thought that is what he was trying to build and he was not.

I am going back to trying to help Kenwood hybrid owners with Kenwood problems.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Wes Will <wwill@...> wrote:
>
> On 07/24/2013 05:51 AM, Terry Wagoner wrote:
> > I forgot to add this which discusses the 88 foot antenna as a "system"
> > and not just the flat top. Have to be able to get the power to the
> > efficient radiator.
>
> For those who don't have access to an antenna handbook that covers this
> (and other) wire dipole antennas, here is a link to the Cebik article on

> the web as a PDF file. You can download it and have a copy handy at
> home, or print it, or just read it on the web from here. I keep a copy
> archived locally, though, because it is such a good reference for these
> sorts of antennae.
>
> http://www.users.on.net/~bcr/files/backyard%20wire%20antennaes.pdf
>
> This is just to save folks some digging around. It's not the only
> article by any means, nor possibly not even the best one. It's just one
> of them, and I find it to be very good for the basic purposes of
> building one. The drawings are very clear, in particular.
>
> (If I could cabbage on to a three-position antenna switch, I would
> consider a triple EDZ triangular array, like the one which is shown in
> this PDF file article, in my back yard. I've got three trees that would
> probably work for supports. Almost as good as a big beam, without the
> wind load, which is a SERIOUS thing around my neck of the woods. Last
> night we were treated to another dose of high winds- 60 mph / 100 kph,
> and not just gusts. Those were sustained wind speeds, for many minutes
> at a go. Putting up a big beam antenna around here is just asking for a
> pile of recyclable aluminum scraps.)
>
> --
> Wes Will
> N9KDY
>

43597. Re: [TS-520_820_530_830] Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-24 14:39:17 UTC
From: W5RKL
Topic: 43555 Message: 43597

I agree so lets all move on.

73
Mike W5RKL

On 7/24/2013 9:30 AM, Terry Wagoner wrote:
>
> We should really let this go. I just wanted to help him optimize the
> Norcal design and get it up in the air more if he can.
>
> This started when someone objected to me saying that a shortened
> multi-band antenna represents a "compromise". Compromise isnt a dirty
> word and I stand by my statement.
>
> All multi-band antennas (that includes loops)and shortened versions of
> them whether they use traps or loading coils or other mechanisms
> represent a "compromise" over a full size single band antenna.
> Compromise can be in gain, directivity, bandwidth, ease of feeding,
> convenience of getting the feedline into the shack etc. Read this a
> couple of times if you still dont get it.
>
> When you can come up with a coax fed multi-band antenna for 160 thru
> 10 meters that matches performance with full size single band antennas
> you will be a rich man. We have all been searching for that antenna.
>
> I do not dispute that the 88' multi-band antenna if trimmed
> appropriately can approximate a EDZ on 20 meters and exhibit some
> gain. Most multi-band antennas if erected high enough do exhibit gain
> on the higher bands. The lower bands is where the challenges start to
> manifest themselves more.
>
> As to the owner performance reports for these antennas most if not all
> are subjective and often fail to give any credit for propagation. If
> you dont believe that then how do you explain being able to copy 10
> meter 100mw beacon carriers on just about any antenna? Ok maybe not on
> a coat hanger.
>
> I stand by my comment that a shortened multi-band antennas represents
> a "compromise" antenna. You put up what you can based on the limits of
> your lot size and your budget. About the only area where hams can
> still experiment with a modest budget and have some fun.
>
> This never was about a 20 meter EDZ. Not sure how it got to this
> point. I think because someone thought that is what he was trying to

> build and he was not.
>
> I am going back to trying to help Kenwood hybrid owners with Kenwood
> problems.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Wes Will <wwill@...> wrote:
> >
> > On 07/24/2013 05:51 AM, Terry Wagoner wrote:
> > > I forgot to add this which discusses the 88 foot antenna as a "system"
> > > and not just the flat top. Have to be able to get the power to the
> > > efficient radiator.
> >
> > For those who don't have access to an antenna handbook that covers this
> > (and other) wire dipole antennas, here is a link to the Cebik
> article on
> > the web as a PDF file. You can download it and have a copy handy at
> > home, or print it, or just read it on the web from here. I keep a copy
> > archived locally, though, because it is such a good reference for these
> > sorts of antennae.
> >
> > http://www.users.on.net/~bcr/files/backyard%20wire%20antennaes.pdf
> <http://www.users.on.net/%7Ebcr/files/backyard%20wire%20antennaes.pdf>
> >
> > This is just to save folks some digging around. It's not the only
> > article by any means, nor possibly not even the best one. It's just one
> > of them, and I find it to be very good for the basic purposes of
> > building one. The drawings are very clear, in particular.
> >
> > (If I could cabbage on to a three-position antenna switch, I would
> > consider a triple EDZ triangular array, like the one which is shown in
> > this PDF file article, in my back yard. I've got three trees that would
> > probably work for supports. Almost as good as a big beam, without the
> > wind load, which is a SERIOUS thing around my neck of the woods. Last
> > night we were treated to another dose of high winds- 60 mph / 100 kph,
> > and not just gusts. Those were sustained wind speeds, for many minutes
> > at a go. Putting up a big beam antenna around here is just asking for a
> > pile of recyclable aluminum scraps.)
> >
> > --
> > Wes Will
> > N9KDY
> >
>
>

[Non-text portions of this message have been removed]

43598. Re: [TS-520_820_530_830] Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-24 16:13:44 UTC
From: Don
Topic: 43556 Message: 43598

Terry
All voltages checked out ok.on the power supply and the final section
The arching might have been caused by a bad solder joint at the top of
the choke,,PS-2
Now i just have to find our why the relay is not kicking in to turn the
rig on

73
Don/Ve2ud

On 23/07/2013 10:30 PM, Terry Wagoner wrote:
>
> Do you mean you have no HV reading on your panel meter?
>
> Are you comfortable measuring HV at top of the plate choke L2 in the
> PA cage?
>
> With rig off and unplugged and HV caps discharged you can do a quick
> visual in the PA cage. Look at the Plate choke to see if any signs of
> discoloration. Look at base of choke and see if the rf bypass
> capacitor seems to be dark and/or split open. Look at the small VHF
> choke at right angle at base of big choke to see if it appears
> discolored or blown in half.
>
> If all look good then energize rig and measure voltage at top of main
> choke L2. You can connect your meter leads (make sure good positive
> connections with probe alligator clips so they dont jump off) while
> rig is unplugged and then power it on and not have to touch the meter
> to take the reading. Down power and discharge HV caps before removing
> meter test leads.
>
> If you have good voltage at anodes of the 6146 tubes you most likely
> have lost your HV voltage divider resistor string R5 thru R8 on the
> Rect board. If so replace all. Can buy precision resistors from Mouser.
>
> If you have good HV at top of L2 and no Ip likely have lost your four
> 20 ohm cathode meter shunt resistors on the Final board due to 6146
> arc over.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> > Terry

> > I should mention that i have no IP reading and no HV reading at all
> > It's just like a fuse has blown.
> > The fuse is fine as we would not have fan,and panel lamps on ,but i am
> > sure you will straighten me out on this
> > Don
> >
> >
> >
> > On 23/07/2013 7:56 PM, Terry Wagoner wrote:
> > >
> > > Don:
> > >
> > > Just close the loop for all of us and I am not saying you dont
> need to
> > > check for Plate Load cap for arcing at some point if you did hear
> > > arcing and frying sound. Just would not be high on my list now unless
> > > you know you had a coax or connector or antenna feed point problem
> > > that resulted in a very high impedance being presented to your SO-239.
> > >
> > > Loading rig into 50ohms should see approx 71rms volt or approx 200
> P-P
> > > volts across your Plate load cap. The plate spacing is designed for
> > > this voltage level. If you introduce a high impedance due to a bad
> > > connection say 5000 ohms the voltage will be 10x that or approx
> 707rms
> > > volts or approx 2000 P-P volts. Plate load cap wont like that.
> > >
> > > Terry K9TW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > > >
> > > > Terry
> > > > As always thanks for your help
> > > > Don/ve2ud
> > > >
> > > >
> > > >
> > > > On 23/07/2013 7:11 PM, Terry Wagoner wrote:
> > > > >
> > > > > Have you gone to audio board and measured the 12vdc, 9vdc and
> 3.6vdc
> > > > > RF-1 voltages yet. If not it is next logical step. OK to measure
> > > power
> > > > > supply voltages, but the radio likes to see these voltages
> where they
> > > > > are used at and not where they are produced at.
> > > > >
> > > > > If all the low voltage supplies are good then I would focus on

> > > > > restoring the Receiver first and not the Transmitter. Arcing
> over the
> > > > > > Plate load capacitor plates will not cause no RX mode. No
> reason to
> > > > > > open PA cage at this juncture.
> > > > > >
> > > > > > When you say no Receive that means a lot of different things to
> > > > > > different people. No audio?, no off air signals?, no marker
> signal?.
> > > > > > Pretty easy to check the major receiver blocks after you
> confirm low
> > > > > > voltage regulators are working.
> > > > > >
> > > > > > You can start at front end or at audio output. Usually easiest
> to see
> > > > > > if audio stage is working. If you do not have an audio
> generator or
> > > > > > signal tracer you can use just about any audio source you have
> (MP-3
> > > > > > player, lap top etc to inject audio signal at the AF Gain pot
> to test
> > > > > > the Audio stage.
> > > > > >
> > > > > > As a rule I always get receiver going and then move on to the
> > > > > > transmitter. Just my approach.
> > > > > >
> > > > > > Terry K9TW
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > > > > > >
> > > > > > > Hi Ken
> > > > > > >
> > > > > > > Thanks for your reply
> > > > > > > I did bring it back from the dead with Terry's help,but i
> turned
> > > it on
> > > > > > > the other day and all went silent[no readout,no sound]
> > > > > > > I thought maybe the power supply had shorted out,but that is
> not the
> > > > > > > case as per mike's help.
> > > > > > > This rig has been not quite a nightmare,but a real learning
> > > > > > > experience.Ebay special.
> > > > > > > As i do have a few Hybrid rigs i can take my time with it.
> > > > > > > I started the teck stuff very late in life as i was mostly a DX
> > > > > > > chaser,but i now enjoy this part of the hobby more than
> operating.
> > > > > > > I think the problem might lie in the final cage area,,but will

> > > take my
> > > > > > time for sure,as time i have
> > > > > >
> > > > > > 73
> > > > > > Don/Ve2ud
> > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > > On 23/07/2013 5:39 PM, Ken Winterling wrote:
> > > > > > >
> > > > > > > Don,
> > > > > > >
> > > > > > > If you had arcing "with loading" I also suggest you check the
> > > > > variable
> > > > > > > caps
> > > > > > > on the load, plate, etc. to make sure none of the movable
> plates
> > > > short to
> > > > > > > the stationary plates during any part of their rotation.
> You need
> > > > rotate
> > > > > > > each cap through its entire range while checking the
> surfaces very
> > > > > > > carefully under a good light. You may find some "spot welds"
> > > on the
> > > > > > > plates. The pitting caused by the arcing will make a plate
> more
> > > > > > > susceptible to future arcing due to the sharp peaks at the
> edges
> > > > of the
> > > > > > > "craters". It can be difficult to smooth them out but it
> can be
> > > > done if
> > > > > > > you take your time.
> > > > > > >
> > > > > > > Ken
> > > > > > > WA2LBI
> > > > > > >
> > > > > > > On Tue, Jul 23, 2013 at 5:10 PM, Don <ve2ud@
> > > > > > > <mailto:ve2ud%40travel-net.com>> wrote:
> > > > > > >
> > > > > > > **
> > > > > > >
> > > > > > >
> > > > > > > Mike
> > > > > > > Thanks for that info
> > > > > > > There is 929 volts VDC on the units 800 terminal,so the
> problem
> > > > lies in

> > > > > > > > another area
> > > > > > > > > R14 is good also
> > > > > > > > > I did have a problem with loading and arching before the rig
> > > > > went silent
> > > > > > > > >
> > > > > > > > > 73
> > > > > > > > > Don/Ve2ud
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > On 23/07/2013 3:11 PM, W5RKL wrote:
> > > > > > > > >
> > > > > > > > > Don,
> > > > > > > > >
> > > > > > > > > Don't measure the Rectifier Unit's high voltage output at
> > > the "HV"
> > > > > > > > > terminal. The "HV" terminal is for the "HV" metering
> > > circuit, the
> > > > > > > > > voltage is very low at that terminal. Measure the
> > > Rectifier Unit's
> > > > > > > > > actual DC high voltage at the Rectifier Unit's "800"
> > > terminal,
> > > > > > > > that's
> > > > > > > > > where you will see approximately 920VDC (no load
> > > voltage/standby
> > > > > > > > voltage).
> > > > > > > > >
> > > > > > > > > If R14 on the Rectifier Unit is bad, for example it's
> > > burnt open,
> > > > > > > there
> > > > > > > > > will be loss of bias voltage in the 830. Problems in
> the bias
> > > > > > supply not
> > > > > > > > > only affect the driver tube and the other circuits that
> > > use the -C
> > > > > > > > > supply, but also the final tubes. For example, loss of the
> > > > > > bias supply
> > > > > > > > > (Rectifier Unit's -C supply) can result in both final
> tubes
> > > > > conducting
> > > > > > > > > to saturation levels, even in standby (transmitter is not
> > > > > keyed) which
> > > > > > > > > will turn the final tube plate RED, not to mention
> that D7 can
> > > > > also fail
> > > > > > > > > adding to the loss of bias voltage from the Rectifier
> Unit.
> > > > > > > > >
> > > > > > > > > Also, ALL of the hybrid high voltage power supplies are
> > > "Voltage
> > > > > > > > > Doubling" supplies. Therefore, you will not see 800 volts

> > > on the
> > > > > > > > > transformer AC terminals as you might expect, the AC
> voltage
> > > > > will be
> > > > > > > > > much less. I recommend you study power supplies in the
> ARRL
> > > > > > > handbook so
> > > > > > > > > > you understand how power supply in general and especially
> > > voltage
> > > > > > > > > > doubling supplies, work. You should also study capacitors
> > > as well,
> > > > > > > > > > especially connecting capacitors in series.
> > > > > > > > > >
> > > > > > > > > > Capacitors connected in series do NOT calculate the
> same as
> > > > > > > resistors in
> > > > > > > > > > series. For example, the 2 HV filter capacitors are
> > > connected in
> > > > > > > series
> > > > > > > > > > which results in a total capacitance of "50ufd", not
> "200ufd"
> > > > > > as you
> > > > > > > > > > might think. The following formula will calculate the
> total
> > > > > > capacitance
> > > > > > > > > > of 2 capacitors connected in series:
> > > > > > > > > >
> > > > > > > > > > C1 x C2 / C1 + C2 = Tc
> > > > > > > > > >
> > > > > > > > > > In the case of the 2 HV capacitors in the Kenwood
> hybrids (2 x
> > > > > > 100ufd at
> > > > > > > > > > 500VDC each capacitor);
> > > > > > > > > >
> > > > > > > > > > 100 x 100 / 100 + 100 = 50ufd
> > > > > > > > > >
> > > > > > > > > > The total safe working voltage of the 2 capacitors in
> > > series is
> > > > > > > 1000VDC
> > > > > > > > > >
> > > > > > > > > > 500 + 500 = 1000VDC
> > > > > > > > > >
> > > > > > > > > > If 2 capacitors of different values, such as 30ufd
> (250VDC)
> > > > > > and 50ufd
> > > > > > > > > > (450VDC), are connected in series, the same formula and
> > > the same
> > > > > > > > > > addition of the individual capacitor's working voltage
> is used
> > > > > > > > > resulting in:

> > > > > > > > >
> > > > > > > > > > 30 x 50 / 30 + 50 = 18.75ufd
> > > > > > > > > >
> > > > > > > > > > The safe maximum working voltage is:
> > > > > > > > > >
> > > > > > > > > > 250 + 450 = 700VDC
> > > > > > > > > >
> > > > > > > > > > There is another formula to calculate the approximate
> voltage
> > > > > > that is
> > > > > > > > > > applied across each capacitor connected in series that's
> > > > > > connected
> > > > > > > > to a
> > > > > > > > > > source voltage and that formula is:
> > > > > > > > > >
> > > > > > > > > > Cv = TC / IC x Sv
> > > > > > > > > >
> > > > > > > > > > Cv = Voltage across each capacitor
> > > > > > > > > > TC = Total Capacitance of the capacitors connected in
> series
> > > > > > > > > > IC = Individual Capacitance value
> > > > > > > > > > Sv = Source voltage
> > > > > > > > > >
> > > > > > > > > > I mean no disrespect to anyone but the above formulas
> are all
> > > > > > part of
> > > > > > > > > > what I have been referring to many times on this group as
> > > > learning
> > > > > > > > > > "Basic Electronics" and every ham should have studied and
> > > > > > thoroughly
> > > > > > > > > > understood these topics, as well as many other topics,
> before
> > > > > > > > taking the
> > > > > > > > > > license exam.
> > > > > > > > > >
> > > > > > > > > > 73
> > > > > > > > > > Mike W5RKL
> > > > > > > > > >
> > > > > > > > > > On 7/23/2013 11:04 AM, Don wrote:
> > > > > > > > > >
> > > > > > > > > > Mike
> > > > > > > > > >
> > > > > > > > > > I had my meter on dc and not ac so the 12vac is ok duh
> > > > > > > > > > Ac-800 i get 344 Ac-400--278 Ac 300-246 Ac-200-190
> Ac-100-88
> > > > > > > > > > Ac-14-9,5 and HV- nil
> > > > > > > > > > The driver and the finals light up ok
> > > > > > > > > >
> > > > > > > > > > Did not say the rec board was bad,just that there was a
> > > > problem

> > > > > > > there
> > > > > > > > > > before and looks
> > > > > > > > > > likeR14 was replaced
> > > > > > > > > >
> > > > > > > > > > 73
> > > > > > > > > > Don/Ve2ud
> > > > > > > > > >
> > > > > > > > > > On 23/07/2013 11:34 AM, Don wrote:
> > > > > > > > > >
> > > > > > > > > > Sorry Mike forgot again
> > > > > > > > > >
> > > > > > > > > > It's a ts830s
> > > > > > > > > >
> > > > > > > > > > I will print this out and get back to you
> > > > > > > > > >
> > > > > > > > > > 73
> > > > > > > > > > Don
> > > > > > > > > >
> > > > > > > > > > On 23/07/2013 11:29 AM, W5RKL wrote:
> > > > > > > > > >
> > > > > > > > > > Don,
> > > > > > > > > >
> > > > > > > > > > What hybrid are you referring to? When asking about
> > > problems
> > > > > > > > > with your
> > > > > > > > > > hybrids you must provide the model of hybrid you are
> > > > > > referring to.
> > > > > > > > > >
> > > > > > > > > > Are you saying that you measured the AC voltage on
> > > the 12VAC
> > > > > > > > > winding and
> > > > > > > > > > it's zero?
> > > > > > > > > >
> > > > > > > > > > Did you check ALL of the Rectifier Unit voltages
> before
> > > > > > thinking
> > > > > > > > > the
> > > > > > > > > > Rectifier Unit is bad?
> > > > > > > > > >
> > > > > > > > > > Did you check to see if the driver and both
> final tube
> > > > > filaments
> > > > > > > > > are lit
> > > > > > > > > > (Heater switch turned ON)
> > > > > > > > > >
> > > > > > > > > > If the driver and both final tube filaments are
> lit and
> > > > > > the dial
> > > > > > > > > lamps
> > > > > > > > > > are illuminating then the 12VAC winding is fine.

> > > > > > > > > > > > >
> > > > > > > > > > > > > > The fan runs off of the 100VAC winding of the power
> > > > > transformer
> > > > > > > > > > and if
> > > > > > > > > > > > > > the fan is running then that winding is good.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > You need to do more testing/measuring of the
> > > Rectifier Unit
> > > > > > > > > > voltages to
> > > > > > > > > > > > > > determine whether or not one or more power supplies
> > > have
> > > > > > failed.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > 73
> > > > > > > > > > > > > > Mike W5RKL
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > On 7/23/2013 9:54 AM, Don D wrote:
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Hi All
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Need some help to determine if my power supply is
> > > kaput
> > > > > > > > > > > > > > It has been tampered with before as the rectifier
> > > unit
> > > > > > > > > was
> > > > > > > > worked
> > > > > > > > > > > > > > before me
> > > > > > > > > > > > > > When i turn it on,all i get is front panel lamps
> > > and fan
> > > > > > > > > > > > > > I get no 12.6 volts on the transformer
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > 73
> > > > > > > > > > > > > > Don/Ve2ud
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > [Non-text portions of this message have been removed]

> > > >
> > >
> > >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
>

[Non-text portions of this message have been removed]

43599. Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-24 17:25:49 UTC
From: scott10k
Topic: 43555 Message: 43599

I agree with Mike, but I would like to thank Terry for the link to the Cebik article which I found very useful. Back to my hybrids.

73s, Scott, N6CIC

--- In TS-520_820_530_830@yahoogroups.com, W5RKL <w5rkl@...> wrote:
>
> I agree so lets all move on.
>
> 73
> Mike W5RKL
>
> On 7/24/2013 9:30 AM, Terry Wagoner wrote:
> >
> > We should really let this go. I just wanted to help him optimize the
> > Norcal design and get it up in the air more if he can.
> >
> > This started when someone objected to me saying that a shortened
> > multi-band antenna represents a "compromise". Compromise isnt a dirty
> > word and I stand by my statement.
> >
> > All multi-band antennas (that includes loops)and shortened versions of
> > them whether they use traps or loading coils or other mechanisms
> > represent a "compromise" over a full size single band antenna.
> > Compromise can be in gain, directivity, bandwidth, ease of feeding,
> > convenience of getting the feedline into the shack etc. Read this a
> > couple of times if you still dont get it.
> >
> > When you can come up with a coax fed multi-band antenna for 160 thru
> > 10 meters that matches performance with full size single band antennas
> > you will be a rich man. We have all been searching for that antenna.
> >
> > I do not dispute that the 88' multi-band antenna if trimmed
> > appropriately can approximate a EDZ on 20 meters and exhibit some
> > gain. Most multi-band antennas if erected high enough do exhibit gain
> > on the higher bands. The lower bands is where the challenges start to
> > manifest themselves more.
> >
> > As to the owner performance reports for these antennas most if not all
> > are subjective and often fail to give any credit for propagation. If
> > you dont believe that then how do you explain being able to copy 10
> > meter 100mw beacon carriers on just about any antenna? Ok maybe not on
> > a coat hanger.
> >

> > I stand by my comment that a shortened multi-band antennas represents
> > a "compromise" antenna. You put up what you can based on the limits of
> > your lot size and your budget. About the only area where hams can
> > still experiment with a modest budget and have some fun.
> >
> > This never was about a 20 meter EDZ. Not sure how it got to this
> > point. I think because someone thought that is what he was trying to
> > build and he was not.
> >
> > I am going back to trying to help Kenwood hybrid owners with Kenwood
> > problems.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Wes Will <wwill@> wrote:
> > >
> > > On 07/24/2013 05:51 AM, Terry Wagoner wrote:
> > > > I forgot to add this which discusses the 88 foot antenna as a "system"
> > > > and not just the flat top. Have to be able to get the power to the
> > > > efficient radiator.
> > >
> > > For those who don't have access to an antenna handbook that covers this
> > > (and other) wire dipole antennas, here is a link to the Cebik
> > article on
> > > the web as a PDF file. You can download it and have a copy handy at
> > > home, or print it, or just read it on the web from here. I keep a copy
> > > archived locally, though, because it is such a good reference for these
> > > sorts of antennae.
> > >
> > > http://www.users.on.net/~bcr/files/backyard%20wire%20antennaes.pdf
> > <http://www.users.on.net/%7Ebcr/files/backyard%20wire%20antennaes.pdf>
> > >
> > > This is just to save folks some digging around. It's not the only
> > > article by any means, nor possibly not even the best one. It's just one
> > > of them, and I find it to be very good for the basic purposes of
> > > building one. The drawings are very clear, in particular.
> > >
> > > (If I could cabbage on to a three-position antenna switch, I would
> > > consider a triple EDZ triangular array, like the one which is shown in
> > > this PDF file article, in my back yard. I've got three trees that would
> > > probably work for supports. Almost as good as a big beam, without the
> > > wind load, which is a SERIOUS thing around my neck of the woods. Last
> > > night we were treated to another dose of high winds- 60 mph / 100 kph,
> > > and not just gusts. Those were sustained wind speeds, for many minutes
> > > at a go. Putting up a big beam antenna around here is just asking for a
> > > pile of recyclable aluminum scraps.)
> > >
> > > --
> > > Wes Will

> > > N9KDY
> > >
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

43600. Technical Reference Sources

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-24 22:49:10 UTC
From: roberteleazer@rocketmail.com
Topic: 43600 Message: 43600

I too want to thank Terry for his link to the antenna information.

And in the same spirit I would like to provide the Group with a link to a very impressive free collection of data, specifically focused on vaccum tubes and older electronics but also of general use:

http://www.tubebooks.org/technical_books_online.htm

73's

Robert
WB5WSV

43601. Re: [TS-520_820_530_830] Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-24 23:08:40 UTC
From: Don
Topic: 43556 Message: 43601

Terry
I downloaded that color schematic and it's a lot better on my eye's to follow.
I measured all the boards for the dc voltages and there is none.That would explain why the rig will not fire up.
I know all the rectifier didoes are good as i tested them to make sure.
Is the 12 volts produce from the rec board?.I see a spot on the rec board marked 12,but i get no reading from it.
73
Don/Ve2ud

\
Don wrote: On 23/07/2013 7:11 PM, Terry Wagoner wrote:>> Have you gone to audio board and measured the 12vdc, 9vdc and 3.6vdc > RF-1 voltages yet. If not it is next logical step. OK to measure power
>
> > supply voltages, but the radio likes to see these voltages where they
> > are used at and not where they are produced at.
> >
> > If all the low voltage supplies are good then I would focus on
> > restoring the Receiver first and not the Transmitter. Arcing over the
> > Plate load capacitor plates will not cause no RX mode. No reason to
> > open PA cage at this juncture.
> >
> > When you say no Receive that means a lot of different things to
> > different people. No audio?, no off air signals?, no marker signal?.
> > Pretty easy to check the major receiver blocks after you confirm low
> > voltage regulators are working.
> >
> > You can start at front end or at audio output. Usually easiest to see
> > if audio stage is working. If you do not have an audio generator or
> > signal tracer you can use just about any audio source you have (MP-3
> > player, lap top etc to inject audio signal at the AF Gain pot to test
> > the Audio stage.
> >
> > As a rule I always get receiver going and then move on to the
> > transmitter. Just my approach.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> > >
> > > Hi Ken

> > >
> > > Thanks for your reply
> > > I did bring it back from the dead with Terry's help,but i turned it on
> > > the other day and all went silent[no readout,no sound]
> > > I thought maybe the power supply had shorted out,but that is not the
> > > case as per mike's help.
> > > This rig has been not quite a nightmare,but a real learning
> > > experience.Ebay special.
> > > As i do have a few Hybrid rigs i can take my time with it.
> > > I started the teck stuff very late in life as i was mostly a DX
> > > chaser,but i now enjoy this part of the hobby more than operating.
> > > I think the problem might lie in the final cage area,,but will take my
> > > time for sure,as time i have
> > >
> > > 73
> > > Don/Ve2ud
> > >
> > >
> > >
> > >
> > > On 23/07/2013 5:39 PM, Ken Winterling wrote:
> > > >
> > > > Don,
> > > >
> > > > If you had arcing "with loading" I also suggest you check the
> > variable
> > > > caps
> > > > on the load, plate, etc. to make sure none of the movable plates
> > short to
> > > > the stationary plates during any part of their rotation. You need
> > rotate
> > > > each cap through its entire range while checking the surfaces very
> > > > carefully under a good light. You may find some "spot welds" on the
> > > > plates. The pitting caused by the arcing will make a plate more
> > > > susceptible to future arcing due to the sharp peaks at the edges
> > of the
> > > > "craters". It can be difficult to smooth them out but it can be
> > done if
> > > > you take your time.
> > > >
> > > > Ken
> > > > WA2LBI
> > > >
> > > > On Tue, Jul 23, 2013 at 5:10 PM, Don <ve2ud@...
> > > > <mailto:ve2ud%40travel-net.com>> wrote:
> > > >
> > > > > **
> > > > >
> > > > >
> > > > > Mike

> > > > > Thanks for that info
> > > > > There is 929 volts VDC on the units 800 terminal,so the problem
> > lies in
> > > > > another area
> > > > > R14 is good also
> > > > > I did have a problem with loading and arching before the rig
> > went silent
> > > > > >
> > > > > > 73
> > > > > > Don/Ve2ud
> > > > > >
> > > > > >
> > > > > > On 23/07/2013 3:11 PM, W5RKL wrote:
> > > > > > >
> > > > > > > Don,
> > > > > > >
> > > > > > > Don't measure the Rectifier Unit's high voltage output at
> the "HV"
> > > > > > > terminal. The "HV" terminal is for the "HV" metering
> circuit, the
> > > > > > > voltage is very low at that terminal. Measure the Rectifier
> Unit's
> > > > > > > actual DC high voltage at the Rectifier Unit's "800" terminal,
> > that's
> > > > > > > where you will see approximately 920VDC (no load voltage/standby
> > > > > > voltage).
> > > > > > >
> > > > > > > If R14 on the Rectifier Unit is bad, for example it's burnt
> open,
> > > > there
> > > > > > > will be loss of bias voltage in the 830. Problems in the bias
> > > > supply not
> > > > > > > only affect the driver tube and the other circuits that use
> the -C
> > > > > > > supply, but also the final tubes. For example, loss of the
> > bias supply
> > > > > > > (Rectifier Unit's -C supply) can result in both final tubes
> > conducting
> > > > > > > to saturation levels, even in standby (transmitter is not
> > keyed) which
> > > > > > > will turn the final tube plate RED, not to mention that D7 can
> > > > also fail
> > > > > > > adding to the loss of bias voltage from the Rectifier Unit.
> > > > > > >
> > > > > > > Also, ALL of the hybrid high voltage power supplies are "Voltage
> > > > > > > Doubling" supplies. Therefore, you will not see 800 volts on the
> > > > > > > transformer AC terminals as you might expect, the AC voltage
> > will be
> > > > > > > much less. I recommend you study power supplies in the ARRL
> > > > handbook so

> > > > > > you understand how power supply in general and especially
> voltage
> > > > > > doubling supplies, work. You should also study capacitors as
> well,
> > > > > > especially connecting capacitors in series.
> > > > > >
> > > > > > Capacitors connected in series do NOT calculate the same as
> > > > resistors in
> > > > > > series. For example, the 2 HV filter capacitors are connected in
> > > > series
> > > > > > which results in a total capacitance of "50ufd", not "200ufd"
> > as you
> > > > > > might think. The following formula will calculate the total
> > > > capacitance
> > > > > > of 2 capacitors connected in series:
> > > > > >
> > > > > > C1 x C2 / C1 + C2 = Tc
> > > > > >
> > > > > > In the case of the 2 HV capacitors in the Kenwood hybrids (2 x
> > > > 100ufd at
> > > > > > 500VDC each capacitor);
> > > > > >
> > > > > > 100 x 100 / 100 + 100 = 50ufd
> > > > > >
> > > > > > The total safe working voltage of the 2 capacitors in series is
> > > > 1000VDC
> > > > > >
> > > > > > 500 + 500 = 1000VDC
> > > > > >
> > > > > > If 2 capacitors of different values, such as 30ufd (250VDC)
> > and 50ufd
> > > > > > (450VDC), are connected in series, the same formula and the same
> > > > > > addition of the individual capacitor's working voltage is used
> > > > > > resulting in:
> > > > > >
> > > > > > 30 x 50 / 30 + 50 = 18.75ufd
> > > > > >
> > > > > > The safe maximum working voltage is:
> > > > > >
> > > > > > 250 + 450 = 700VDC
> > > > > >
> > > > > > There is another formula to calculate the approximate voltage
> > that is
> > > > > > applied across each capacitor connected in series that's
> > connected
> > > > > to a
> > > > > > source voltage and that formula is:
> > > > > >
> > > > > > Cv = TC / IC x Sv
> > > > > >

> > > > > > Cv = Voltage across each capacitor
> > > > > > TC = Total Capacitance of the capacitors connected in series
> > > > > > IC = Individual Capacitance value
> > > > > > Sv = Source voltage
> > > > > >
> > > > > > I mean no disrespect to anyone but the above formulas are all
> > part of
> > > > > > what I have been referring to many times on this group as
> learning
> > > > > > "Basic Electronics" and every ham should have studied and
> > thoroughly
> > > > > > understood these topics, as well as many other topics, before
> > > > taking the
> > > > > > license exam.
> > > > > >
> > > > > > 73
> > > > > > Mike W5RKL
> > > > > >
> > > > > > On 7/23/2013 11:04 AM, Don wrote:
> > > > > > >
> > > > > > > Mike
> > > > > > >
> > > > > > > I had my meter on dc and not ac so the 12vac is ok duh
> > > > > > > Ac-800 i get 344 Ac-400--278 Ac 300-246 Ac-200-190 Ac-100-88
> > > > > > > Ac-14-9,5 and HV- nil
> > > > > > > The driver and the finals light up ok
> > > > > > >
> > > > > > > Did not say the rec board was bad,just that there was a
> problem
> > > > there
> > > > > > > before and looks
> > > > > > > likeR14 was replaced
> > > > > > >
> > > > > > > 73
> > > > > > > Don/Ve2ud
> > > > > > >
> > > > > > > On 23/07/2013 11:34 AM, Don wrote:
> > > > > > > >
> > > > > > > > Sorry Mike forgot again
> > > > > > > >
> > > > > > > > It's a ts830s
> > > > > > > >
> > > > > > > > I will print this out and get back to you
> > > > > > > >
> > > > > > > > 73
> > > > > > > > Don
> > > > > > > >
> > > > > > > > On 23/07/2013 11:29 AM, W5RKL wrote:
> > > > > > > > >
> > > > > > > > Don,

> > > > > > > > >
> > > > > > > > > > What hybrid are you referring to? When asking about
> problems
> > > > > > with your
> > > > > > > > > > hybrids you must provide the model of hybrid you are
> > > > referring to.
> > > > > > > > > >
> > > > > > > > > > Are you saying that you measured the AC voltage on the
> 12VAC
> > > > > > winding and
> > > > > > > > > > it's zero?
> > > > > > > > > >
> > > > > > > > > > Did you check ALL of the Rectifier Unit voltages before
> > thinking
> > > > > > the
> > > > > > > > > > Rectifier Unit is bad?
> > > > > > > > > >
> > > > > > > > > > Did you check to see if the driver and both final tube
> > filaments
> > > > > > are lit
> > > > > > > > > > (Heater switch turned ON)
> > > > > > > > > >
> > > > > > > > > > If the driver and both final tube filaments are lit and
> > the dial
> > > > > > lamps
> > > > > > > > > > are illuminating then the 12VAC winding is fine.
> > > > > > > > > >
> > > > > > > > > > The fan runs off of the 100VAC winding of the power
> > transformer
> > > > > > and if
> > > > > > > > > > the fan is running then that winding is good.
> > > > > > > > > >
> > > > > > > > > > You need to do more testing/measuring of the Rectifier
> Unit
> > > > > > voltages to
> > > > > > > > > > determine whether or not one or more power supplies have
> > failed.
> > > > > > > > > >
> > > > > > > > > > 73
> > > > > > > > > > Mike W5RKL
> > > > > > > > > >
> > > > > > > > > > On 7/23/2013 9:54 AM, Don D wrote:
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > Hi All
> > > > > > > > > >
> > > > > > > > > > Need some help to determine if my power supply is kaput
> > > > > > > > > > It has been tampered with before as the rectifier unit
> > was
> > > > > worked

> > > > > > > > > > before me
> > > > > > > > > > > When i turn it on,all i get is front panel lamps and fan
> > > > > > > > > > > I get no 12.6 volts on the transformer
> > > > > > > > > > >
> > > > > > > > > > > 73
> > > > > > > > > > > Don/Ve2ud
> > > > > >
> > > > >
> > > > > [Non-text portions of this message have been removed]
> > > > >
> > > > >
> > > >
> > > >
> > > >
> > > > [Non-text portions of this message have been removed]
> > >
> >
> >
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

43602. Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-24 23:29:01 UTC
From: Terry Wagoner
Topic: 43556 Message: 43602

Dont need any relays to change state for Receive. Rx works on the NC contacts of the relays.

I thought you said you had no HV indication on your panel meter???

Sounds like you are talking about choke L1 and junction of PD-2 which is 6146 screen grid voltage.

This is first I have heard about a relay problem. What relay are you talking about? The Aux relay on the AF board or the TR relay under PA cage or both? They should both key when you flip to Send. If they do not then you may have a bad Q17 relay switching transistor on Audio board. Never seen a bad relay operating coil.

Before assuming bad Q17 check Molex connectors 4 and 5 on the Audio board. Carefully pull,clean, and re-seat.

You can test Q17 by grounding Pin 5 of Conn 5. If no action try Pin 1 of Conn 4.

If grounding SS line at the Audio board does not result in keying the relays still could be a bad solder connection at the molex connector pins. Measure dc voltages at TP-3 on audio board as you flip to Send and/or apply ground on the SS line. Correct voltages are on the schematic (approx 11.9vdc in Rx and approx 10.5vdc in Tx). If you have correct voltages at TP-3 and still no relay action then measure voltage at Collector of Q17 which is Conn 5 Pin 6 RL. Should be 0 in Rx and 12vdc in Tx. If Q17 is bad need to replace it and the flywheel diode at same time.

Bad relay switching transistor does not explain no Rx???

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Terry
> All voltages checked out ok.on the power supply and the final section
> The arching might have been caused by a bad solder joint at the top of
> the choke,,PS-2
> Now i just have to find our why the relay is not kicking in to turn the
> rig on
>
> 73
> Don/Ve2ud
>
>
>
>
>
> On 23/07/2013 10:30 PM, Terry Wagoner wrote:

> >
> > Do you mean you have no HV reading on your panel meter?
> >

43603. Re: Technical Reference Sources

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-24 23:42:09 UTC
From: Terry Wagoner
Topic: 43600 Message: 43603

Robert:

You are correct a great site. Just some really big downloads, but some real treasures. J. F. Riders VTVM primer is great for understanding why VTVM was invented and how to use it to troubleshoot tube radios. I think I learned how to check for leaky interstage coupling caps from this book many years ago.

Thanks
Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> I too want to thank Terry for his link to the antenna information.
>
> And in the same spirit I would like to provide the Group with a link to a very impressive free collection of data, specifically focused on vaccum tubes and older electronics but also of general use:
>
> http://www.tubebooks.org/technical_books_online.htm
>
> 73's
>
> Robert
> WB5WSV
>

43604. Re: [TS-520_820_530_830] Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 00:01:11 UTC
From: John Davidson
Topic: 43555 Message: 43604

Re the 80-125 ft flat top centerfed antennas;
The only compromise for an "allband" 88-125 ft Centerfed wire is using balanced feedline where you will need a balanced input tuner in the shack to have the best efficiency. No way is it a Shortened antenna if you use it on the bands where it is at least half wavelength. My 90 ft dipole works the bands from 60M up to at least 17Meters. Since it is less than a halfwave on 160 and 80 it fails badly there.

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, July 24, 2013 6:51 AM
Subject: [TS-520_820_530_830] Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

I forgot to add this which discusses the 88 foot antenna as a "system" and not just the flat top. Have to be able to get the power to the efficient radiator.

I have no personal experience using a 88 ft multiband antenna. Pretty sure I said much of the literature puts it in class of all shortened antennas as being a compromise antennas.

However I am a big fan of experimenting with all kinds of wire antenna configurations and I think I said that and offered suggestions on how he could enhance his existing Cebik doublet.

Hopefully he wont experience any arc over in his MFJ tuner.

http://www.w8ji.com/vswr_reactive_power.htm

Terry K9TW

--- In TS-520_820_530_830@...m, "Terry Wagoner" <wagstw46@...> wrote:
>
> Glad it is working for you and fun to break the pile ups.
>
> Curious how you load into it and adjust tuner and the 830 Pi-network as you move around the band looking for the pile ups to pick off.
>
> Do you tune slightly off the pile up and key rig and make your on air adjustments?
>
> Wonder how it compares to three element tri-band yagi on receive?
>
> No need to download EZnec
> http://www.tomochka.com/na7u/doublet/w4rnlbackup.html
>
> Terry K9TW

>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "buck" <texigan@> wrote:
> >
> >
> >
> > "Most of the 88 foot designs I have seen are a compromise."
> >
> > Actually, an 88 foot antenna, center-fed with balanced line, tuned with a simple tuner and a balun is an EXCELLENT all-band antenna...
> >
> > Don't know why Barry settled on an 88' length, possibly because that is where his "sky hooks" are... But in any case, he (as someone else noted) has come up with a 20-meter Extended-Double-Zepp, which is one of the best all-band antennas known to man...
> >
> > Although I have room for the 135' version, I use an 86' flat-top, center-fed with 300 ohm TV lead-in... It is 45' high, using trees for sky-hooks...
> >
> > It works very well on ALL bands from 160 thru 30 meters, and on 20, 18, 15, 12 and 10 meters, it is one HELLUVA GOOD antenna... My little ol' TS-830S, with about 100 watts output, usually gets the rare DX on first attempt...
> >
> > Do yourselves a favor... download the "Demo" version of EZnec... Model a 20 meter EDZ, and take a look at the resulting patterns on all bands...
> >
> > Notice the spherical radiation pattern on 160, 80/75... Most of your radiation goes straight up where it will reflect from the iononsphere and give you excellent local communication... (local being 200-300 miles on 160, and 200-500 miles on 80/75)... 40 and 30 meters are even better, but the EDZ really starts to shine at 20 meters with it's low angle of radation and almost 3 db gain over a dipole... On 18 meters, the pattern is 4-leaf clover with maximum radiation at about 20 degrees... On 15 meters, still the 4-leaf clover, but max radiation is now at 15 degrees... 12 meter pattern is multi-lobed with maximum radiation at 10 degrees... 10 meters, a multi-lobe pattern (10 lobes, looks like a big spider) with max radiation at 10 degrees...
> >
> > On 20, 18, 15, 12, and 10 meters, you can "pick off" the DX before the "big-boys" can bring their beams around...
> >
> > Nice going Barry... Glad there is still someone out there that has "figgered out" that antennas are not nearly as complicated as some would have you believe...
> >
> > buck K7WN
> >
> > ==
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > >
> >
> > > Most of the 88 foot designs I have seen are a compromise.

> >
>

[Non-text portions of this message have been removed]

43605. Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 00:08:40 UTC
From: Terry Wagoner
Topic: 43556 Message: 43605

That 12vdc point is the input for the SG relay. If you have no regulated 12vdc from the Audio board will have no 12vdc here.

You need 14A voltage from the rectifier board to the Audio Board. Measure at the 14A terminal. If good there then measure at the Audio Board at the 14A terminal. If bad there then check the AC input voltage across AC 14 terminals to see of transformer secondary winding is good. If have ac then check the bridge rectifier diodes.

Voltage at 14A is 120 hz AC from the bridge rectifier on the HV Rec board. It has not been filtered yet by the C-R-C filter on the Audio Board.

If you have approx 17.9vdc at the 14A terminal on the Audio Board and no 12vdc at the 12vdc terminal post on Audio board you have a problem with the series pass regulator circuit. Could be bad series pass transistor Q34, but need to troubleshoot to determine that.

Here are some approx voltages:

1. Across AC14 = 15.4vac
2. 14A to chassis ground = 17.9vdc
3. 12 dc output post on AF board = 11.9vdc

Note: You may want to consider cutting a piece of cardboard (off back of yellow 8.5 x 11 writing pad for example) and lay it over the HV filter cap area while taking these voltages so you do not inadvertanty touch or drop something in that area. I have a piece of lexan that I use from time to time to cover this area and the HV rect board.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Terry
> I downloaded that color schematic and it's a lot better on my eye's to
> follow.
> I measured all the boards for the dc voltages and there is none.That
> would explain why the rig will not fire up.
> I know all the rectifier didoes are good as i tested them to make sure.
> Is the 12 volts produce from the rec board?.I see a spot on the rec
> board marked 12,but i get no reading from it.
> 73
> Don/Ve2ud
>
>
>
>
>
>
>

> \
> Don wrote: On 23/07/2013 7:11 PM, Terry Wagoner wrote:>> Have you gone
> to audio board and measured the 12vdc, 9vdc and 3.6vdc > RF-1 voltages
> yet. If not it is next logical step. OK to measure power
> >
> > > supply voltages, but the radio likes to see these voltages where they
> > > are used at and not where they are produced at.
> > >
> > > If all the low voltage supplies are good then I would focus on
> > > restoring the Receiver first and not the Transmitter. Arcing over the
> > > Plate load capacitor plates will not cause no RX mode. No reason to
> > > open PA cage at this juncture.
> > >
> > > When you say no Receive that means a lot of different things to
> > > different people. No audio?, no off air signals?, no marker signal?.
> > > Pretty easy to check the major receiver blocks after you confirm low
> > > voltage regulators are working.
> > >
> > > You can start at front end or at audio output. Usually easiest to see
> > > if audio stage is working. If you do not have an audio generator or
> > > signal tracer you can use just about any audio source you have (MP-3
> > > player, lap top etc to inject audio signal at the AF Gain pot to test
> > > the Audio stage.
> > >
> > > As a rule I always get receiver going and then move on to the
> > > transmitter. Just my approach.
> > >
> > > Terry K9TW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > > >
> > > > Hi Ken
> > > >
> > > > Thanks for your reply
> > > > I did bring it back from the dead with Terry's help,but i turned it on
> > > > the other day and all went silent[no readout,no sound]
> > > > I thought maybe the power supply had shorted out,but that is not the
> > > > case as per mike's help.
> > > > This rig has been not quite a nightmare,but a real learning
> > > > experience.Ebay special.
> > > > As i do have a few Hybrid rigs i can take my time with it.
> > > > I started the teck stuff very late in life as i was mostly a DX
> > > > chaser,but i now enjoy this part of the hobby more than operating.
> > > > I think the problem might lie in the final cage area,,but will take my
> > > > time for sure,as time i have
> > > >
> > > > 73
> > > > Don/Ve2ud

> > > >
> > > >
> > > >
> > > >
> > > > On 23/07/2013 5:39 PM, Ken Winterling wrote:
> > > > >
> > > > > Don,
> > > > >
> > > > > If you had arcing "with loading" I also suggest you check the
> > > variable
> > > > > caps
> > > > > on the load, plate, etc. to make sure none of the movable plates
> > > short to
> > > > > the stationary plates during any part of their rotation. You need
> > > rotate
> > > > > each cap through its entire range while checking the surfaces very
> > > > > carefully under a good light. You may find some "spot welds" on the
> > > > > plates. The pitting caused by the arcing will make a plate more
> > > > > susceptible to future arcing due to the sharp peaks at the edges
> > > of the
> > > > > "craters". It can be difficult to smooth them out but it can be
> > > done if
> > > > > you take your time.
> > > > >
> > > > > Ken
> > > > > WA2LBI
> > > > >
> > > > > On Tue, Jul 23, 2013 at 5:10 PM, Don <ve2ud@
> > > > > <mailto:ve2ud%40travel-net.com>> wrote:
> > > > >
> > > > > > **
> > > > > >
> > > > > >
> > > > > > Mike
> > > > > > Thanks for that info
> > > > > > There is 929 volts VDC on the units 800 terminal,so the problem
> > > lies in
> > > > > > another area
> > > > > > R14 is good also
> > > > > > I did have a problem with loading and arching before the rig
> > > went silent
> > > > > >
> > > > > > 73
> > > > > > Don/Ve2ud
> > > > > >
> > > > > >
> > > > > > On 23/07/2013 3:11 PM, W5RKL wrote:
> > > > > > >
> > > > > > > Don,
> > > > > > >

> > > > > > > Don't measure the Rectifier Unit's high voltage output at
> > the "HV"
> > > > > > > > terminal. The "HV" terminal is for the "HV" metering
> > circuit, the
> > > > > > > > voltage is very low at that terminal. Measure the Rectifier
> > Unit's
> > > > > > > > actual DC high voltage at the Rectifier Unit's "800" terminal,
> > > that's
> > > > > > > > where you will see approximately 920VDC (no load voltage/standby
> > > > > > > voltage).
> > > > > > > >
> > > > > > > > If R14 on the Rectifier Unit is bad, for example it's burnt
> > open,
> > > > > > there
> > > > > > > > will be loss of bias voltage in the 830. Problems in the bias
> > > > > supply not
> > > > > > > > only affect the driver tube and the other circuits that use
> > the -C
> > > > > > > > supply, but also the final tubes. For example, loss of the
> > > bias supply
> > > > > > > > (Rectifier Unit's -C supply) can result in both final tubes
> > > conducting
> > > > > > > > to saturation levels, even in standby (transmitter is not
> > > keyed) which
> > > > > > > > will turn the final tube plate RED, not to mention that D7 can
> > > > > > also fail
> > > > > > > > adding to the loss of bias voltage from the Rectifier Unit.
> > > > > > > >
> > > > > > > > Also, ALL of the hybrid high voltage power supplies are "Voltage
> > > > > > > > Doubling" supplies. Therefore, you will not see 800 volts on the
> > > > > > > > transformer AC terminals as you might expect, the AC voltage
> > > will be
> > > > > > > > much less. I recommend you study power supplies in the ARRL
> > > > > > handbook so
> > > > > > > > you understand how power supply in general and especially
> > voltage
> > > > > > > > doubling supplies, work. You should also study capacitors as
> > well,
> > > > > > > > especially connecting capacitors in series.
> > > > > > > >
> > > > > > > > Capacitors connected in series do NOT calculate the same as
> > > > > > resistors in
> > > > > > > > series. For example, the 2 HV filter capacitors are connected in
> > > > > > series
> > > > > > > > which results in a total capacitance of "50ufd", not "200ufd"
> > > as you
> > > > > > > > might think. The following formula will calculate the total
> > > > > > capacitance
> > > > > > > > of 2 capacitors connected in series:
> > > > > > > >

> > > > > > > C1 x C2 / C1 + C2 = Tc
> > > > > > > >
> > > > > > > > In the case of the 2 HV capacitors in the Kenwood hybrids (2 x
> > > > > 100ufd at
> > > > > > > 500VDC each capacitor);
> > > > > > > >
> > > > > > > > 100 x 100 / 100 + 100 = 50ufd
> > > > > > > >
> > > > > > > > The total safe working voltage of the 2 capacitors in series is
> > > > > 1000VDC
> > > > > > > >
> > > > > > > > 500 + 500 = 1000VDC
> > > > > > > >
> > > > > > > > If 2 capacitors of different values, such as 30ufd (250VDC)
> > > and 50ufd
> > > > > > > (450VDC), are connected in series, the same formula and the same
> > > > > > > addition of the individual capacitor's working voltage is used
> > > > > > > resulting in:
> > > > > > > >
> > > > > > > > 30 x 50 / 30 + 50 = 18.75ufd
> > > > > > > >
> > > > > > > > The safe maximum working voltage is:
> > > > > > > >
> > > > > > > > 250 + 450 = 700VDC
> > > > > > > >
> > > > > > > > There is another formula to calculate the approximate voltage
> > > that is
> > > > > > > applied across each capacitor connected in series that's
> > > connected
> > > > > > to a
> > > > > > > > source voltage and that formula is:
> > > > > > > >
> > > > > > > > Cv = TC / IC x Sv
> > > > > > > >
> > > > > > > > Cv = Voltage across each capacitor
> > > > > > > > TC = Total Capacitance of the capacitors connected in series
> > > > > > > > IC = Individual Capacitance value
> > > > > > > > Sv = Source voltage
> > > > > > > >
> > > > > > > > I mean no disrespect to anyone but the above formulas are all
> > > part of
> > > > > > > what I have been referring to many times on this group as
> > learning
> > > > > > > "Basic Electronics" and every ham should have studied and
> > > thoroughly
> > > > > > > understood these topics, as well as many other topics, before
> > > > > > taking the
> > > > > > > license exam.
> > > > > > > >
> > > > > > > 73

> > > > > > > Mike W5RKL
> > > > > > > >
> > > > > > > > On 7/23/2013 11:04 AM, Don wrote:
> > > > > > > > >
> > > > > > > > > Mike
> > > > > > > > > >
> > > > > > > > > > I had my meter on dc and not ac so the 12vac is ok duh
> > > > > > > > > > Ac-800 i get 344 Ac-400--278 Ac 300-246 Ac-200-190 Ac-100-88
> > > > > > > > > > Ac-14-9,5 and HV- nil
> > > > > > > > > > The driver and the finals light up ok
> > > > > > > > > >
> > > > > > > > > > Did not say the rec board was bad,just that there was a
> > problem
> > > > > > there
> > > > > > > > > > before and looks
> > > > > > > > > > likeR14 was replaced
> > > > > > > > > >
> > > > > > > > > > 73
> > > > > > > > > > Don/Ve2ud
> > > > > > > > > >
> > > > > > > > > > On 23/07/2013 11:34 AM, Don wrote:
> > > > > > > > > >
> > > > > > > > > > Sorry Mike forgot again
> > > > > > > > > >
> > > > > > > > > > It's a ts830s
> > > > > > > > > >
> > > > > > > > > > I will print this out and get back to you
> > > > > > > > > >
> > > > > > > > > > 73
> > > > > > > > > > Don
> > > > > > > > > >
> > > > > > > > > > On 23/07/2013 11:29 AM, W5RKL wrote:
> > > > > > > > > >
> > > > > > > > > > Don,
> > > > > > > > > >
> > > > > > > > > > What hybrid are you referring to? When asking about
> > problems
> > > > > > with your
> > > > > > > > > > hybrids you must provide the model of hybrid you are
> > > > > > referring to.
> > > > > > > > > >
> > > > > > > > > > Are you saying that you measured the AC voltage on the
> > 12VAC
> > > > > > winding and
> > > > > > > > > > it's zero?
> > > > > > > > > >
> > > > > > > > > > Did you check ALL of the Rectifier Unit voltages before
> > > thinking
> > > > > > the
> > > > > > > > > > Rectifier Unit is bad?

> > > > > > > > > >
> > > > > > > > > > > Did you check to see if the driver and both final tube
> > > filaments
> > > > > > > > > are lit
> > > > > > > > > > > (Heater switch turned ON)
> > > > > > > > > >
> > > > > > > > > > > If the driver and both final tube filaments are lit and
> > > the dial
> > > > > > > lamps
> > > > > > > > > > > are illuminating then the 12VAC winding is fine.
> > > > > > > > > >
> > > > > > > > > > > The fan runs off of the 100VAC winding of the power
> > > transformer
> > > > > > > and if
> > > > > > > > > > > the fan is running then that winding is good.
> > > > > > > > > >
> > > > > > > > > > > You need to do more testing/measuring of the Rectifier
> > Unit
> > > > > > > voltages to
> > > > > > > > > > > determine whether or not one or more power supplies have
> > > failed.
> > > > > > > > > >
> > > > > > > > > > > 73
> > > > > > > > > > > Mike W5RKL
> > > > > > > > > >
> > > > > > > > > > > On 7/23/2013 9:54 AM, Don D wrote:
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > > Hi All
> > > > > > > > > >
> > > > > > > > > > > Need some help to determine if my power supply is kaput
> > > > > > > > > > > It has been tampered with before as the rectifier unit
> > > was
> > > > > > > worked
> > > > > > > > > > > before me
> > > > > > > > > > > When i turn it on,all i get is front panel lamps and fan
> > > > > > > > > > > I get no 12.6 volts on the transformer
> > > > > > > > > >
> > > > > > > > > > > 73
> > > > > > > > > > > Don/Ve2ud
> > > > > > > > >
> > > > > > > >
> > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > >
> > > > > > >
> > > > > >
> > > > > >
> > > > >
> > > > > > [Non-text portions of this message have been removed]
> > > > >

> > >
> > >
> >
> > [Non-text portions of this message have been removed]
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

43606. Re: [TS-520_820_530_830] Technical Reference Sources

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 00:17:47 UTC
From: Bob Lazarow
Topic: 43600 Message: 43606

Very nice and much appreciated...perfect addition to BAMA site LOL

Bob /WA2JAJ

On 7/24/2013 6:49 PM, roberteleazer@... wrote:
>
> I too want to thank Terry for his link to the antenna information.
>
> And in the same spirit I would like to provide the Group with a link
> to a very impressive free collection of data, specifically focused on
> vaccum tubes and older electronics but also of general use:
>
> http://www.tubebooks.org/technical_books_online.htm
>
> 73's
>
> Robert
> WB5WSV
>
>
>
> No virus found in this message.
> Checked by AVG - www.avg.com <http://www.avg.com>
> Version: 2013.0.3349 / Virus Database: 3209/6517 - Release Date: 07/24/13
>

[Non-text portions of this message have been removed]

43607. Re: TS 530S No display or receive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 00:37:02 UTC
From: k5hfg
Topic: 43427 Message: 43607

Good evening all,

Thought I would give closure to this post. I have completed all checks on this rig and the only thing out of spec was the IF. After making those adjustments it is up and running FB. Receive sounds terrific. I did get a little bit more from alignment but not a whole S unit on any band. Everything but the PLL and Counter boards look factory installed and the final tank is spotless. No new parts anywhere that I can see. I am of the opinion that the 2 boards were cannibalized for another rig and the old boards placed back in. I did find half of the screws missing when I removed the PLL board. So, all in all I have had a good week working on this Hybrid and finally got to understand the PLL circuit. This was the only board I had no experience on. Thanks to all who offered their opinions and thanks to Terry for following me thru this. Great experience and another old girl is back on her feet. I put a fresh painted cabinet on her and she shines like new. Just one scuff mark on the upper right corner of the bezel. I may do a little touch up there to make it perfect. Forgot to mention, the narrow SSB filter works fine but I can't stand to listen to it. Can not imagine anyone using it but that is just my ear's opinion.
73, Don K5HFG

43608. Re: TS 530S No display or receive

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 01:38:30 UTC
From: Terry Wagoner
Topic: 43427 Message: 43608

Take all kinds of folks in this world. A note or tag on the boards would have helped. I generally dont store my parts harvesting boards in a rig. That would present a challenge to any future owner.

Nice work Don. Enjoy. Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "k5hfg" <dlbowders@...> wrote:
>
> Good evening all,
>
> Thought I would give closure to this post. I have completed all checks on this rig and the only thing out of spec was the IF. After making those adjustments it is up and running FB. Receive sounds terrific. I did get a little bit more from alignment but not a whole S unit on any band. Everything but the PLL and Counter boards look factory installed and the final tank is spotless. No new parts anywhere that I can see. I am of the opinion that the 2 boards were cannibalized for another rig and the old boards placed back in. I did find half of the screws missing when I removed the PLL board. So, all in all I have had a good week working on this Hybrid and finally got to understand the PLL circuit. This was the only board I had no experience on. Thanks to all who offered their opinions and thanks to Terry for following me thru this. Great experience and another old girl is back on her feet. I put a fresh painted cabinet on her and she shines like new. Just one scuff mark on the upper right corner of the bezel. I may do a little touch up there to make it perfect. Forgot to mention, the narrow SSB filter works fine but I can't stand to listen to it. Can not imagine anyone using it but that is just my ear's opinion.
> 73, Don K5HFG
>

43609. Re: [TS-520_820_530_830] Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 01:58:13 UTC
From: Don
Topic: 43556 Message: 43609

Terry
First i must say excellent instructions.
I had to think about the measurement across AC14,but the brain kicked in
and said both leeds across it.
So the results are
Across AC14=15.5
14A=19.5
12dc output post on AF board= NIL
Next step
73

Don/Ve2ud

On 24/07/2013 8:08 PM, Terry Wagoner wrote:
>
> That 12vdc point is the input for the SG relay. If you have no
> regulated 12vdc from the Audio board will have no 12vdc here.
>
> You need 14A voltage from the rectifier board to the Audio Board.
> Measure at the 14A terminal. If good there then measure at the Audio
> Board at the 14A terminal. If bad there then check the AC input
> voltage across AC 14 terminals to see of transformer secondary winding
> is good. If have ac then check the bridge rectifier diodes.
>
> Voltage at 14A is 120 hz AC from the bridge rectifier on the HV Rec
> board. It has not been filtered yet by the C-R-C filter on the Audio
> Board.
>
> If you have approx 17.9vdc at the 14A terminal on the Audio Board and
> no 12vdc at the 12vdc terminal post on Audio board you have a problem
> with the series pass regulator circuit. Could be bad series pass
> transistor Q34, but need to troubleshoot to determine that.
>
> Here are some approx voltages:
>
> 1. Across AC14 = 15.4vac
> 2. 14A to chassis ground = 17.9vdc
> 3. 12 dc output post on AF board = 11.9vdc
>
> Note: You may want to consider cutting a piece of cardboard (off back
> of yellow 8.5 x 11 writing pad for example) and lay it over the HV
> filter cap area while taking these voltages so you do not inadvertanty
> touch or drop something in that area. I have a piece of lexan that I
> use from time to time to cover this area and the HV rect board.
>

> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> > Terry
> > I downloaded that color schematic and it's a lot better on my eye's to
> > follow.
> > I measured all the boards for the dc voltages and there is none.That
> > would explain why the rig will not fire up.
> > I know all the rectifier didoes are good as i tested them to make sure.
> > Is the 12 volts produce from the rec board?.I see a spot on the rec
> > board marked 12,but i get no reading from it.
> > 73
> > Don/Ve2ud
> >
> >
> >
> >
> >
> >
> >
> > \
> > Don wrote: On 23/07/2013 7:11 PM, Terry Wagoner wrote:>> Have you gone
> > to audio board and measured the 12vdc, 9vdc and 3.6vdc > RF-1 voltages
> > yet. If not it is next logical step. OK to measure power
> > >
> > > > supply voltages, but the radio likes to see these voltages where
> they
> > > > are used at and not where they are produced at.
> > > >
> > > > If all the low voltage supplies are good then I would focus on
> > > > restoring the Receiver first and not the Transmitter. Arcing
> over the
> > > > Plate load capacitor plates will not cause no RX mode. No reason to
> > > > open PA cage at this juncture.
> > > >
> > > > When you say no Receive that means a lot of different things to
> > > > different people. No audio?, no off air signals?, no marker signal?.
> > > > Pretty easy to check the major receiver blocks after you confirm low
> > > > voltage regulators are working.
> > > >
> > > > You can start at front end or at audio output. Usually easiest
> to see
> > > > if audio stage is working. If you do not have an audio generator or
> > > > signal tracer you can use just about any audio source you have (MP-3
> > > > player, lap top etc to inject audio signal at the AF Gain pot to
> test
> > > > the Audio stage.
> > > >

> > > > As a rule I always get receiver going and then move on to the
> > > > transmitter. Just my approach.
> > > >
> > > > Terry K9TW
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > > > >
> > > > > Hi Ken
> > > > >
> > > > > Thanks for your reply
> > > > > I did bring it back from the dead with Terry's help,but i
> turned it on
> > > > > the other day and all went silent[no readout,no sound]
> > > > > I thought maybe the power supply had shorted out,but that is
> not the
> > > > > case as per mike's help.
> > > > > This rig has been not quite a nightmare,but a real learning
> > > > > experience.Ebay special.
> > > > > As i do have a few Hybrid rigs i can take my time with it.
> > > > > I started the teck stuff very late in life as i was mostly a DX
> > > > > chaser,but i now enjoy this part of the hobby more than operating.
> > > > > I think the problem might lie in the final cage area,,but will
> take my
> > > > > time for sure,as time i have
> > > > >
> > > > > 73
> > > > > Don/Ve2ud
> > > > >
> > > > >
> > > > >
> > > > >
> > > > > On 23/07/2013 5:39 PM, Ken Winterling wrote:
> > > > > >
> > > > > > Don,
> > > > > >
> > > > > > If you had arcing "with loading" I also suggest you check the
> > > > variable
> > > > > > caps
> > > > > > on the load, plate, etc. to make sure none of the movable plates
> > > > short to
> > > > > > the stationary plates during any part of their rotation. You
> need
> > > > rotate
> > > > > > each cap through its entire range while checking the
> surfaces very
> > > > > > carefully under a good light. You may find some "spot welds"
> on the

> > > > > > plates. The pitting caused by the arcing will make a plate more
> > > > > > susceptible to future arcing due to the sharp peaks at the edges
> > > > of the
> > > > > > "craters". It can be difficult to smooth them out but it can be
> > > > done if
> > > > > > you take your time.
> > > > > >
> > > > > > Ken
> > > > > > WA2LBI
> > > > > >
> > > > > > On Tue, Jul 23, 2013 at 5:10 PM, Don <ve2ud@
> > > > > > <mailto:ve2ud%40travel-net.com>> wrote:
> > > > > >
> > > > > > > **
> > > > > >
> > > > > >
> > > > > > > Mike
> > > > > > > Thanks for that info
> > > > > > > There is 929 volts VDC on the units 800 terminal,so the
> problem
> > > > lies in
> > > > > > > another area
> > > > > > > R14 is good also
> > > > > > > I did have a problem with loading and arching before the rig
> > > > went silent
> > > > > > >
> > > > > > > 73
> > > > > > > Don/Ve2ud
> > > > > > >
> > > > > > >
> > > > > > > On 23/07/2013 3:11 PM, W5RKL wrote:
> > > > > > >
> > > > > > > Don,
> > > > > > >
> > > > > > > Don't measure the Rectifier Unit's high voltage output at
> > > the "HV"
> > > > > > > terminal. The "HV" terminal is for the "HV" metering
> > > circuit, the
> > > > > > > voltage is very low at that terminal. Measure the Rectifier
> > > Unit's
> > > > > > > actual DC high voltage at the Rectifier Unit's "800"
> terminal,
> > > > that's
> > > > > > > where you will see approximately 920VDC (no load
> voltage/standby
> > > > > > > voltage).
> > > > > > >
> > > > > > > If R14 on the Rectifier Unit is bad, for example it's burnt
> > > open,
> > > > > > > there

> > > > > > > > will be loss of bias voltage in the 830. Problems in the
> bias
> > > > > > supply not
> > > > > > > > only affect the driver tube and the other circuits that use
> > > the -C
> > > > > > > > supply, but also the final tubes. For example, loss of the
> > > > bias supply
> > > > > > > > (Rectifier Unit's -C supply) can result in both final tubes
> > > > conducting
> > > > > > > > to saturation levels, even in standby (transmitter is not
> > > > keyed) which
> > > > > > > > will turn the final tube plate RED, not to mention that
> D7 can
> > > > > > also fail
> > > > > > > > adding to the loss of bias voltage from the Rectifier Unit.
> > > > > > > >
> > > > > > > > Also, ALL of the hybrid high voltage power supplies are
> "Voltage
> > > > > > > Doubling" supplies. Therefore, you will not see 800
> volts on the
> > > > > > > transformer AC terminals as you might expect, the AC voltage
> > > > will be
> > > > > > > much less. I recommend you study power supplies in the ARRL
> > > > > > handbook so
> > > > > > > you understand how power supply in general and especially
> > > voltage
> > > > > > > doubling supplies, work. You should also study
> capacitors as
> > > well,
> > > > > > > especially connecting capacitors in series.
> > > > > > >
> > > > > > > Capacitors connected in series do NOT calculate the same as
> > > > > > resistors in
> > > > > > > series. For example, the 2 HV filter capacitors are
> connected in
> > > > > series
> > > > > > > which results in a total capacitance of "50ufd", not
> "200ufd"
> > > as you
> > > > > > > might think. The following formula will calculate the total
> > > > > capacitance
> > > > > > > of 2 capacitors connected in series:
> > > > > > >
> > > > > > > C1 x C2 / C1 + C2 = Tc
> > > > > > >
> > > > > > > In the case of the 2 HV capacitors in the Kenwood
> hybrids (2 x
> > > > > 100ufd at
> > > > > > > 500VDC each capacitor);
> > > > > > >

> > > > > > > > 100 x 100 / 100 + 100 = 50ufd
> > > > > > > > >
> > > > > > > > > The total safe working voltage of the 2 capacitors in
> series is
> > > > > > 1000VDC
> > > > > > > > >
> > > > > > > > > 500 + 500 = 1000VDC
> > > > > > > > >
> > > > > > > > > If 2 capacitors of different values, such as 30ufd (250VDC)
> > > > and 50ufd
> > > > > > > > > (450VDC), are connected in series, the same formula and
> the same
> > > > > > > > > addition of the individual capacitor's working voltage
> is used
> > > > > > > > > resulting in:
> > > > > > > > >
> > > > > > > > > 30 x 50 / 30 + 50 = 18.75ufd
> > > > > > > > >
> > > > > > > > > The safe maximum working voltage is:
> > > > > > > > >
> > > > > > > > > 250 + 450 = 700VDC
> > > > > > > > >
> > > > > > > > > There is another formula to calculate the approximate
> voltage
> > > > that is
> > > > > > > > > applied across each capacitor connected in series that's
> > > > connected
> > > > > > > > to a
> > > > > > > > > source voltage and that formula is:
> > > > > > > > >
> > > > > > > > > Cv = TC / IC x Sv
> > > > > > > > >
> > > > > > > > > Cv = Voltage across each capacitor
> > > > > > > > > TC = Total Capacitance of the capacitors connected in series
> > > > > > > > > IC = Individual Capacitance value
> > > > > > > > > Sv = Source voltage
> > > > > > > > >
> > > > > > > > > I mean no disrespect to anyone but the above formulas
> are all
> > > > part of
> > > > > > > > > what I have been referring to many times on this group as
> > > learning
> > > > > > > > > "Basic Electronics" and every ham should have studied and
> > > > thoroughly
> > > > > > > > > understood these topics, as well as many other topics,
> before
> > > > > > taking the
> > > > > > > > > license exam.
> > > > > > > > >
> > > > > > > > > 73

> > > > > > > > Mike W5RKL
> > > > > > > > >
> > > > > > > > > On 7/23/2013 11:04 AM, Don wrote:
> > > > > > > > > >
> > > > > > > > > > Mike
> > > > > > > > > > >
> > > > > > > > > > I had my meter on dc and not ac so the 12vac is ok duh
> > > > > > > > > > Ac-800 i get 344 Ac-400--278 Ac 300-246 Ac-200-190
> Ac-100-88
> > > > > > > > > > Ac-14-9,5 and HV- nil
> > > > > > > > > > The driver and the finals light up ok
> > > > > > > > > > >
> > > > > > > > > > Did not say the rec board was bad,just that there was a
> > > problem
> > > > > > > > there
> > > > > > > > > > before and looks
> > > > > > > > > > likeR14 was replaced
> > > > > > > > > > >
> > > > > > > > > > 73
> > > > > > > > > > Don/Ve2ud
> > > > > > > > > > >
> > > > > > > > > > On 23/07/2013 11:34 AM, Don wrote:
> > > > > > > > > > >
> > > > > > > > > > Sorry Mike forgot again
> > > > > > > > > > >
> > > > > > > > > > It's a ts830s
> > > > > > > > > > >
> > > > > > > > > > I will print this out and get back to you
> > > > > > > > > > >
> > > > > > > > > > 73
> > > > > > > > > > Don
> > > > > > > > > > >
> > > > > > > > > > On 23/07/2013 11:29 AM, W5RKL wrote:
> > > > > > > > > > >
> > > > > > > > > > Don,
> > > > > > > > > > >
> > > > > > > > > > What hybrid are you referring to? When asking about
> > > problems
> > > > > > > > with your
> > > > > > > > > > hybrids you must provide the model of hybrid you are
> > > > > > referring to.
> > > > > > > > > > >
> > > > > > > > > > Are you saying that you measured the AC voltage on
> the
> > > 12VAC
> > > > > > > > winding and
> > > > > > > > > > it's zero?
> > > > > > > > > > >
> > > > > > > > > > Did you check ALL of the Rectifier Unit voltages
> before

> > > > thinking
> > > > > > > the
> > > > > > > > > > > Rectifier Unit is bad?
> > > > > > > > > > >
> > > > > > > > > > > Did you check to see if the driver and both final tube
> > > > filaments
> > > > > > > > > are lit
> > > > > > > > > > > (Heater switch turned ON)
> > > > > > > > > > >
> > > > > > > > > > > If the driver and both final tube filaments are
> lit and
> > > > the dial
> > > > > > > lamps
> > > > > > > > > > > are illuminating then the 12VAC winding is fine.
> > > > > > > > > > >
> > > > > > > > > > > The fan runs off of the 100VAC winding of the power
> > > > transformer
> > > > > > > and if
> > > > > > > > > > > the fan is running then that winding is good.
> > > > > > > > > > >
> > > > > > > > > > > You need to do more testing/measuring of the
> Rectifier
> > > Unit
> > > > > > > voltages to
> > > > > > > > > > > determine whether or not one or more power
> supplies have
> > > > failed.
> > > > > > > > > > >
> > > > > > > > > > > 73
> > > > > > > > > > > Mike W5RKL
> > > > > > > > > > >
> > > > > > > > > > > On 7/23/2013 9:54 AM, Don D wrote:
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > Hi All
> > > > > > > > > > >
> > > > > > > > > > > Need some help to determine if my power supply
> is kaput
> > > > > > > > > > > It has been tampered with before as the
> rectifier unit
> > > > was
> > > > > > worked
> > > > > > > > > > > before me
> > > > > > > > > > > When i turn it on,all i get is front panel lamps
> and fan
> > > > > > > > > > > I get no 12.6 volts on the transformer
> > > > > > > > > > >
> > > > > > > > > > > 73
> > > > > > > > > > > Don/Ve2ud
> > > > > > >

> > > > > >
> > > > > > [Non-text portions of this message have been removed]
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> > > > > >
> > > > > >
> > > > > > [Non-text portions of this message have been removed]
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> > > >
> > > [Non-text portions of this message have been removed]
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> > >
> > > [Non-text portions of this message have been removed]
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>

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43610. Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 01:48:38 UTC
From: buck
Topic: 43555 Message: 43610

Terry... I didn't intend to "step on anyone's toes"...

Just thought that a more complete description of the EDZ would possibly encourage some of these guys to build a simple, yet very good, antenna...

Truth of the matter is that I enjoy this forum, and when my old TS-830S is in need of repair or maintenance, this is the first place I come looking for pertinent information...

==========
Now, a few comments on your and others comments
==========
Re: Jim S comment: "Height is really the prime determining factor on how well you are going to "reach out" with almost any kind of antenna."

A true statement Jim... Height is the "name of the game" when it comes to antennas...
==========
With Jim's comment in mind, I will comment on the following statement:

Re: Terry's comment: "No need to download EZnec
http://www.tomochka.com/na7u/doublet/w4rnlbackup.html "

Yep... the woods is full of published antenna patterns... but NONE of them will match your particular set of antenna erecting problems... Keep in mind Jim's statement about height... You will not get those published antenna patterns unless your antenna is at least a half-wavelength above grade...

And that is where EZNEC "shines"... You can enter YOUR particular parameters into EZNEC and see how the antenna will radiate when cut to fit your lot, and stretched between your sky-hooks...
==========
Re: Terry's comment: Glad it is working for you and fun to break the pile ups.

Terry... I have been licensed for about 60 years... I have used almost any kind of antenna you can imagine... For many years I used a 1/4 wave inverted L on 160 and a full sized 1/2 wave dipole on 80/75... But, I was primarily a "beam and tower" guy, with stacked mono-band yagis atop a 70' tower. (3 elements on 20, 3 elements on 15 and 4 elements on 10 meters... In the early 90's one of those Florida hurricanes turned the yagis into junk and I erected a two element tri-band quad in their place...

But, Alas, I got too old to climb towers... and I put up a 20 meter EDZ...

That is when the real fun started... I found that the EDZ worked so good on 160, 80 and 75 that I took down the inverted L and the 80/75 meter dipole... The EDZ also worked very well on 40 and 30 meters, and extremely well on 20 meters and higher bands...
==========
Re: Terry's comment" I forgot to add this which discusses the 88 foot antenna as a "system"

and not just the flat top. Have to be able to get the power to the efficient radiator.

Yep... and the "system" includes the antenna itself, transmission lines, tuners, baluns, etc..

My particular system is an 86' flat-top of #12 stranded wire, 45' high, center-fed with 57' of 300 ohm TV twin-lead connected to a Walt Maxwell bead-balun which is mounted on the exterior wall of my house and connected to my home-brew pi-net tuner using a 6 foot length of RG-303...
==========
Re: Terry's comments: "Do you tune slightly off the pile up and key rig and make your on air adjustments?"
"Curious how you load into it and adjust tuner and the 830 Pi-network as you move around the band looking for the pile ups to pick off."

I seldom tune-up "on the air"... Other than when adjusting your tuner for a brand new antenna setup, tuning up "on the air" is just not necessary...

1.) When I use an antenna for the first time, with the "Bird" in the line, and with the 830 powered down to QRP and tuned to the 50 ohm dummy load, I switch from the dummy load to the antenna and adjust the tuner for lowest swr at the point in the band where I usually operate... I then record the settings of the rotary inductor, the input capacitor and the output capacitor for each band that I intend to operate... (Note: These settings are just for initial adjustment, and will change when the 830 is powered up to 100 watts output)

2.) Next, I tune the 830 to 100 watts output into the 50 ohm home-brew dummy load... (The tuner controls are set to the points determined in step 1.) When switching from the dummy-load to the antenna system, I DO NOT RETUNE the 830 as it is tuned for a perfect 50 ohm match... If any "touch-up" is needed, I do it with the tuner controls, which is, in effect, adjusting the tuner to the 50 ohms that the 830 likes to "see"... I then record the "touched-up" tuner settings for each band...

For example: If I am going to operate on 20 meters, I set the tuner controls to the "touched-up" settings for the 20 meter band (in my case, 14050kc)... I then put the TS-830 VFO on 14050kc and tune it for 100 watts output into my dummy load... (about 225 mils of "dipped" plate current)... I then switch the output of the TS830 from the dummy load to the antenna system... No further adjustment is neccessary... No "on the air" tune-up is necessary... I can QSY from 14001 to 14100 without re-tuning the TS-830, or the tuner... The SWR stays below 1.2:1
==========
Re: Terry's comment: "Wonder how it compares to three element tri-band yagi on receive?"

Actually, it compares fairly well... Of course the EDZ doesn't have the ability to rotate and doesn't have the FB or FS ratio of the yagi, but it "hears" very well, and doesn't have the expense or maintenance problems associated with rotating a large antenna on a 70 foot tower... Also, the yagi is virtually useless until the antenna "bears" on the DX station QTH... I have many times experienced the frustration of listening to some guy with a "pea-shooter" pick off the DX stations while I was waiting for my antenna to come around to bearing...
==========

Yes... I am "long-winded" but just trying to respond to Terry's queries...

And I realize that someone has already complained about having to read about "antennas" on the forum...

But, all things considered, it is good to have a report like Barry's... And, it just might encourage some of these other guys to know that it is still possible to build antennas and equipment that will "work the world"...

buck K7WN

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Glad it is working for you and fun to break the pile ups.
>
> Curious how you load into it and adjust tuner and the 830 Pi-network as you move around the band looking for the pile ups to pick off.
>
> Do you tune slightly off the pile up and key rig and make your on air adjustments?
>
> Wonder how it compares to three element tri-band yagi on receive?
>
> No need to download EZnec
> http://www.tomochka.com/na7u/doublet/w4rnlbackup.html
>
> Terry K9TW
>

43611. Re: [TS-520_820_530_830] Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 02:09:01 UTC
From: Don Cunningham
Topic: 43556 Message: 43611

Don,

Terry answered that one in the message you attached. He said check around the series pass transistor (Q34) to see where the voltage disappears.
73,
Another Don, lurking and trying to learn, WB5HAK

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.3349 / Virus Database: 3209/6518 - Release Date: 07/24/13

[Non-text portions of this message have been removed]

43612. Re: [TS-520_820_530_830] Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 02:25:19 UTC
From: Don
Topic: 43556 Message: 43612

He said

If you have approx 17.9vdc at the 14A terminal on the Audio Board and no
12vdc at the 12vdc terminal post on Audio board you have a problem with
the series pass regulator circuit. Could be bad series pass transistor
Q34, but need to troubleshoot to determine that.
So will wait to see what he has to say.
73
Don

On 24/07/2013 10:09 PM, Don Cunningham wrote:
>
> Don,
>

> Terry answered that one in the message you attached. He said check
> around the series pass transistor (Q34) to see where the voltage
> disappears.
> 73,
> Another Don, lurking and trying to learn, WB5HAK
>
> -----
> No virus found in this message.
> Checked by AVG - www.avg.com
> Version: 2013.0.3349 / Virus Database: 3209/6518 - Release Date: 07/24/13
>
> [Non-text portions of this message have been removed]
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43613. Re: [TS-520_820_530_830] Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 02:28:09 UTC
From: Don Cunningham
Topic: 43556 Message: 43613

I'm awaiting that too, but thought it might give you something to check till he gets back :>)
73,
Don

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.3349 / Virus Database: 3209/6518 - Release Date: 07/24/13

[Non-text portions of this message have been removed]

43614. Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 02:35:51 UTC
From: Barry
Topic: 43555 Message: 43614

I am sorry to have stirred such a pot - but thanks to everybody for a great education. I am learning a lot every day!

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@...> wrote:
>
> I worked the Czech Republic, France and Poland last night on the 820 after researching several different dipoles, and with $12 of 14 gauge wire. 44' for each leg and maybe 25' or so for feedline allowed me to throw it up over the house and spread it out pretty well over my front and back yard, and it's up about 14' or so.
>
> That's my first homebrew antenna, and it's not perfect - SWR was a little high, so I'm going to keep working with it - but the very first contact was the Czech Republic. He gave me a 5-7, and I'd have to give him no better than that... but I was very pleased to have done this well last night.
>
> I think my 820 is in better shape at 30+ years old than I was.
>
> Barry
> KK4RXN
> Jeremiah 29:11-13 / John 3:16
>

43615. Re: [TS-520_820_530_830] Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 02:39:44 UTC
From: Don Cunningham
Topic: 43556 Message: 43615

Actually I didn't state that well in my last reply. What I read Terry to say was that the series pass transistor, Q34, might be bad, but you'd have to troubleshoot to see, I just think that he meant that the transistor MIGHT be bad, but could be something else in that area. I just took that to mean to check around the pass transistor circuitry. Maybe not though, just my impression.
73,
Don

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.3349 / Virus Database: 3209/6518 - Release Date: 07/24/13

[Non-text portions of this message have been removed]

43616. Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 03:07:44 UTC
From: Terry Wagoner
Topic: 43556 Message: 43616

Well the problem is that it is not easy to take voltage readings from the component side of the board to determine what has failed. Here are some possibilities that come to mind:
1. Open L5 choke- never seen one. If you are very careful you can get on the Emitter lead of Q34 and see if you have approx 18.0 vdc. If you do then choke is not open. If C83 was shorted and pulling down voltage it should hurt 14A rectifier diodes on HV Rect board. To take component side EBC or DSG readings I use a corsage pin that has a white pearl ball on the top and is about 3 inches long. I heat shrink them and leave room at top to clip on a mini-grabber test lead and leave just the sharp tipped point exposed on other end. Can do this with any small diameter sharp pin.
2. Next still being careful not to short transistor leads or short to aluminum heat sink measure the Base of Q34. It should be approx 17.25vdc
3. I have seen failed D26 reference diodes. Output voltage will usually drop to below 1 volt if this occurs.
4. Never seen any of the feedback transistors or error amp transistor bad.
5. With rig off measure resistance from 12vdc output terminal post to chassis ground. Should see approx 40 ohms.

Really after this would need to fold the board back and remove Q34 to test it. Would also want to check D26.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
>
> He said
>
> If you have approx 17.9vdc at the 14A terminal on the Audio Board and no
> 12vdc at the 12vdc terminal post on Audio board you have a problem with
> the series pass regulator circuit. Could be bad series pass transistor
> Q34, but need to troubleshoot to determine that.
> So will wait to see what he has to say.
> 73
> Don
>
>
>
>
> On 24/07/2013 10:09 PM, Don Cunningham wrote:
> >
> > Don,
> >
>
>
>
> > Terry answered that one in the message you attached. He said check

> > around the series pass transistor (Q34) to see where the voltage
> > disappears.
> > 73,
> > Another Don, lurking and trying to learn, WB5HAK
> >
> > -----
> > No virus found in this message.
> > Checked by AVG - www.avg.com
> > Version: 2013.0.3349 / Virus Database: 3209/6518 - Release Date: 07/24/13
> >
> > [Non-text portions of this message have been removed]
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43617. TS-520s VOX flipping on and off in CW recieve

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 04:59:55 UTC
From: JDPuffer
Topic: 43617 Message: 43617

I recently hooked up my 520s after realizing that it had the 500Hz CW filter installed. I am having issued with the vox rapidly switching on and off while in receive mode in CW. It does not do this when switched to the dummy load, or when the volume is very quiet, or when in side band. I don't have a microphone plugged in, and it does it whether the CW key is plugged in or not. I've fiddled with the VOX adjustment knobs and nothing seems to affect it at all.

Any advice???

Carl -
N8FU

43618. Re: [TS-520_820_530_830] Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 11:25:21 UTC
From: Don
Topic: 43556 Message: 43618

Hi Don
No problem,it's just i don't want to get ahead of the instructor.
First i will remove the board and do a inspection on it first,as in
solder joints,broken wire,ect
and then go with Terry's recommendations.

73
Don/Ve2ud.

On 24/07/2013 10:39 PM, Don Cunningham wrote:
>
> Actually I didn't state that well in my last reply. What I read Terry
> to say was that the series pass transistor, Q34, might be bad, but
> you'd have to troubleshoot to see, I just think that he meant that the
> transistor MIGHT be bad, but could be something else in that area. I
> just took that to mean to check around the pass transistor circuitry.
> Maybe not though, just my impression.
> 73,
> Don
>
> -----
> No virus found in this message.
> Checked by AVG - www.avg.com
> Version: 2013.0.3349 / Virus Database: 3209/6518 - Release Date: 07/24/13
>
> [Non-text portions of this message have been removed]
>
>

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43619. Re: Worked Czech Republic, France and Poland with the 820 on $12 of wire

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 12:04:24 UTC
From: Terry Wagoner
Topic: 43555 Message: 43619

Buck:

Mike (moderator) has asked us to stop this thread so very quickly:

1. Glad to see you are using a look up table to facilitate ability to change bands and QSY without making full power on air matching unit adjustments. Good practice and I hope everyone new and old alike follows your lead.

2. My comment about shortened multi-band antennas in general representing a compromise relative to single band full size dipoles stands. I am not talking about a stand alone 20 meter EZD antenna.

3. I did not say that 88' or 44' multi-band antennas do not result in EDZ length on either side of the center insulator which results in a good bi-directional antenna on the highest band (20 and 10 meters).

4. It appeared to me that the builder was trying to model a variation of the NorCal QRP club multi-band antenna that uses speaker wire and had not set out to build a 20 meter EDZ. I was trying to help him improve his design. Glad to see he was trying this antenna and home building and not buying a ready built dipole.

5. Here is what Cebik himself said about the low band compromise:

"The 88' doublet offers flexibility and reliability if we are willing to dust off that old link-coupled tuner and invest in some high quality parallel transmission line.....
However, do not develop high expectations from 80 and 75 from the short wire element and possible line losses. However, as a back-up antenna or array, the 88' length may prove serviceable as a single compromise length with determinate pattern directions."

Updated 04-14-2000, 11-01-2004, 09-08-2005. ï¿½ L. B. Cebik, W4RNL. This item first appeared in volume 2 of the Top Band Anthology, pp. 19-33.

6. I did not find in any of Cebiks writings that he discussed the 80/75 NVIS characteristics.

I will be happy to have further discussion between interested parties off list as we all have email. Although discussing antennas and VSWR with hams is tantamount to venturing into politics and religion.

Sorry Mike no more from me.

Terry K9TW

>
>

43620. Re: [TS-520_820_530_830] TS-520s VOX flipping on and off in CW recieve

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 12:12:51 UTC
From: W5RKL
Topic: 43617 Message: 43620

Carl,

Have you tried turning the CW sidetone volume down, VR2 on the AF Unit, to see if that helps the problem? Try cleaning VR2 then adjust it for a normal sidetone in the speaker while keying the 520 in CW mode.

Mike W5RKL

On 7/24/2013 11:59 PM, JDPuffer wrote:
>
> I recently hooked up my 520s after realizing that it had the 500Hz CW
> filter installed. I am having issued with the vox rapidly switching on
> and off while in receive mode in CW. It does not do this when switched
> to the dummy load, or when the volume is very quiet, or when in side
> band. I don't have a microphone plugged in, and it does it whether the
> CW key is plugged in or not. I've fiddled with the VOX adjustment
> knobs and nothing seems to affect it at all.
>
> Any advice???
>
> Carl -
> N8FU
>
>

[Non-text portions of this message have been removed]

43621. Re: [TS-520_820_530_830] TS-520s VOX flipping on and off in CW recieve

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 12:29:03 UTC
From: W5RKL
Topic: 43617 Message: 43621

I forgot to mention that VOX DELAY is enabled in CW mode but VOX GAIN
and ANTI VOX are disable in CW mode. That is why the symptoms don't
change by adjusting ANTI VOX and VOX GAIN while in CW mode.

Mike W5RKL

On 7/25/2013 7:12 AM, W5RKL wrote:
>
> Carl,
>
> Have you tried turning the CW sidetone volume down, VR2 on the AF Unit,
> to see if that helps the problem? Try cleaning VR2 then adjust it for a
> normal sidetone in the speaker while keying the 520 in CW mode.
>
> Mike W5RKL
>
> On 7/24/2013 11:59 PM, JDPuffer wrote:
> >
> > I recently hooked up my 520s after realizing that it had the 500Hz CW
> > filter installed. I am having issued with the vox rapidly switching on
> > and off while in receive mode in CW. It does not do this when switched
> > to the dummy load, or when the volume is very quiet, or when in side
> > band. I don't have a microphone plugged in, and it does it whether the
> > CW key is plugged in or not. I've fiddled with the VOX adjustment
> > knobs and nothing seems to affect it at all.
> >
> > Any advice???
> >
> > Carl -
> > N8FU
> >
> >
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

43622. Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 13:17:51 UTC
From: Terry Wagoner
Topic: 43556 Message: 43622

If your visual inspection does not reveal any open traces etc then maybe it would be best if you just replace Q34 and D26 while board is folded over. If you find D26 has shorted check R132 to make sure it hasnt shorted. More likely to find it drifted high.

I dont normally recommend changing parts that have not been proven to be bad but may be easier than powering the board while folded over and taking voltage readings? You can run board like this just keep AF gain down and dont run too long as you will have lost some heat sinking. Dont want to damage Q4 AF output chip.

Also, might want to consider replacing C84, C83, and C81 while you are there.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Hi Don
> No problem,it's just i don't want to get ahead of the instructor.
> First i will remove the board and do a inspection on it first,as in
> solder joints,broken wire,ect
> and then go with Terry's recommendations.
>
> 73
> Don/Ve2ud.
>
>
>
>
>
> On 24/07/2013 10:39 PM, Don Cunningham wrote:
> >
> > Actually I didn't state that well in my last reply. What I read Terry
> > to say was that the series pass transistor, Q34, might be bad, but
> > you'd have to troubleshoot to see, I just think that he meant that the
> > transistor MIGHT be bad, but could be something else in that area. I
> > just took that to mean to check around the pass transistor circuitry.
> > Maybe not though, just my impression.
> > 73,
> > Don
> >
> > -----
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> > Checked by AVG - www.avg.com
> > Version: 2013.0.3349 / Virus Database: 3209/6518 - Release Date: 07/24/13
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43623. Re: [TS-520_820_530_830] Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 15:05:16 UTC
From: Don
Topic: 43556 Message: 43623

Terry
As those zener's can act like a fuse,i took D26 out and tested it.It tested fine,so i reinstalled it
and tested for 12 volts again,and checked the base of Q34 and both were fine.
I did not realize because i had the rig upside down that the rig had came back on,because i had no audio i could not hear it.
Maybe just resoldering the D-26 woke it up,but all the bottom of the board looked pretty good.

I have rechecked the connectors but still no audio yet.

Don/Ve2ud

On 25/07/2013 9:17 AM, Terry Wagoner wrote:
>
> If your visual inspection does not reveal any open traces etc then
> maybe it would be best if you just replace Q34 and D26 while board is
> folded over. If you find D26 has shorted check R132 to make sure it
> hasnt shorted. More likely to find it drifted high.
>
> I dont normally recommend changing parts that have not been proven to
> be bad but may be easier than powering the board while folded over and
> taking voltage readings? You can run board like this just keep AF gain
> down and dont run too long as you will have lost some heat sinking.
> Dont want to damage Q4 AF output chip.
>
> Also, might want to consider replacing C84, C83, and C81 while you are
> there.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> > Hi Don
> > No problem,it's just i don't want to get ahead of the instructor.
> > First i will remove the board and do a inspection on it first,as in
> > solder joints,broken wire,ect
> > and then go with Terry's recommendations.
> >
> > 73
> > Don/Ve2ud.
> >
> >
> >

> >
> >
> > On 24/07/2013 10:39 PM, Don Cunningham wrote:
> > >
> > > Actually I didn't state that well in my last reply. What I read Terry
> > > to say was that the series pass transistor, Q34, might be bad, but
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> > > transistor MIGHT be bad, but could be something else in that area. I
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43624. Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 15:24:30 UTC
From: Terry Wagoner
Topic: 43556 Message: 43624

So you are telling me you now have regulated 12vdc, regulated 9vdc and 3.6vdc RF-1 available on the Audio Board and no output from the Speaker?

This really sounds like a loose molex connection, dirty molex connection, bad solder joint at molex connector pins, cracked foil at molex connector causing an intermittent condition.

Do you have CW side tone in speaker if not what about headphones?

With just a few points of audio injection can find where losing it. Can start at Speaker and work backwards toward Produce Detector input or work from Product Detector input toward Speaker.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Terry
> As those zener's can act like a fuse,i took D26 out and tested it.It
> tested fine,so i reinstalled it
> and tested for 12 volts again,and checked the base of Q34 and both were
> fine.
> I did not realize because i had the rig upside down that the rig had
> came back on,because i had no audio i could not hear it.
> Maybe just resoldering the D-26 woke it up,but all the bottom of the
> board looked pretty good.
>
> I have rechecked the connectors but still no audio yet.
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> Don/Ve2ud
>
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> On 25/07/2013 9:17 AM, Terry Wagoner wrote:
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> > I dont normally recommend changing parts that have not been proven to
> > be bad but may be easier than powering the board while folded over and
> > taking voltage readings? You can run board like this just keep AF gain
> > down and dont run too long as you will have lost some heat sinking.
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> > Also, might want to consider replacing C84, C83, and C81 while you are
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> > Terry K9TW
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> > --- In TS-520_820_530_830@yahoogroups.com
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43625. Re: [TS-520_820_530_830] Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 15:38:31 UTC
From: Don
Topic: 43556 Message: 43625

Terry
I still have to check the rest of the voltages,as it's such a nice day,i
need to do a bit of yard work
Yes i did test with the headphones and for cw side tone and nothing heard.

Don/Ve2ud

On 25/07/2013 11:24 AM, Terry Wagoner wrote:
>
> So you are telling me you now have regulated 12vdc, regulated 9vdc and
> 3.6vdc RF-1 available on the Audio Board and no output from the Speaker?
>
> This really sounds like a loose molex connection, dirty molex
> connection, bad solder joint at molex connector pins, cracked foil at
> molex connector causing an intermittent condition.
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> Do you have CW side tone in speaker if not what about headphones?
>
> With just a few points of audio injection can find where losing it.
> Can start at Speaker and work backwards toward Produce Detector input
> or work from Product Detector input toward Speaker.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
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> > board looked pretty good.
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> > I have rechecked the connectors but still no audio yet.
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> > Don/Ve2ud
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> > On 25/07/2013 9:17 AM, Terry Wagoner wrote:

> > >
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> > > > On 24/07/2013 10:39 PM, Don Cunningham wrote:
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43626. Re: [TS-520_820_530_830] Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 17:21:40 UTC
From: Don
Topic: 43556 Message: 43626

Terry
I should mention no rec signal now also ?

Don/Ve2ud

On 25/07/2013 11:24 AM, Terry Wagoner wrote:
>
> So you are telling me you now have regulated 12vdc, regulated 9vdc and
> 3.6vdc RF-1 available on the Audio Board and no output from the Speaker?
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> This really sounds like a loose molex connection, dirty molex
> connection, bad solder joint at molex connector pins, cracked foil at
> molex connector causing an intermittent condition.
>
> Do you have CW side tone in speaker if not what about headphones?
>
> With just a few points of audio injection can find where losing it.
> Can start at Speaker and work backwards toward Produce Detector input
> or work from Product Detector input toward Speaker.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> > Terry
> > As those zener's can act like a fuse,i took D26 out and tested it.It
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> > > Also, might want to consider replacing C84, C83, and C81 while you
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> > > Terry K9TW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
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43627. Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 17:58:19 UTC
From: Terry Wagoner
Topic: 43556 Message: 43627

OK there can be a difference between no Audio and no Receive signal. Or can be one and the same.

I assume you mean no off air S-meter indications as you tune across the band and no Marker signal S-meter indication at the 25khz positions of the VFO range?

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Terry
> I should mention no rec signal now also ?
>
> Don/Ve2ud
>
>
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>
>
> On 25/07/2013 11:24 AM, Terry Wagoner wrote:
> >
> > So you are telling me you now have regulated 12vdc, regulated 9vdc and
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> > This really sounds like a loose molex connection, dirty molex
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> > Do you have CW side tone in speaker if not what about headphones?
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> > With just a few points of audio injection can find where losing it.
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> >
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> > > Terry
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> > > Maybe just resoldering the D-26 woke it up,but all the bottom of the
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> > >
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43628. Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 18:35:46 UTC
From: Terry Wagoner
Topic: 43556 Message: 43628

OK I do not know what you mean by check the rest of the voltages?

Now that you have 12vdc restored do the relays key?

Side tone in the headphones is a quick test absent any AF signal injection capability. Did you have normal sidetone before this latest failure?

Use of Moni assuming you have a TIF signal is also a quick test for the AF output amp and headphones jack.

However neither signal source tests the Q3 audio pre-amp path.

Sometimes having no RIF signal can fool you into thinking you have no audio, but in that case you should still have side tone.

If you have no Side tone and no Marker signal need to think what is common to this or is it multiple problems. First thought is low voltage power supply missing. Need 12vdc, 9vdc, and RF-1. Then need proper bias switching.

Anytime a radio is capable of being powered up and not blow the fuse the proper way to troubleshoot is with signal injection and signal tracing. Have to understand the required goes ins and goes outs and validate they are there. Once you find where signal is missing then you reach for the voltmeter.

Audio stage is typically the easiest to test. In old days a finger or jumper lead applied to wiper of AF gain pot is all you needed. Once you eliminate that stage you can move on to IF and RF.

If you are going to trouble shoot hybrids you really need to get an RF generator with internal AF modulation that comes out to external jack. You can inject RF and AF with this test set.

Other option is building a Signal injection/Signal tracer like the Hendricks QRP test unit or buy a Heathkit Signal Tracer like the It-12. The IT-12 cannot inject audio or RF so I would go for the Hendricks or get a RF sig gen. Even a Heath IG-102 or Eico-324 or similar LC type for starters is fine.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Terry
> I still have to check the rest of the voltages,as it's such a nice day,i
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> > > > hasnt shorted. More likely to find it drifted high.
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> > > > down and dont run too long as you will have lost some heat sinking.
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> > > >
> > > > Terry K9TW
> > > >
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> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
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> > > > > Hi Don
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> > > > > First i will remove the board and do a inspection on it first,as in
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> > > > > and then go with Terry's recommendations.
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> > > > > 73
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> > > > >
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> > > > > > Maybe not though, just my impression.
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> > > > > > No virus found in this message.
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> > > > > > Version: 2013.0.3349 / Virus Database: 3209/6518 - Release Date:
> > > > > 07/24/13
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> [Non-text portions of this message have been removed]
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43629. Re: [TS-520_820_530_830] Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 18:55:26 UTC
From: Don
Topic: 43556 Message: 43629

Terry
I just did all the connector voltage checks and all are ok,except were
you say 3.6 volts i get minus 6 volts.
The bands are the worse i heard them in a long time,so to say receiver
is not working might not be correct,so please disregard that.
The marker signal is there,i just can't hear it.I did plug a speaker
into the rear speaker out and a faith hum is there.
Maybe i pinched a wire somewhere?

Hope you take Paypal lol

Don/Ve2ud

On 25/07/2013 1:58 PM, Terry Wagoner wrote:
>
> OK there can be a difference between no Audio and no Receive signal.
> Or can be one and the same.
>
> I assume you mean no off air S-meter indications as you tune across
> the band and no Marker signal S-meter indication at the 25khz
> positions of the VFO range?
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> > Terry
> > I should mention no rec signal now also ?
> >
> > Don/Ve2ud
> >
> >
> >
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> >
> > On 25/07/2013 11:24 AM, Terry Wagoner wrote:
> > >
> > > So you are telling me you now have regulated 12vdc, regulated 9vdc
> and
> > > 3.6vdc RF-1 available on the Audio Board and no output from the
> Speaker?
> > >
> > > This really sounds like a loose molex connection, dirty molex
> > > connection, bad solder joint at molex connector pins, cracked foil at
> > > molex connector causing an intermittent condition.

> > >
> > > Do you have CW side tone in speaker if not what about headphones?
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> > > With just a few points of audio injection can find where losing it.
> > > Can start at Speaker and work backwards toward Produce Detector input
> > > or work from Product Detector input toward Speaker.
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> > > > and tested for 12 volts again,and checked the base of Q34 and
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> > > > I did not realize because i had the rig upside down that the rig had
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> > > > Maybe just resoldering the D-26 woke it up,but all the bottom of the
> > > > board looked pretty good.
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> > > > I have rechecked the connectors but still no audio yet.
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43630. Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 18:58:54 UTC
From: Terry Wagoner
Topic: 43556 Message: 43630

Don:

I am totally at your mercy as to what you are seeing and reporting. I have to ask are you 100% certain that you have 12vdc at the 12vdc post on the audio board? Do the relays now key when you flip to send?

The Audio amp requires 12vdc and the RF amp and RIF Mixer requires 12vdc. Very odd that you had no 12vdc, removed and re-installed reference zener and report now having restored 12vdc.

If you go to RF board do you have 12vdc at Conn 6 Pin 2?

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> OK I do not know what you mean by check the rest of the voltages?
>
> Now that you have 12vdc restored do the relays key?
>

43631. Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 19:17:19 UTC
From: Terry Wagoner
Topic: 43556 Message: 43631

Are you saying at Audio Board Conn 9 Pin 5 you are reading -6vdc to ground?

If so the S-meter should be pegged full scale. Have you tried turning the AGC off and leave it off for several seconds and see if rx comes alive?

If this is the case go to IF board Conn 15 Pin 3 back by the 300 and 200 filter caps on the IF board and measure the AGC bus voltage. Make sure you are on Pin 3 and not Pin 1 as it has 300vdc on it.

If you have -6vdc on the AGC bus there is one common way this can occur. That is for AGC Amp Q10 to be saturated. This happens when you have lost Product Detector carrier null. Can be bad or dirty trim pot or shorted ring diodes. The BFO (LO) leaks back thru L12 and swamps the AGC detector diodes and drives Q10 into saturation. Q10 has -6vdc on its emitter. When turned on to saturation the -6vdc is applied to the AGC bus. The -6vdc is required to back bias the AGC detector diodes and set the AGC threshold level.

Should never have -6vdc on AGC bus. RF amp and IF amps will be turned off with that level of dc control voltage applied to Gate 2 of the devices. Should be +3.6vdc with RF gain pot full CW. You wont be able to read that level with a 11meg VTVM or 10 Meg DMM. Probably around 2.8vdc or so as meter Z will pull it down.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
>
> Terry
> I just did all the connector voltage checks and all are ok,except were
> you say 3.6 volts i get minus 6 volts.
> The bands are the worse i heard them in a long time,so to say receiver
> is not working might not be correct,so please disregard that.
> The marker signal is there,i just can't hear it.I did plug a speaker
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> Maybe i pinched a wire somewhere?
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> Hope you take Paypal lol
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> Don/Ve2ud
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> On 25/07/2013 1:58 PM, Terry Wagoner wrote:
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> > Or can be one and the same.
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> > I assume you mean no off air S-meter indications as you tune across
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> > > On 25/07/2013 11:24 AM, Terry Wagoner wrote:
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43632. Re: [TS-520_820_530_830] Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 19:39:56 UTC
From: Don
Topic: 43556 Message: 43632

Terry
Yes odd in deed.Maybe it was the first one off the line hi hi
All the solder joints look dull,but it probably because it's old like me.
Just removing and reinstalling that diode made no sense to me as why we
got voltage's back
yes the relays engage now
I put the headphones on and keyed it[relay click's] and all i get is a
hum in the headphones
The 60ma ip is there,but i can't load the radio,no drive,no rf output now
Yes the 12vdc is ok at conn6 pin2
This is starting to drive me a bit batty and i sure it's getting to be a
bit much for you too.
We had it nicely going and puff away it went
Maybe when my brain and eye's have had a rest, i will recheck it all
I need a good boat anchor for my boat.

Don/Ve2ud

On 25/07/2013 2:58 PM, Terry Wagoner wrote:
>
> Don:
>
> I am totally at your mercy as to what you are seeing and reporting. I
> have to ask are you 100% certain that you have 12vdc at the 12vdc post
> on the audio board? Do the relays now key when you flip to send?
>
> The Audio amp requires 12vdc and the RF amp and RIF Mixer requires
> 12vdc. Very odd that you had no 12vdc, removed and re-installed
> reference zener and report now having restored 12vdc.
>
> If you go to RF board do you have 12vdc at Conn 6 Pin 2?
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Terry Wagoner"
> <wagstw46@...> wrote:
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> > OK I do not know what you mean by check the rest of the voltages?
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> > Now that you have 12vdc restored do the relays key?
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43633. Re: [TS-520_820_530_830] Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 19:43:24 UTC
From: Don
Topic: 43556 Message: 43633

No it's conn7 pin 7 minus 6 volts

On 25/07/2013 3:17 PM, Terry Wagoner wrote:
>
> Are you saying at Audio Board Conn 9 Pin 5 you are reading -6vdc to
> ground?
>
> If so the S-meter should be pegged full scale. Have you tried turning
> the AGC off and leave it off for several seconds and see if rx comes
> alive?
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> If this is the case go to IF board Conn 15 Pin 3 back by the 300 and
> 200 filter caps on the IF board and measure the AGC bus voltage. Make
> sure you are on Pin 3 and not Pin 1 as it has 300vdc on it.
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> If you have -6vdc on the AGC bus there is one common way this can
> occur. That is for AGC Amp Q10 to be saturated. This happens when you
> have lost Product Detector carrier null. Can be bad or dirty trim pot
> or shorted ring diodes. The BFO (LO) leaks back thru L12 and swamps
> the AGC detector diodes and drives Q10 into saturation. Q10 has -6vdc
> on its emitter. When turned on to saturation the -6vdc is applied to
> the AGC bus. The -6vdc is required to back bias the AGC detector
> diodes and set the AGC threshold level.
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> Should never have -6vdc on AGC bus. RF amp and IF amps will be turned
> off with that level of dc control voltage applied to Gate 2 of the
> devices. Should be +3.6vdc with RF gain pot full CW. You wont be able
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> > > Terry K9TW
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> > > > > Terry K9TW
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > > > > >
> > > > > > Terry
> > > > > > As those zener's can act like a fuse,i took D26 out and
> tested it.It
> > > > > > tested fine,so i reinstalled it
> > > > > > and tested for 12 volts again,and checked the base of Q34 and
> > > both were
> > > > > > fine.
> > > > > > I did not realize because i had the rig upside down that the
> rig had
> > > > > > came back on,because i had no audio i could not hear it.
> > > > > > Maybe just resoldering the D-26 woke it up,but all the
> bottom of the
> > > > > > board looked pretty good.
> > > > > >
> > > > > > I have rechecked the connectors but still no audio yet.
> > > > > >
> > > > > > Don/Ve2ud
> > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > > On 25/07/2013 9:17 AM, Terry Wagoner wrote:
> > > > > >
> > > > > > If your visual inspection does not reveal any open traces
> etc then
> > > > > > maybe it would be best if you just replace Q34 and D26 while
> > > board is
> > > > > > folded over. If you find D26 has shorted check R132 to make
> > > sure it
> > > > > > hasnt shorted. More likely to find it drifted high.
> > > > > >
> > > > > > I dont normally recommend changing parts that have not been
> > > proven to
> > > > > > be bad but may be easier than powering the board while folded
> > > over
> > > > > and
> > > > > > taking voltage readings? You can run board like this just
> keep AF
> > > > > gain
> > > > > > down and dont run too long as you will have lost some heat
> > > sinking.
> > > > > > Dont want to damage Q4 AF output chip.

> > > > > > >
> > > > > > > > Also, might want to consider replacing C84, C83, and C81
> while
> > > you
> > > > > are
> > > > > > > > there.
> > > > > > > >
> > > > > > > > Terry K9TW
> > > > > > > >
> > > > > > > > --- In TS-520_820_530_830@yahoogroups.com
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> > > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don
> <ve2ud@> wrote:
> > > > > > > >
> > > > > > > > > Hi Don
> > > > > > > > > No problem,it's just i don't want to get ahead of the
> > > instructor.
> > > > > > > > > First i will remove the board and do a inspection on it
> > > first,as in
> > > > > > > > > solder joints,broken wire,ect
> > > > > > > > > and then go with Terry's recommendations.
> > > > > > > > >
> > > > > > > > > 73
> > > > > > > > > Don/Ve2ud.
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > On 24/07/2013 10:39 PM, Don Cunningham wrote:
> > > > > > > > >
> > > > > > > > > > Actually I didn't state that well in my last reply. What I
> > > > > read Terry
> > > > > > > > > > to say was that the series pass transistor, Q34, might be
> > > bad, but
> > > > > > > > > > you'd have to troubleshoot to see, I just think that
> he meant
> > > > > that
> > > > > > > > > > the
> > > > > > > > > > transistor MIGHT be bad, but could be something else
> in that
> > > > > area. I
> > > > > > > > > > just took that to mean to check around the pass transistor
> > > > > circuitry.
> > > > > > > > > > Maybe not though, just my impression.
> > > > > > > > > > 73,
> > > > > > > > > > Don
> > > > > > > > >

> > > > > > > > > -----
> > > > > > > > > > No virus found in this message.
> > > > > > > > > > Checked by AVG - www.avg.com
> > > > > > > > > > Version: 2013.0.3349 / Virus Database: 3209/6518 -
> Release
> > > Date:
> > > > > > > > 07/24/13
> > > > > > > > > >
> > > > > > > > > > [Non-text portions of this message have been removed]
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43634. Re: [TS-520_820_530_830] Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 19:53:03 UTC
From: Don
Topic: 43556 Message: 43634

I should have not involved conn 7 pin,,i should have only followed the
red line [dc line] and that
being the case all connectors have the right voltages on them.
Nap time
Don

On 25/07/2013 3:43 PM, Don wrote:
>
>
> No it's conn7 pin 7 minus 6 volts
>
> On 25/07/2013 3:17 PM, Terry Wagoner wrote:
> >
> > Are you saying at Audio Board Conn 9 Pin 5 you are reading -6vdc to
> > ground?
> >
> > If so the S-meter should be pegged full scale. Have you tried turning
> > the AGC off and leave it off for several seconds and see if rx comes
> > alive?
> >
> > If this is the case go to IF board Conn 15 Pin 3 back by the 300 and
> > 200 filter caps on the IF board and measure the AGC bus voltage. Make
> > sure you are on Pin 3 and not Pin 1 as it has 300vdc on it.
> >
> > If you have -6vdc on the AGC bus there is one common way this can
> > occur. That is for AGC Amp Q10 to be saturated. This happens when you
> > have lost Product Detector carrier null. Can be bad or dirty trim pot
> > or shorted ring diodes. The BFO (LO) leaks back thru L12 and swamps
> > the AGC detector diodes and drives Q10 into saturation. Q10 has -6vdc
> > on its emitter. When turned on to saturation the -6vdc is applied to
> > the AGC bus. The -6vdc is required to back bias the AGC detector
> > diodes and set the AGC threshold level.
> >
> > Should never have -6vdc on AGC bus. RF amp and IF amps will be turned
> > off with that level of dc control voltage applied to Gate 2 of the
> > devices. Should be +3.6vdc with RF gain pot full CW. You wont be able
> > to read that level with a 11meg VTVM or 10 Meg DMM. Probably around
> > 2.8vdc or so as meter Z will pull it down.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> > >

> > >
> > > Terry
> > > I just did all the connector voltage checks and all are ok,except were
> > > you say 3.6 volts i get minus 6 volts.
> > > The bands are the worse i heard them in a long time,so to say receiver
> > > is not working might not be correct,so please disregard that.
> > > The marker signal is there,i just can't hear it.I did plug a speaker
> > > into the rear speaker out and a faith hum is there.
> > > Maybe i pinched a wire somewhere?
> > >
> > > Hope you take Paypal lol
> > >
> > > Don/Ve2ud
> > >
> > >
> > >
> > > On 25/07/2013 1:58 PM, Terry Wagoner wrote:
> > > >
> > > > OK there can be a difference between no Audio and no Receive signal.
> > > > Or can be one and the same.
> > > >
> > > > I assume you mean no off air S-meter indications as you tune across
> > > > the band and no Marker signal S-meter indication at the 25khz
> > > > positions of the VFO range?
> > > >
> > > > Terry K9TW
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > > > >
> > > > > Terry
> > > > > I should mention no rec signal now also ?
> > > > >
> > > > > Don/Ve2ud
> > > > >
> > > > >
> > > > >
> > > > >
> > > > >
> > > > > On 25/07/2013 11:24 AM, Terry Wagoner wrote:
> > > > > >
> > > > > > So you are telling me you now have regulated 12vdc, regulated
> > 9vdc
> > > > > and
> > > > > > 3.6vdc RF-1 available on the Audio Board and no output from the
> > > > > Speaker?
> > > > > >
> > > > > > This really sounds like a loose molex connection, dirty molex

> > > > > > connection, bad solder joint at molex connector pins, cracked
> > foil at
> > > > > > molex connector causing an intermittent condition.
> > > > > >
> > > > > > Do you have CW side tone in speaker if not what about
> headphones?
> > > > > >
> > > > > > With just a few points of audio injection can find where
> > losing it.
> > > > > > Can start at Speaker and work backwards toward Produce
> > Detector input
> > > > > > or work from Product Detector input toward Speaker.
> > > > > >
> > > > > > Terry K9TW
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
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> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@>
> wrote:
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> > > > > > > Terry
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> > > > > > > I did not realize because i had the rig upside down that the
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> > > > > > > came back on,because i had no audio i could not hear it.
> > > > > > > Maybe just resoldering the D-26 woke it up,but all the
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> > > > > > > board looked pretty good.
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> > > > > > > I have rechecked the connectors but still no audio yet.
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> > > > > > > On 25/07/2013 9:17 AM, Terry Wagoner wrote:
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> > > > sure it
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> > > > > > > > > I dont normally recommend changing parts that have not been
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> > > > over
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> > > > > > > > > taking voltage readings? You can run board like this just
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> > > > > > > > down and dont run too long as you will have lost some heat
> > > > sinking.
> > > > > > > > Dont want to damage Q4 AF output chip.
> > > > > > > >
> > > > > > > > Also, might want to consider replacing C84, C83, and C81
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> > > > > > are
> > > > > > > > there.
> > > > > > > >
> > > > > > > > Terry K9TW
> > > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com
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> > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don
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> > > > > > > >
> > > > > > > > Hi Don
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> > > > > > > > First i will remove the board and do a inspection on it
> > > > first,as in
> > > > > > > > solder joints,broken wire,ect
> > > > > > > > and then go with Terry's recommendations.
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> > > > > > > > 73
> > > > > > > > Don/Ve2ud.
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> > > > > > > > > > > Don
> > > > > > > > > >
> > > > > > > > > > -----
> > > > > > > > > > No virus found in this message.
> > > > > > > > > > Checked by AVG - www.avg.com
> > > > > > > > > > Version: 2013.0.3349 / Virus Database: 3209/6518 -
> > Release
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> > > > > > > > > > [Non-text portions of this message have been removed]
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43635. Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 22:23:05 UTC
From: Terry Wagoner
Topic: 43556 Message: 43635

Don:

When you finished the PLL board repairs are you certain you plugged Conn 7 in? It is your Carrier Osc signal to the IF board.

Do you have a means to measure the Carrier Oscillator signal at Conn 13 on the IF board? If no Carrier signal there then go back to Conn 7 on PLL board and confirm it is there. If no Carrier there then re-seat Conn 8.

You need Carrier Osc signal to produce TIF signal. No TIF signal from the IF board and you will have no RF drive to your finals.

You also need Carrier Osc signal to recover audio at the Product Detector which is then sent to AF board to be amplified.

Does not account for why you have no sidetone, but could account for no RX and no TX.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> I should have not involved conn 7 pin,,i should have only followed the
> red line [dc line] and that
> being the case all connectors have the right voltages on them.
> Nap time
> Don
>
>
>
>
>

43636. Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 23:29:40 UTC
From: Terry Wagoner
Topic: 43556 Message: 43636

I forgot to mention that you can check for Carrier Osc at TP-3 which is right next to Conn 13 on the IF board. Some schematics do not show TP-3. Level should be approx 300mv rms volts.

Terry

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Don:
>
> When you finished the PLL board repairs are you certain you plugged Conn 7 in? It is your Carrier Osc signal to the IF board.
>
> Do you have a means to measure the Carrier Oscillator signal at Conn 13 on the IF board? If no Carrier signal there then go back to Conn 7 on PLL board and confirm it is there. If no Carrier there then re-seat Conn 8.
>
> You need Carrier Osc signal to produce TIF signal. No TIF signal from the IF board and you will have no RF drive to your finals.
>
> You also need Carrier Osc signal to recover audio at the Product Detector which is then sent to AF board to be amplified.
>
> Does not account for why you have no sidetone, but could account for no RX and no TX.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@> wrote:
> >
> > I should have not involved conn 7 pin,,i should have only followed the
> > red line [dc line] and that
> > being the case all connectors have the right voltages on them.
> > Nap time
> > Don
> >
> >
> >
> >
> >
> >
>

43637. Re: [TS-520_820_530_830] Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 23:34:52 UTC
From: Don
Topic: 43556 Message: 43637

Terry

Sure i did,but later tonight i am going to start all over again from
board to board
and will report back with the measurements.
I have to reread some of the material you sent me.so i know i am on the
same page as you,as i don't want to give you false information to waste
your time.
Even tho it's much more complicated than my QRP gear,i have to use the
same overall approach.
When i get overtired or frustrated,i usually stop for a day to clear my
mind.
I really appreciate your patience.

Don/Ve2ud

On 25/07/2013 6:23 PM, Terry Wagoner wrote:
>
> Don:
>
> When you finished the PLL board repairs are you certain you plugged
> Conn 7 in? It is your Carrier Osc signal to the IF board.
>
> Do you have a means to measure the Carrier Oscillator signal at Conn
> 13 on the IF board? If no Carrier signal there then go back to Conn 7
> on PLL board and confirm it is there. If no Carrier there then re-seat
> Conn 8.
>
> You need Carrier Osc signal to produce TIF signal. No TIF signal from
> the IF board and you will have no RF drive to your finals.
>
> You also need Carrier Osc signal to recover audio at the Product
> Detector which is then sent to AF board to be amplified.
>
> Does not account for why you have no sidetone, but could account for
> no RX and no TX.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> > I should have not involved conn 7 pin,,i should have only followed the
> > red line [dc line] and that
> > being the case all connectors have the right voltages on them.
> > Nap time

> > Don
> >
> >
> >
> >
> >
>
>

[Non-text portions of this message have been removed]

43638. Re: [TS-520_820_530_830] Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 23:56:00 UTC
From: Don
Topic: 43556 Message: 43638

Because my eye's are not what they use to be[plus a few other things]
i have to blow up the pdf file to about 400% to read it.
I am going to try to get my daughter to blow up a nice copy for me from
her work place so i can lay on top of my chest freezer and follow it
along as i did with my Heathkit HW9 as they made a nice one.
The freezer broke so instead of paying someone to take it out, i decide
to use the top as a repair work bench hi hi..

73
Don/Ve2ud

On 25/07/2013 7:29 PM, Terry Wagoner wrote:
>
> I forgot to mention that you can check for Carrier Osc at TP-3 which
> is right next to Conn 13 on the IF board. Some schematics do not show
> TP-3. Level should be approx 300mv rms volts.
>
> Terry
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Terry Wagoner"
> <wagstw46@...> wrote:
> >
> > Don:
> >
> > When you finished the PLL board repairs are you certain you plugged
> Conn 7 in? It is your Carrier Osc signal to the IF board.
> >
> > Do you have a means to measure the Carrier Oscillator signal at Conn
> 13 on the IF board? If no Carrier signal there then go back to Conn 7
> on PLL board and confirm it is there. If no Carrier there then re-seat
> Conn 8.
> >
> > You need Carrier Osc signal to produce TIF signal. No TIF signal
> from the IF board and you will have no RF drive to your finals.
> >
> > You also need Carrier Osc signal to recover audio at the Product
> Detector which is then sent to AF board to be amplified.
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> > Does not account for why you have no sidetone, but could account for
> no RX and no TX.
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> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com

> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
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> > >
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[Non-text portions of this message have been removed]

43639. Audio out of the rear socket Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-26 07:38:50 UTC
From: Kevin, Natalia, Stacey and Rochelle
Topic: 43639 Message: 43639

Hi Guys,

I am doing some audio management for my radios.

On the TS830 rear socket I see an audio out pin.

My question is, is this pin out suitable to plug into a mixer? I am guessing here that it would be a fixed level output (but I could be wrong).

Any ideas or input would be helpful

Regards

Kevin. ZL1KFM.

I will also be feeding the TX audio in from another mixer port. I have already made up a resister pad to bring the levels down to prevent overdriving the audio input stage. Pity there isn't a better audio input that would be better, suggestion, maybe look at tapping into the board and fit a socket into the back of the radio for mixer audio in?

[Non-text portions of this message have been removed]

43640. Re: [TS-520_820_530_830] Audio out of the rear socket Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-26 11:16:36 UTC
From: W5RKL
Topic: 43639 Message: 43640

Hi Kevin,

If you are referring to pin 1 on the REMOTE DIN socket, labeled "SP" on the schematic, then no that is not a fixed output. Pin 1 on the REMOTE DIN socket connects to the AF Unit plug 3 pin 1 which is the output of the audio amplifier. Audio that appears on Pin 1 of the REMOTE DIN socket varies with the front panel volume control. Do you have the 830's high resolution color schematic? If you do not have it then I can send it to you.

73
Mike W5RKL

> Hi Guys,
>
> I am doing some audio management for my radios.
>
> On the TS830 rear socket I see an audio out pin.
>
> My question is, is this pin out suitable to plug into a mixer? I am
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> here that it would be a fixed level output (but I could be wrong).
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> overdriving the audio input stage. Pity there isn't a better audio input
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> fit a socket into the back of the radio for mixer audio in?
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

43641. Re: TS-520s VOX flipping on and off in CW recieve

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-25 17:52:26 UTC
From: Carl Payne
Topic: 43617 Message: 43641

The sidetone is pretty quiet. If anything i would like to turn that up. What I don't understand is what signal is even activating the vox in the first place. The microphone is unplugged and sitting in a drawer. It does it with everything except the antenna unhooked. Seems to me that there isn't anything that should even know that the volume is there.
Carl - N8FU

[Non-text portions of this message have been removed]

43642. S meter.....

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-26 11:13:59 UTC
From: Mike McHugh
Topic: 43642 Message: 43642

Hi guys (and girls).... Just a quick question..... I just purchased a 830s and LOVE that radio . Wow.... Quite a step up from the 520s that I have been using. I never want to go SS. I'll stick with the hybrids....
Easy question I hope.......
When I first turn the radio on, the S meter pegs to the right... I must have some control set too far one way or tother... Scars the dickens out of me. Don't want to look for a new meter. The meter functions just fine after that initial turn on.....Radio functions just great and glad I made the purchase....
Another observation.... I seem to be able to "drive" this rig a lot hotter than the 520s..... I am getting 140 watts out and could never get that with the 520s even after "recapping" the rig. Is this typical of 830s..... To get ahead of your next response, NO I do not keep it there. I settle on at 120watt or less. I remain impressed by this radio. Whew!.....Like it, like it ,like it.....
Thanks for any help you can offer......

Mike KD2Dyy

43643. Re: [TS-520_820_530_830] Audio out of the rear socket Question

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-26 11:54:32 UTC
From: Ken Winterling
Topic: 43639 Message: 43643

Kevin,

Look at page 15 of the TS-830 user manual, section 15 "REMOTE CONNECTOR". According to the table, Pin 1, record output, is a variable level 100-150mV AF signal. It is, in fact, connected to the output of the audio amplifier, the same as the speaker, and the level varies with the front panel AF control.

Regarding an audio input, look at page 25 of the manual under "PHONE PATCH OPERATION". It describes how to install a phone patch input like the ones that are standard on the TS-502 and TS-820. It has you install a RCA jack in one of the unused holes in the back panel.

Ken
WA2LBI

On Fri, Jul 26, 2013 at 3:38 AM, Kevin, Natalia, Stacey and Rochelle <sparcnz@...> wrote:

> **
>
>
> Hi Guys,
>
> I am doing some audio management for my radios.
>
> On the TS830 rear socket I see an audio out pin.
>
> My question is, is this pin out suitable to plug into a mixer? I am
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> here that it would be a fixed level output (but I could be wrong).
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> Any ideas or input would be helpful
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> Regards
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> Kevin. ZL1KFM.
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> I will also be feeding the TX audio in from another mixer port. I have
> already made up a resister pad to bring the levels down to prevent
> overdriving the audio input stage. Pity there isn't a better audio input
> that would be better, suggestion, maybe look at tapping into the board and
> fit a socket into the back of the radio for mixer audio in?
>
>

[Non-text portions of this message have been removed]

43644. Re: [TS-520_820_530_830] Re: TS-520s VOX flipping on and off in CW recieve

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-26 11:56:50 UTC
From: W5RKL
Topic: 43617 Message: 43644

Hi Carl,

If you have a short jumper cable with alligator clips, recreate the VOX tripping then connect the jumper wire between the VOX Unit's "AV" terminal and chassis ground. If the VOX Unit stops tripping then I suspect the problem is loss of ground in CW mode through Mode switch wafer S3-5. Wafer S3-5 may have worn down over time causing loss of connection to ground in CW mode or it may be very dirty/corroded. Try cleaning the Mode switch wafer.

73
Mike W5RKL

On 7/25/2013 12:52 PM, Carl Payne wrote:
>
> The sidetone is pretty quiet. If anything i would like to turn that up.
> What I don't understand is what signal is even activating the vox in the
> first place. The microphone is unplugged and sitting in a drawer. It does
> it with everything except the antenna unhooked. Seems to me that there
> isn't anything that should even know that the volume is there.
> Carl - N8FU
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

43645. RE: [TS-520_820_530_830] S meter.....

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-26 11:59:33 UTC
From: fpath fpath
Topic: 43642 Message: 43645

Mike,

In relation to your meter pegging (FSD) when you first switching radio on, the easy solution is either disconnect your antenna or if your using an antenna switch switch the radio to ground, this usually stops the hard FSD.

These radios are designed for approx 100w output, it could be that your radio has had QRO modification, this is where the 210v line has been change to the 300v line on the rectifier board, not a good modification at all. Depends on who does this modification, resistors on the rectifier board may have been supersized and from memory R37 on the RF board may have been supersized as well. All fairly easy to see if you removed the top and bottom covers. If you do this make sure the radio is disconnected from AC and the HV is discharged prior to poking around on any of the boards. HV provides a great service to the funeral industry.

73s

Dave

VK5PDL

To: ts-520_820_530_830@yahoogroups.com
From: mchugh54321@...
Date: Fri, 26 Jul 2013 04:13:59 -0700
Subject: [TS-520_820_530_830] S meter.....

Hi guys (and girls).... Just a quick question..... I just purchased a 830s and LOVE that radio . Wow.... Quite a step up from the 520s that I have been using. I never want to go SS. I'll stick with the hybrids....
Easy question I hope.....
When I first turn the radio on, the S meter pegs to the right... I must have some control set too far one way or tother... Scars the dickens out of me. Don't want to look for a new meter. The meter functions just fine after that initial turn on.....Radio functions just great and glad I made the purchase....
Another observation.... I seem to be able to "drive" this rig a lot hotter than the 520s..... I am getting 140 watts out and could never get that with the 520s even after "recapping" the rig. Is this typical of 830s..... To get ahead of your next response, NO I do not keep it there. I settle on at 120watt or less. I remain impressed by this radio. Whew!.....Like it, like it ,like it.....
Thanks for any help you can offer.....

Mike KD2Dyy

[Non-text portions of this message have been removed]

43646. Re: [TS-520_820_530_830] S meter.....

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-26 12:20:15 UTC
From: W5RKL
Topic: 43642 Message: 43646

Hi Mike,

The S meter will rise full scale when the 830 is first power on then fall back to zero (no antenna connected).

I question the "140 watts" output you claim your 830 is producing. I'll assume you have a watt meter inline between the 830's output and the antenna, or hopefully a 50 ohm dummy load, that shows 140 watts. If your watt meter shows 140 watts, what are the 830's IP and HV meter indications showing with 140 watts indicated on your watt meter and is the 140 watts indicated with a 50 ohm dummy load or an antenna connected to the 830?

The 830 has a maximum DC input power rating of 180 watts in CW mode. That is the maximum input power the final amplifier in the 830 is capable or producing. In order to achieve 140 watts output in CW mode the 830's final amplifier efficiency rating would have to be "78%" and that's simply not possible with the 830. Did you tune the transmitter into a 50 ohm dummy load using the tune up procedures listed in the operator's manual? If you did you won't see 140 watts output in CW mode unless your watt meter's calibration is off.

73
Mike W5RKL

On 7/26/2013 6:13 AM, Mike McHugh wrote:
>
>
> Hi guys (and girls).... Just a quick question..... I just purchased a
> 830s and LOVE that radio . Wow.... Quite a step up from the 520s that
> I have been using. I never want to go SS. I'll stick with the hybrids....
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> dickens out of me. Don't want to look for a new meter. The meter
> functions just fine after that initial turn on.....Radio functions
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> get that with the 520s even after "recapping" the rig. Is this typical
> of 830s..... To get ahead of your next response, NO I do not keep it
> there. I settle on at 120watt or less. I remain impressed by this
> radio. Whew!.....Like it, like it ,like it...........
> Thanks for any help you can offer......
>
> Mike KD2Dyy

>
>

[Non-text portions of this message have been removed]

43647. Re: [TS-520_820_530_830] S meter.....

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-26 12:24:03 UTC
From: W5RKL
Topic: 43642 Message: 43647

I meant to say the 830's S meter will rise above zero a bit then fall back to zero when no antenna is connected. Sorry about that. Too early and not enough coffee.

73
Mike W5RKL

On 7/26/2013 7:20 AM, W5RKL wrote:
>
> Hi Mike,
>
> The S meter will rise full scale when the 830 is first power on then
> fall back to zero (no antenna connected).
>
> I question the "140 watts" output you claim your 830 is producing. I'll
> assume you have a watt meter inline between the 830's output and the
> antenna, or hopefully a 50 ohm dummy load, that shows 140 watts. If your
> watt meter shows 140 watts, what are the 830's IP and HV meter
> indications showing with 140 watts indicated on your watt meter and is
> the 140 watts indicated with a 50 ohm dummy load or an antenna connected
> to the 830?
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> The 830 has a maximum DC input power rating of 180 watts in CW mode.
> That is the maximum input power the final amplifier in the 830 is
> capable or producing. In order to achieve 140 watts output in CW mode
> the 830's final amplifier efficiency rating would have to be "78%" and
> that's simply not possible with the 830. Did you tune the transmitter
> into a 50 ohm dummy load using the tune up procedures listed in the
> operator's manual? If you did you won't see 140 watts output in CW mode
> unless your watt meter's calibration is off.
>
> 73
> Mike W5RKL
>
> On 7/26/2013 6:13 AM, Mike McHugh wrote:
> >
> >
> > Hi guys (and girls).... Just a quick question..... I just purchased a
> > 830s and LOVE that radio . Wow.... Quite a step up from the 520s that
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> > of 830s..... To get ahead of your next response, NO I do not keep it
> > there. I settle on at 120watt or less. I remain impressed by this
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> >
> > Mike KD2Dyy
> >
> >
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

43648. Re: S meter.....

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-26 13:59:20 UTC
From: Terry Wagoner
Topic: 43642 Message: 43648

Mike:

What plate current are you loading to for 140 watts output?

It is OK to load to 250ma if you even can get there, but I would not as a matter of routine. Even at 250ma you should not be seeing 140watts output. Probably more like 840v x .250 = 210 x .55 = 116 watts output into non-inductive 50 ohm dummy load.

Most 830s I have seen start to fall flat much above 225ma. Have seen a couple non-modified that could attain 250ma. Had one fellow tell me he could load to 300ma and one who said he loaded his to 400ma. That is especially interesting as meter only goes to 350ma!

As Dave VK5PDL says if you are really getting out 140 watts the rig has been QRO-d or your wattmeter is not accurate. If QRO-d need to restore to factory and inspect plate choke in PA cage for signs of overheating.

Where is Ip at when you have 140 watts output?

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Mike McHugh <mchugh54321@...> wrote:
>
>
> Hi guys (and girls).... Just a quick question..... I just purchased a 830s and LOVE that radio . Wow.... Quite a step up from the 520s that I have been using. I never want to go SS. I'll stick with the hybrids....
> Easy question I hope.......
> When I first turn the radio on, the S meter pegs to the right... I must have some control set too far one way or tother... Scars the dickens out of me. Don't want to look for a new meter. The meter functions just fine after that initial turn on.....Radio functions just great and glad I made the purchase....
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> Thanks for any help you can offer......
>
> Mike KD2Dyy
>

43649. Re: TS520SE lALC problem back to haunt me!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-26 16:26:31 UTC
From: adrian.langford@ymail.com
Topic: 43531 Message: 43649

I just settled down to do measurements on the rig, but it is behaving normally now - even FSD ALC on 28MHz (though with higher Carrier level than lower bands).

Intermittent problems are annoying!

I monitored idle current for 15 mins and didn't drop - in fact it rose slightly from 60mA to 70mA.

Maybe I should just loosen and re-tighten ground screws? Or leave till problem repeats and do measurements then.

73 de Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Adrian:
>
> After you adjust the resting plate current to 60ma does it stay there for some time or does it drift pretty quickly? Idle current is a function of cathode emission, control grid operating dc bias voltage, and screen grid voltage. If finals have lots of age emission can be a problem. Otherwise bias voltage and screen grid voltage must be to spec and stable.
>
> If you feel comfortable I would measure the grid bias voltage at the final board on the control grid pin of the tube socket. It is not often that the -C supply floats around, however if the bias voltage pot is dirty it can cause resting plate current to change. If you havent cleaned and exercised this pot it is good idea to do so. Easy to remove the three screws that hold the plate to side of rig to get access to pot to apply the Deoxit and canned air. Try to set it back close to original position so you dont have insufficient bias voltage and the finals run away and be destroyed when you first key rig to adjust to 60ma.
>
> As you know ALC indication is a function of RF drive voltage and dc bias offset at the control grids of your 6146 finals. Assuming that DC bias voltage is set properly then need to measure the RF drive voltage. If RF drive voltage is low suggest you try a new 12By7A Driver tube as a first step.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> >
> > Prior to today I had been able to align my 520SE (with Terry's invaluable help!) so that I had full scale ALC on all bands. Before I had no ALC on 10m at all.
> >
> > Turning on the rig today the ALC was much lower than normal when I tuned up. Where I could get FSD on 7MHz with carrier control around 3 and drive peaked, I now had to wind the carrier full clockwise and only get about 3/4 full scale. Checking each band I found I was

getting no ALC on 28, and progressively higher peaked ALC going down bands to 3.5MHz (7 and 3.5 about same).
> >
> > This had happened once before and when I checked idle plate current it was about 40mA not 60mA. After setting to 60mA the ALC was fine.
> >
> > So I checked idle current and it was around 45mA. Thinking this would be bound to fix the ALC I increased to 60mA, but I still had same low ALC! Maybe it was just coincidence that last time I had to readjust idle current, the ALC was its old healthy self?
> >
> > So what could cause a sudden decrease in ALC, and complete loss of it on 10m where it was fine before post-alignment? What's obvious place to look? Could it just be finals have given up? Any reason why the idle current has dropped since last adjusted to 60mA just a few weeks ago when I last saw this problem?
> >
> > Thanks for your advice.
> >
> > 73 de Adrian G4IQW
> >
>

43650. Re: [TS-520_820_530_830] Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-26 16:37:21 UTC
From: Don
Topic: 43556 Message: 43650

Terry

If we go back before this new problem occurred,i found that i had lose crystals on the pll board causing the display to disappear when changing sidebands[re -soldered them and now working]
Loading the rig we got some arching at times.We then had a problem with low output on LSB.
Overall it was working not too bad on all bands and good output.
It had sat for a few days as i was on holidays and when i came back i worked a few stations on it and felt pretty good about getting it to that point from being DEAD.
So all connectors were in place as all was working except for some adjustments to do.
A few days later i go to load the rig,and i notice big arching going on again [on panel meter and on swr meter]so i shut it down.Awhile later i went back to turn it on and all was dead except for the front panel lamps and the fan.
I thought the transformer had shorted out,but with Mike's help that was not the case.
We then checked voltages on the audio board with Terry's help and found no output at the 12 volt post on the audio board.
I took the zener diode out and i tested it[was good],and it now has display,and relay's are working.
Why taking out the zener and reinstalling would now produce my voltage[15 volts now] at the 12 volt pin ? i have no clue why [solder joints?]
What is not working now is,no audio,just a hum on the speaker[could be going to ground],no receive,no 25kHz maker now.I do have my 60 ma's but that all.no drive,no output at all.
I guess that's why the previous owner put it on Ebay as i could see it was worked on before,because all the connectors were numbered with a marker, as i guess he had no manual.

This is a lot more involved here than my QRP gear,and i might be way over my head here.When funds allow,i need to pick up a rf watt meter and a watt meter,a new digital scope would be nice ,but too much for me to spend at this time [cruel stock market]
I did not know a rf watt meter existed until i read a post from terry and did a eBay search.
Terry has gone overboard to help me and i wish i could repay him in some way.maybe i will have to send him my mint TS830[NOT]
As i am not one to easily give me,i will keep plugging at it.

Moral of the story,don't mix your tubes,as one a B and the other a EH!
73
Don/Ve2ud

On 25/07/2013 6:23 PM, Terry Wagoner wrote:
>
> Don:
>
> When you finished the PLL board repairs are you certain you plugged
> Conn 7 in? It is your Carrier Osc signal to the IF board.
>
> Do you have a means to measure the Carrier Oscillator signal at Conn
> 13 on the IF board? If no Carrier signal there then go back to Conn 7
> on PLL board and confirm it is there. If no Carrier there then re-seat
> Conn 8.
>
> You need Carrier Osc signal to produce TIF signal. No TIF signal from
> the IF board and you will have no RF drive to your finals.
>
> You also need Carrier Osc signal to recover audio at the Product
> Detector which is then sent to AF board to be amplified.
>
> Does not account for why you have no sidetone, but could account for
> no RX and no TX.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> > I should have not involved conn 7 pin,,i should have only followed the
> > red line [dc line] and that
> > being the case all connectors have the right voltages on them.
> > Nap time
> > Don
> >
> >
> >
> >
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> >
>
>

[Non-text portions of this message have been removed]

43651. Re: [TS-520_820_530_830] Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-26 17:54:33 UTC
From: Don
Topic: 43556 Message: 43651

Terry
I got a Marconi signal generator and discovered all the bands were good except 40 meters.I was able to load the rig on all the other bands
So we now know the transmitter is working except for 40 meters.
That just leaves me with the receiver and so far,no audio,just that hum,and no marker.

Don/Ve2ud

On 25/07/2013 7:29 PM, Terry Wagoner wrote:
>
> I forgot to mention that you can check for Carrier Osc at TP-3 which
> is right next to Conn 13 on the IF board. Some schematics do not show
> TP-3. Level should be approx 300mv rms volts.
>
> Terry
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Terry Wagoner"
> <wagstw46@...> wrote:
> >
> > Don:
> >
> > When you finished the PLL board repairs are you certain you plugged
> Conn 7 in? It is your Carrier Osc signal to the IF board.
> >
> > Do you have a means to measure the Carrier Oscillator signal at Conn
> 13 on the IF board? If no Carrier signal there then go back to Conn 7
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> > You also need Carrier Osc signal to recover audio at the Product
> Detector which is then sent to AF board to be amplified.
> >
> > Does not account for why you have no sidetone, but could account for
> no RX and no TX.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > >

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[Non-text portions of this message have been removed]

43652. Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-26 18:42:59 UTC
From: Terry Wagoner
Topic: 43556 Message: 43652

Does the Marconi have external modulation typically 400hz or 1000hz?

If so inject it at IF Board Conn 11 Pin 1 DET. If you hear tone in speaker it tells you that Audio stage is working. Move on to testing the IF board as noted below.

If you do not hear it then inject again at Audio Board Conn 1 Pin 2 DET. If you do not hear it then inject at Conn 2 AV1. If you do not hear it inject at Conn 2 AV2. If you cannot hear it then inject at Conn 4 Pin 6 SP. Should hear it here as you are now injecting into the speaker (plus molex pin, solder connection and cabling to the headphones jack). If you can hear tone when injecting at Conn 4 Pin 6 SP and not when injecting at AV-2 then likely have a bad Q4 output device. Just follow the path from the Produce Detector output on the IF board to the Speaker.

Assuming AF stage is good now test IF board.

If you hear the 1000hz tone when you inject it at output of Product Detector on the IF board then set the Marconi for 8.830 Mhz and switch your output cable from the AF output to the RF output. I dont know what kind of output level attenuator the Marconi has. Start with a high level and inject the 8.830mhz into the IF Board RIF input at Conn 6 Pin 6. Should hear tone and should get S meter indication. If S-meter pegs turn down Marconi rf output level. Set the level for approx S9 indication.

If you get no tone when you inject 8.830mhz RIF signal then you know problem is on the IF board.

If you get good tone then you need to go back to RF board and inject there following the path from the RIF output back to the SO-239 or the other way around. I would use 14.200mhz as your test signal.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Terry
> I got a Marconi signal generator and discovered all the bands were good
> except 40 meters.I was able to load the rig on all the other bands
> So we now know the transmitter is working except for 40 meters.
> That just leaves me with the receiver and so far,no audio,just that
> hum,and no marker.
>
> Don/Ve2ud
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43653. Re: [TS-520_820_530_830] Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-26 19:20:19 UTC
From: Don
Topic: 43556 Message: 43653

Hi Terry
I just downloaded the manual and it has 300.400, Marconi 2018

I should get around to it later today or on Sunday

73
Don/Ve2ud

On 26/07/2013 2:42 PM, Terry Wagoner wrote:
>
> Does the Marconi have external modulation typically 400hz or 1000hz?
>
> If so inject it at IF Board Conn 11 Pin 1 DET. If you hear tone in
> speaker it tells you that Audio stage is working. Move on to testing
> the IF board as noted below.
>
> If you do not hear it then inject again at Audio Board Conn 1 Pin 2
> DET. If you do not hear it then inject at Conn 2 AV1. If you do not
> hear it inject at Conn 2 AV2. If you cannot hear it then inject at
> Conn 4 Pin 6 SP. Should hear it here as you are now injecting into the
> speaker (plus molex pin, solder connection and cabling to the
> headphones jack). If you can hear tone when injecting at Conn 4 Pin 6
> SP and not when injecting at AV-2 then likely have a bad Q4 output
> device. Just follow the path from the Produce Detector output on the
> IF board to the Speaker.
>
> Assuming AF stage is good now test IF board.
>
> If you hear the 1000hz tone when you inject it at output of Product
> Detector on the IF board then set the Marconi for 8.830 Mhz and switch
> your output cable from the AF output to the RF output. I dont know
> what kind of output level attenuator the Marconi has. Start with a
> high level and inject the 8.830mhz into the IF Board RIF input at Conn
> 6 Pin 6. Should hear tone and should get S meter indication. If
> S-meter pegs turn down Marconi rf output level. Set the level for
> approx S9 indication.
>
> If you get no tone when you inject 8.830mhz RIF signal then you know
> problem is on the IF board.
>
> If you get good tone then you need to go back to RF board and inject
> there following the path from the RIF output back to the SO-239 or the
> other way around. I would use 14.200mhz as your test signal.
>
> Terry K9TW
>

> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> > Terry
> > I got a Marconi signal generator and discovered all the bands were good
> > except 40 meters.I was able to load the rig on all the other bands
> > So we now know the transmitter is working except for 40 meters.
> > That just leaves me with the receiver and so far,no audio,just that
> > hum,and no marker.
> >
> > Don/Ve2ud
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[Non-text portions of this message have been removed]

43654. Re: Technical Reference Sources

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-26 19:29:02 UTC
From: roberteleazer@rocketmail.com
Topic: 43600 Message: 43654

I just discovered today that you can order a DVD with almost all of the manuals on that website for only $14. The DVDs are on sale right now. I ordered one.

Robert

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Robert:
>
> You are correct a great site. Just some really big downloads, but some real treasures. J. F. Riders VTVM primer is great for understanding why VTVM was invented and how to use it to troubleshoot tube radios. I think I learned how to check for leaky interstage coupling caps from this book many years ago.
>
> Thanks
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> >
> > I too want to thank Terry for his link to the antenna information.
> >
> > And in the same spirit I would like to provide the Group with a link to a very impressive free collection of data, specifically focused on vaccum tubes and older electronics but also of general use:
> >
> > http://www.tubebooks.org/technical_books_online.htm
> >
> > 73's
> >
> > Robert
> > WB5WSV
> >
>

43655. Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-26 20:13:03 UTC
From: Terry Wagoner
Topic: 43556 Message: 43655

I forgot to mention as I do not know anything about your Marconi RF
sig gen it is good practice to use a .01uf blocking cap in series with the "hot" output
conductor of your test cable. Value is not critical.

400hz audio will be just fine.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Hi Terry
> I just downloaded the manual and it has 300.400, Marconi 2018
>
> I should get around to it later today or on Sunday
>
> 73
> Don/Ve2ud
>
>
>

43656. Re: [TS-520_820_530_830] Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-26 20:13:41 UTC
From: Don
Topic: 43556 Message: 43656

Terry
The first test worked for a 400hz tone
The second test did not yield any tone or S meter indication
I also have now a BK200D also,so i tried both

Don/Ve2ud

On 26/07/2013 2:42 PM, Terry Wagoner wrote:
>
> Does the Marconi have external modulation typically 400hz or 1000hz?
>
> If so inject it at IF Board Conn 11 Pin 1 DET. If you hear tone in
> speaker it tells you that Audio stage is working. Move on to testing
> the IF board as noted below.
>
> If you do not hear it then inject again at Audio Board Conn 1 Pin 2
> DET. If you do not hear it then inject at Conn 2 AV1. If you do not
> hear it inject at Conn 2 AV2. If you cannot hear it then inject at
> Conn 4 Pin 6 SP. Should hear it here as you are now injecting into the
> speaker (plus molex pin, solder connection and cabling to the
> headphones jack). If you can hear tone when injecting at Conn 4 Pin 6
> SP and not when injecting at AV-2 then likely have a bad Q4 output
> device. Just follow the path from the Produce Detector output on the
> IF board to the Speaker.
>
> Assuming AF stage is good now test IF board.
>
> If you hear the 1000hz tone when you inject it at output of Product
> Detector on the IF board then set the Marconi for 8.830 Mhz and switch
> your output cable from the AF output to the RF output. I dont know
> what kind of output level attenuator the Marconi has. Start with a
> high level and inject the 8.830mhz into the IF Board RIF input at Conn
> 6 Pin 6. Should hear tone and should get S meter indication. If
> S-meter pegs turn down Marconi rf output level. Set the level for
> approx S9 indication.
>
> If you get no tone when you inject 8.830mhz RIF signal then you know
> problem is on the IF board.
>
> If you get good tone then you need to go back to RF board and inject
> there following the path from the RIF output back to the SO-239 or the
> other way around. I would use 14.200mhz as your test signal.
>
> Terry K9TW
>

> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> > Terry
> > I got a Marconi signal generator and discovered all the bands were good
> > except 40 meters.I was able to load the rig on all the other bands
> > So we now know the transmitter is working except for 40 meters.
> > That just leaves me with the receiver and so far,no audio,just that
> > hum,and no marker.
> >
> > Don/Ve2ud
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[Non-text portions of this message have been removed]

43657. Re: [TS-520_820_530_830] Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-26 20:17:52 UTC
From: Don
Topic: 43556 Message: 43657

I think they used that method on the Heathkit sig generators.
Thanks for that info plus many other things.

Don/Ve2ud

On 26/07/2013 4:13 PM, Terry Wagoner wrote:
>
> I forgot to mention as I do not know anything about your Marconi RF
> sig gen it is good practice to use a .01uf blocking cap in series with
> the "hot" output conductor of your test cable. Value is not critical.
>
> 400hz audio will be just fine.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> > Hi Terry
> > I just downloaded the manual and it has 300.400, Marconi 2018
> >
> > I should get around to it later today or on Sunday
> >
> > 73
> > Don/Ve2ud
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[Non-text portions of this message have been removed]

43658. Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-26 20:36:45 UTC
From: Terry Wagoner
Topic: 43556 Message: 43658

Don:

1. Are you telling me you injected audio into the Product Detector output on the IF board and you got good tone out of the speaker? Were you able to vary the level with the AF gain pot?

If so, your Audio Amp stage is working. Will have to troubleshoot lack of Side Tone later.

2. Are you telling me you injected 8.830mhz into RIF terminal on IF board Conn 6 and got no speaker tone and no S-meter indication? Are you sure you had good level at 8.830mhz? 500uv or -53dBm should give approx S9 indication. Suggest you repeat this test.

If you get no results you know there is a problem on the IF board. It is possible could be as simple as a bad connection at Conn 6.

If you turn the RF gain pot down full CCW does the S-meter drive up scale? If not, then the AGC bus may not be energized or something is pulling it down. You told me you had good 3.6vdc RF-1 voltage.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Terry
> The first test worked for a 400hz tone
> The second test did not yield any tone or S meter indication
> I also have now a BK200D also,so i tried both
>
> Don/Ve2ud
>
>
>
> On 26/07/2013 2:42 PM, Terry Wagoner wrote:
> >
> > Does the Marconi have external modulation typically 400hz or 1000hz?
> >
> > If so inject it at IF Board Conn 11 Pin 1 DET. If you hear tone in
> > speaker it tells you that Audio stage is working. Move on to testing
> > the IF board as noted below.
> >
> > If you do not hear it then inject again at Audio Board Conn 1 Pin 2
> > DET. If you do not hear it then inject at Conn 2 AV1. If you do not
> > hear it inject at Conn 2 AV2. If you cannot hear it then inject at
> > Conn 4 Pin 6 SP. Should hear it here as you are now injecting into the
> > speaker (plus molex pin, solder connection and cabling to the
> > headphones jack). If you can hear tone when injecting at Conn 4 Pin 6
> > SP and not when injecting at AV-2 then likely have a bad Q4 output

> > device. Just follow the path from the Produce Detector output on the
> > IF board to the Speaker.
> >
> > Assuming AF stage is good now test IF board.
> >
> > If you hear the 1000hz tone when you inject it at output of Product
> > Detector on the IF board then set the Marconi for 8.830 Mhz and switch
> > your output cable from the AF output to the RF output. I dont know
> > what kind of output level attenuator the Marconi has. Start with a
> > high level and inject the 8.830mhz into the IF Board RIF input at Conn
> > 6 Pin 6. Should hear tone and should get S meter indication. If
> > S-meter pegs turn down Marconi rf output level. Set the level for
> > approx S9 indication.
> >
> > If you get no tone when you inject 8.830mhz RIF signal then you know
> > problem is on the IF board.
> >
> > If you get good tone then you need to go back to RF board and inject
> > there following the path from the RIF output back to the SO-239 or the
> > other way around. I would use 14.200mhz as your test signal.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > >
> > > Terry
> > > I got a Marconi signal generator and discovered all the bands were good
> > > except 40 meters.I was able to load the rig on all the other bands
> > > So we now know the transmitter is working except for 40 meters.
> > > That just leaves me with the receiver and so far,no audio,just that
> > > hum,and no marker.
> > >
> > > Don/Ve2ud
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> [Non-text portions of this message have been removed]
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43659. Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-26 20:39:04 UTC
From: Terry Wagoner
Topic: 43556 Message: 43659

Unless you are very familiar with the design of your signal generator always good practice to use a coupling/blocking cap in series with your output lead. Dont want to damage your sig gen with high DC voltage.

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
>
> I think they used that method on the Heathkit sig generators.
> Thanks for that info plus many other things.
>
> Don/Ve2ud
>
> On 26/07/2013 4:13 PM, Terry Wagoner wrote:
> >
> > I forgot to mention as I do not know anything about your Marconi RF
> > sig gen it is good practice to use a .01uf blocking cap in series with
> > the "hot" output conductor of your test cable. Value is not critical.
> >
> > 400hz audio will be just fine.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > >
> > > Hi Terry
> > > I just downloaded the manual and it has 300.400, Marconi 2018
> > >
> > > I should get around to it later today or on Sunday
> > >
> > > 73
> > > Don/Ve2ud
> > >
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> [Non-text portions of this message have been removed]
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43660. Re: [TS-520_820_530_830] Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-26 20:50:20 UTC
From: Don
Topic: 43556 Message: 43660

Yes Terry i could vary the pot
I used my old scope to make sure i had good output on the SSG first.
I think that's the max 500uv output for the Marconi 2018
Let me recheck it all after super and get back to you

Don/Ve2ud

On 26/07/2013 4:36 PM, Terry Wagoner wrote:
>
> Don:
>
> 1. Are you telling me you injected audio into the Product Detector
> output on the IF board and you got good tone out of the speaker? Were
> you able to vary the level with the AF gain pot?
>
> If so, your Audio Amp stage is working. Will have to troubleshoot lack
> of Side Tone later.
>
> 2. Are you telling me you injected 8.830mhz into RIF terminal on IF
> board Conn 6 and got no speaker tone and no S-meter indication? Are
> you sure you had good level at 8.830mhz? 500uv or -53dBm should give
> approx S9 indication. Suggest you repeat this test.
>
> If you get no results you know there is a problem on the IF board. It
> is possible could be as simple as a bad connection at Conn 6.
>
> If you turn the RF gain pot down full CCW does the S-meter drive up
> scale? If not, then the AGC bus may not be energized or something is
> pulling it down. You told me you had good 3.6vdc RF-1 voltage.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> > Terry
> > The first test worked for a 400hz tone
> > The second test did not yield any tone or S meter indication
> > I also have now a BK200D also,so i tried both
> >
> > Don/Ve2ud
> >
> >
> >
> > On 26/07/2013 2:42 PM, Terry Wagoner wrote:

> > >
> > > Does the Marconi have external modulation typically 400hz or 1000hz?
> > >
> > > If so inject it at IF Board Conn 11 Pin 1 DET. If you hear tone in
> > > speaker it tells you that Audio stage is working. Move on to testing
> > > the IF board as noted below.
> > >
> > > If you do not hear it then inject again at Audio Board Conn 1 Pin 2
> > > DET. If you do not hear it then inject at Conn 2 AV1. If you do not
> > > hear it inject at Conn 2 AV2. If you cannot hear it then inject at
> > > Conn 4 Pin 6 SP. Should hear it here as you are now injecting into
> the
> > > speaker (plus molex pin, solder connection and cabling to the
> > > headphones jack). If you can hear tone when injecting at Conn 4 Pin 6
> > > SP and not when injecting at AV-2 then likely have a bad Q4 output
> > > device. Just follow the path from the Produce Detector output on the
> > > IF board to the Speaker.
> > >
> > > Assuming AF stage is good now test IF board.
> > >
> > > If you hear the 1000hz tone when you inject it at output of Product
> > > Detector on the IF board then set the Marconi for 8.830 Mhz and
> switch
> > > your output cable from the AF output to the RF output. I dont know
> > > what kind of output level attenuator the Marconi has. Start with a
> > > high level and inject the 8.830mhz into the IF Board RIF input at
> Conn
> > > 6 Pin 6. Should hear tone and should get S meter indication. If
> > > S-meter pegs turn down Marconi rf output level. Set the level for
> > > approx S9 indication.
> > >
> > > If you get no tone when you inject 8.830mhz RIF signal then you know
> > > problem is on the IF board.
> > >
> > > If you get good tone then you need to go back to RF board and inject
> > > there following the path from the RIF output back to the SO-239 or
> the
> > > other way around. I would use 14.200mhz as your test signal.
> > >
> > > Terry K9TW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > > >
> > > > Terry
> > > > I got a Marconi signal generator and discovered all the bands
> were good
> > > > except 40 meters.I was able to load the rig on all the other bands
> > > > So we now know the transmitter is working except for 40 meters.

> > > > That just leaves me with the receiver and so far,no audio,just that
> > > > hum,and no marker.
> > > >
> > > > Don/Ve2ud
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43661. Re: [TS-520_820_530_830] Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-26 21:00:14 UTC
From: Don
Topic: 43556 Message: 43661

Terry
I want to make sure i am measuring the right place for the 3.6vdc,so can
you tell the board and pin number

Don

On 26/07/2013 4:50 PM, Don wrote:
> You told me you had good 3.6vdc RF-1 voltage

43662. Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-26 21:08:12 UTC
From: Terry Wagoner
Topic: 43556 Message: 43662

I would be very surprised if the Marconi didnt put out 1volt or 1000mv or +13dBm. If you have the manual you need to read it to get familiar with it when you get time.

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Yes Terry i could vary the pot
> I used my old scope to make sure i had good output on the SSG first.
> I think that's the max 500uv output for the Marconi 2018
> Let me recheck it all after super and get back to you
>
> Don/Ve2ud
>
>
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>
>
> On 26/07/2013 4:36 PM, Terry Wagoner wrote:
> >
> > Don:
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> > 1. Are you telling me you injected audio into the Product Detector
> > output on the IF board and you got good tone out of the speaker? Were
> > you able to vary the level with the AF gain pot?
> >
> > If so, your Audio Amp stage is working. Will have to troubleshoot lack
> > of Side Tone later.
> >
> > 2. Are you telling me you injected 8.830mhz into RIF terminal on IF
> > board Conn 6 and got no speaker tone and no S-meter indication? Are
> > you sure you had good level at 8.830mhz? 500uv or -53dBm should give
> > approx S9 indication. Suggest you repeat this test.
> >
> > If you get no results you know there is a problem on the IF board. It
> > is possible could be as simple as a bad connection at Conn 6.
> >
> > If you turn the RF gain pot down full CCW does the S-meter drive up
> > scale? If not, then the AGC bus may not be energized or something is
> > pulling it down. You told me you had good 3.6vdc RF-1 voltage.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > >
> > > Terry

> > > The first test worked for a 400hz tone
> > > The second test did not yield any tone or S meter indication
> > > I also have now a BK200D also,so i tried both
> > >
> > > Don/Ve2ud
> > >
> > >
> > >
> > > On 26/07/2013 2:42 PM, Terry Wagoner wrote:
> > > >
> > > > Does the Marconi have external modulation typically 400hz or 1000hz?
> > > >
> > > > If so inject it at IF Board Conn 11 Pin 1 DET. If you hear tone in
> > > > speaker it tells you that Audio stage is working. Move on to testing
> > > > the IF board as noted below.
> > > >
> > > > If you do not hear it then inject again at Audio Board Conn 1 Pin 2
> > > > DET. If you do not hear it then inject at Conn 2 AV1. If you do not
> > > > hear it inject at Conn 2 AV2. If you cannot hear it then inject at
> > > > Conn 4 Pin 6 SP. Should hear it here as you are now injecting into
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> > > > speaker (plus molex pin, solder connection and cabling to the
> > > > headphones jack). If you can hear tone when injecting at Conn 4 Pin 6
> > > > SP and not when injecting at AV-2 then likely have a bad Q4 output
> > > > device. Just follow the path from the Produce Detector output on the
> > > > IF board to the Speaker.
> > > >
> > > > Assuming AF stage is good now test IF board.
> > > >
> > > > If you hear the 1000hz tone when you inject it at output of Product
> > > > Detector on the IF board then set the Marconi for 8.830 Mhz and
> > switch
> > > > your output cable from the AF output to the RF output. I dont know
> > > > what kind of output level attenuator the Marconi has. Start with a
> > > > high level and inject the 8.830mhz into the IF Board RIF input at
> > Conn
> > > > 6 Pin 6. Should hear tone and should get S meter indication. If
> > > > S-meter pegs turn down Marconi rf output level. Set the level for
> > > > approx S9 indication.
> > > >
> > > > If you get no tone when you inject 8.830mhz RIF signal then you know
> > > > problem is on the IF board.
> > > >
> > > > If you get good tone then you need to go back to RF board and inject
> > > > there following the path from the RIF output back to the SO-239 or
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> > > > other way around. I would use 14.200mhz as your test signal.
> > > >
> > > > Terry K9TW
> > > >

> > > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > > > >
> > > > > Terry
> > > > > I got a Marconi signal generator and discovered all the bands
> > were good
> > > > > except 40 meters.I was able to load the rig on all the other bands
> > > > > So we now know the transmitter is working except for 40 meters.
> > > > > That just leaves me with the receiver and so far,no audio,just that
> > > > > hum,and no marker.
> > > > >
> > > > > Don/Ve2ud
> > > > >
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43663. Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-26 21:28:39 UTC
From: Terry Wagoner
Topic: 43556 Message: 43663

OK RF-1 is your threshold voltage for the AGC and ALC bus. It is derived from the regulated 9vdc on the Audio board. Trimmer pot VR-3 on the Audio board is used to adjust it at Conn 9 Pin 5.

Measure it there and adjust it to 3.6vdc with a DMM if you have one.

RF-1 is the power supply for the AGC bus and the AGC bus likes to have that voltage applied at the IF board. It is applied thru the RF gain pot to Conn 8 Pin 2 RFG terminal. Should have approx 3.6vdc with RF gain pot full CW and approx 2.6vdc with the RF gain pot full CCW.

At this point you still have not measured the AGC bus voltage. Just the dc power supply to it. You need a minimum of a 11meg VTVM or a 10meg DMM to measure the AGC bus voltage at Conn 15 Pin 3 on IF board.

We discussed this at least once before and I cautioned you to get on the correct pin as there is 300vdc on Pin 1 of Conn 15. I will give you the color of Pin 3 lead wire, but do not bet your life on color code conventions. Always measure to confirm. AGC bus should be the Brown wire. If your DMM is low Z input it will cause the S-meter to read up scale around 10 over S9 or higher and you will measure under 2.0vdc. With a 11meg meter should get something on order of 3.0vdc and approx S3 to S4 indication.

If Conn 6 Pin 6 RIF input is good and supplying your test 8.830mhz to Q1 amp and the AGC bus voltage is good what would you check next?

Hint: You need a Local Oscillator signal available for your 2nd rx mixer. A test point is provided to measure the frequency and the level.

Terry

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Terry
> I want to make sure i am measuring the right place for the 3.6vdc,so can
> you tell the board and pin number
>
> Don
>
>
>
> On 26/07/2013 4:50 PM, Don wrote:
> > You told me you had good 3.6vdc RF-1 voltage
>

43664. Re: [TS-520_820_530_830] S meter.....

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-27 00:56:54 UTC
From: Mike McHugh
Topic: 43642 Message: 43664

Hi Mike and thank you for your comments. I just "replied" to Terry K9TW and I thank both for your comments.
Yes I loaded into Dummy antenna and , as I reported to Terry, my ip is at 230 and 775VDC shows on HV. Grid Current was set at 60ma...I still see about 138 on my wattmeter. I just received a new MFJ 870 and I did calibrate my older Para Dynamics Wattmeter to the new MFJ..... I told Terry that I am tempted to get,yet,another wattmeter to compare one meter against the others...I'm still not sure of the readings on either meter....Trust is elusive for me.
I related to Terry that I will open the hood (top and bottom) tomorrow and look for any mods. that might have been installed. I think the HV reading is close to what it should be....I keep searching for answers.
Thanks,again, Mike for your input.... I DO appreciate...

Mike.KD2DYY

On Fri, Jul 26, 2013 5:20 AM PDT W5RKL wrote:

>Hi Mike,
>
>The S meter will rise full scale when the 830 is first power on then
>fall back to zero (no antenna connected).
>
>I question the "140 watts" output you claim your 830 is producing. I'll
>assume you have a watt meter inline between the 830's output and the
>antenna, or hopefully a 50 ohm dummy load, that shows 140 watts. If your
>watt meter shows 140 watts, what are the 830's IP and HV meter
>indications showing with 140 watts indicated on your watt meter and is
>the 140 watts indicated with a 50 ohm dummy load or an antenna connected
>to the 830?
>
>The 830 has a maximum DC input power rating of 180 watts in CW mode.
>That is the maximum input power the final amplifier in the 830 is
>capable or producing. In order to achieve 140 watts output in CW mode
>the 830's final amplifier efficiency rating would have to be "78%" and
>that's simply not possible with the 830. Did you tune the transmitter
>into a 50 ohm dummy load using the tune up procedures listed in the
>operator's manual? If you did you won't see 140 watts output in CW mode
>unless your watt meter's calibration is off.
>
>73
>Mike W5RKL
>
>
>
>

>
>On 7/26/2013 6:13 AM, Mike McHugh wrote:
>>
>>
>> Hi guys (and girls).... Just a quick question..... I just purchased a
>> 830s and LOVE that radio . Wow.... Quite a step up from the 520s that
>> I have been using. I never want to go SS. I'll stick with the hybrids....
>> Easy question I hope.......
>> When I first turn the radio on, the S meter pegs to the right... I
>> must have some control set too far one way or tother... Scars the
>> dickens out of me. Don't want to look for a new meter. The meter
>> functions just fine after that initial turn on.....Radio functions
>> just great and glad I made the purchase....
>> Another observation.... I seem to be able to "drive" this rig a lot
>> hotter than the 520s..... I am getting 140 watts out and could never
>> get that with the 520s even after "recapping" the rig. Is this typical
>> of 830s..... To get ahead of your next response, NO I do not keep it
>> there. I settle on at 120watt or less. I remain impressed by this
>> radio. Whew!.....Like it, like it ,like it..........
>> Thanks for any help you can offer......
>>
>> Mike KD2Dyy
>>
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>[Non-text portions of this message have been removed]
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43665. Re: [TS-520_820_530_830] Re: S meter.....

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-27 00:39:26 UTC
From: Mike McHugh
Topic: 43642 Message: 43665

Hi Terry and thanks for the comments...I did a close look at the meter on the full output that I THINK I am putting out..... My plate ip is 230 and HV is at 775 (Bias is set at 60ma).....This reading is with "send" switch on and CW.W
I am showing 140 watts BUT I cannot believe my meter. I did just buy and received an MFJ 870 meter and calibrated my older Para Dynamics wattmeter to that meter....I have this strong urge to get,yet,another meter to compare each of Three meters...Gad! Does it never end?
As I said before, I will NOT load up to the max and will hold my plate iP to 220 or less. No need to try to smoke the old 6146B's... I have yet to open the rig. I know I should and tomorrow I will and look for any and all mods. that might have been installed. I am VERY happy with what I see so far on this radio.....
Still will hold on to my old 520s... First radio I fired up with my new license in 50 years....Time does fly...
Talk with you soon......

Mike KD2DYY

On Fri, Jul 26, 2013 6:59 AM PDT Terry Wagoner wrote:

>Mike:
>
>What plate current are you loading to for 140 watts output?
>
>It is OK to load to 250ma if you even can get there, but I would not as a matter of routine. Even at 250ma you should not be seeing 140watts output. Probably more like 840v x .250 = 210 x .55 = 116 watts output into non-inductive 50 ohm dummy load.
>
>Most 830s I have seen start to fall flat much above 225ma. Have seen a couple non-modified that could attain 250ma. Had one fellow tell me he could load to 300ma and one who said he loaded his to 400ma. That is especially interesting as meter only goes to 350ma!
>
>As Dave VK5PDL says if you are really getting out 140 watts the rig has been QRO-d or your wattmeter is not accurate. If QRO-d need to restore to factory and inspect plate choke in PA cage for signs of overheating.
>
>Where is Ip at when you have 140 watts output?
>
>Terry K9TW
>
>--- In TS-520_820_530_830@yahoogroups.com, Mike McHugh <mchugh54321@...> wrote:
>>
>>
>> Hi guys (and girls).... Just a quick question..... I just purchased a 830s and LOVE that radio . Wow.... Quite a step up from the 520s that I have been using. I never want to go SS. I'll stick with the hybrids....

>> Easy question I hope.......
>> When I first turn the radio on, the S meter pegs to the right... I must have some control set too far one way or tother... Scars the dickens out of me. Don't want to look for a new meter. The meter functions just fine after that initial turn on.....Radio functions just great and glad I made the purchase....
>> Another observation.... I seem to be able to "drive" this rig a lot hotter than the 520s..... I am getting 140 watts out and could never get that with the 520s even after "recapping" the rig. Is this typical of 830s..... To get ahead of your next response, NO I do not keep it there. I settle on at 120watt or less. I remain impressed by this radio. Whew!.....Like it, like it ,like it...........
>> Thanks for any help you can offer......
>>
>> Mike KD2Dyy
>>
>
>

43666. Re: S meter.....

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-27 03:15:03 UTC
From: Terry Wagoner
Topic: 43642 Message: 43666

OK if 775vdc and 230ma are accurate you would be very close to rated CW DC input power of 180 watts. Not possible to get 140 watts output at 180 watts input.

If you have some test equipment can verify output power by measuring RF voltage drop across your dummy load.

If you had a 3 diode RF probe/VTVM or O-scope could place Coaxial tee at your dummy load and measure the RF voltage at open Tee. At 100 watts output into 50 ohm dummy load you would read close to 70.7 rms volts.

E = Square root of P x R or E= Square root of 140 x 50 = 83.7rms volts measured by RF probe or 236.7 Peak to Peak volts on a Scope. 140 watts into 50 ohm load = 83.7 P-P volts.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Mike McHugh <mchugh54321@...> wrote:
>
>
> Hi Terry and thanks for the comments...I did a close look at the meter on the full output that I THINK I am putting out..... My plate ip is 230 and HV is at 775 (Bias is set at 60ma).....This reading is with "send" switch on and CW.W
> I am showing 140 watts BUT I cannot believe my meter. I did just buy and received an MFJ 870 meter and calibrated my older Para Dynamics wattmeter to that meter....I have this strong urge to get,yet,another meter to compare each of Three meters...Gad! Does it never end?
> As I said before, I will NOT load up to the max and will hold my plate iP to 220 or less. No need to try to smoke the old 6146B's... I have yet to open the rig. I know I should and tomorrow I will and look for any and all mods. that might have been installed. I am VERY happy with what I see so far on this radio.....
> Still will hold on to my old 520s... First radio I fired up with my new license in 50 years....Time does fly...
> Talk with you soon......
>
> Mike KD2DYY
>
>
>
> ------------------------------
> On Fri, Jul 26, 2013 6:59 AM PDT Terry Wagoner wrote:
>
> >Mike:
> >
> >What plate current are you loading to for 140 watts output?
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> >It is OK to load to 250ma if you even can get there, but I would not as a matter of routine. Even at 250ma you should not be seeing 140watts output. Probably more like 840v x

.250 = 210 x .55 = 116 watts output into non-inductive 50 ohm dummy load.
> >
> >Most 830s I have seen start to fall flat much above 225ma. Have seen a couple non-modified that could attain 250ma. Had one fellow tell me he could load to 300ma and one who said he loaded his to 400ma. That is especially interesting as meter only goes to 350ma!
> >
> >As Dave VK5PDL says if you are really getting out 140 watts the rig has been QRO-d or your wattmeter is not accurate. If QRO-d need to restore to factory and inspect plate choke in PA cage for signs of overheating.
> >
> >Where is Ip at when you have 140 watts output?
> >
> >Terry K9TW
> >
> >--- In TS-520_820_530_830@yahoogroups.com, Mike McHugh <mchugh54321@> wrote:
> >>
> >>
> >> Hi guys (and girls).... Just a quick question..... I just purchased a 830s and LOVE that radio . Wow.... Quite a step up from the 520s that I have been using. I never want to go SS. I'll stick with the hybrids....
> >> Easy question I hope.......
> >> When I first turn the radio on, the S meter pegs to the right... I must have some control set too far one way or tother... Scars the dickens out of me. Don't want to look for a new meter. The meter functions just fine after that initial turn on.....Radio functions just great and glad I made the purchase....
> >> Another observation.... I seem to be able to "drive" this rig a lot hotter than the 520s..... I am getting 140 watts out and could never get that with the 520s even after "recapping" the rig. Is this typical of 830s..... To get ahead of your next response, NO I do not keep it there. I settle on at 120watt or less. I remain impressed by this radio. Whew!.....Like it, like it ,like it...........
> >> Thanks for any help you can offer......
> >>
> >> Mike KD2Dyy
> >>
> >
> >
>

43667. Re: TS520SE lALC problem back to haunt me!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-27 06:19:58 UTC
From: adrian.langford@ymail.com
Topic: 43531 Message: 43667

OK I think I know what's going on with my intermittent ALC problem.

To recap:

- normally I get healthy ALC, can easily get full scale on all bands bar 10m when peaking ALC with Drive, and just below full scale on 10m

- when problem arises I can still get ALC indication, but lower levels and au have to crank Carrier much higher than normal. I no longer get ALC on 10m and very low on 15m (within black ALC scale with Carrier maxed). That's with 60mA idle current.

It's heat related! ALC fine when I turn rig on from cold. It goes awry when rig has been left on for period. Am checking now to see how long before problem starts but it's within an hour or so (and temps hit in UK just now and we don't have indoor aircon, so ambient reaches 25-30C).

So where should I look for heat-related reduction of ALC? I'm going to at least make sure 12BY7A driver is firmly in base today (I replaced recently). Any other candidate parts/connectors/boards?

73 Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@..." <adrian@...> wrote:
>
> I just settled down to do measurements on the rig, but it is behaving normally now - even FSD ALC on 28MHz (though with higher Carrier level than lower bands).
>
> Intermittent problems are annoying!
>
> I monitored idle current for 15 mins and didn't drop - in fact it rose slightly from 60mA to 70mA.
>
> Maybe I should just loosen and re-tighten ground screws? Or leave till problem repeats and do measurements then.
>
> 73 de Adrian G4IQW
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Adrian:
> >
> > After you adjust the resting plate current to 60ma does it stay there for some time or does it drift pretty quickly? Idle current is a function of cathode emission, control grid operating dc bias voltage, and screen grid voltage. If finals have lots of age emission can be a problem. Otherwise bias voltage and screen grid voltage must be to spec and stable.
> >
> > If you feel comfortable I would measure the grid bias voltage at the final board on the

control grid pin of the tube socket. It is not often that the -C supply floats around, however if the bias voltage pot is dirty it can cause resting plate current to change. If you havent cleaned and exercised this pot it is good idea to do so. Easy to remove the three screws that hold the plate to side of rig to get access to pot to apply the Deoxit and canned air. Try to set it back close to original position so you dont have insufficient bias voltage and the finals run away and be destroyed when you first key rig to adjust to 60ma.
> >
> > As you know ALC indication is a function of RF drive voltage and dc bias offset at the control grids of your 6146 finals. Assuming that DC bias voltage is set properly then need to measure the RF drive voltage. If RF drive voltage is low suggest you try a new 12By7A Driver tube as a first step.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@" <adrian@> wrote:
> > >
> > > Prior to today I had been able to align my 520SE (with Terry's invaluable help!) so that I had full scale ALC on all bands. Before I had no ALC on 10m at all.
> > >
> > > Turning on the rig today the ALC was much lower than normal when I tuned up. Where I could get FSD on 7MHz with carrier control around 3 and drive peaked, I now had to wind the carrier full clockwise and only get about 3/4 full scale. Checking each band I found I was getting no ALC on 28, and progressively higher peaked ALC going down bands to 3.5MHz (7 and 3.5 about same).
> > >
> > > This had happened once before and when I checked idle plate current it was about 40mA not 60mA. After setting to 60mA the ALC was fine.
> > >
> > > So I checked idle current and it was around 45mA. Thinking this would be bound to fix the ALC I increased to 60mA, but I still had same low ALC! Maybe it was just coincidence that last time I had to readjust idle current, the ALC was its old healthy self?
> > >
> > > So what could cause a sudden decrease in ALC, and complete loss of it on 10m where it was fine before post-alignment? What's obvious place to look? Could it just be finals have given up? Any reason why the idle current has dropped since last adjusted to 60mA just a few weeks ago when I last saw this problem?
> > >
> > > Thanks for your advice.
> > >
> > > 73 de Adrian G4IQW
> > >
> >
>

43668. Audio Out the Rear Socket - Update

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-27 07:57:48 UTC
From: Kevin, Natalia, Stacey and Rochelle
Topic: 43668 Message: 43668

To save writing to each of you that emailed me directly, thanks for the information, it appears from the replies that the audio out is an tap from the speaker, and is followed on the schematic.

I am going to look at seeing a point I can tap an audio output to the input of the mixer. I have tried to use the audio out for the ext speaker however the audio was not the best.

And I have the information from page 25 to use the phone-patch input mod, this should fix the input audio issue.

And thanks for the HiRes schematic, I do have a copy but where it is at the moment is anyone's guess.

Regards Kevin, ZL1KFM.

[Non-text portions of this message have been removed]

43669. Re: TS520SE IALC problem back to haunt me!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-27 12:15:08 UTC
From: Terry Wagoner
Topic: 43531 Message: 43669

I would instrument the rig to find what required parameter(s) is falling off.

As you know you need proper RF drive level, good cathode emission, proper operating bias, and proper Screen grid voltage.

In RX mode not much you can monitor. You could watch 6146 Screen grid voltage and control grid cutoff bias voltages to see if they change over time. I doubt it.

Easiest first thing to eliminate is to sub all three tubes even though you did that with the driver tube. Subs can be weak of bad even if supposed NOS tubes.

Otherwise you need to measure RF drive and Operating bias voltage under key down into dummy load. You know RF drive must exceed the negative dc offset voltage. Either drive is low or bias is high. Usually it is low RF drive that causes low ALC indication.

Easy to make a quick check at finals control grids to make sure operating bias isnt drifting high.

Assuming bias is not the culprit I would run the TX level diagram using O-scope or RF millivolt meter or 3 diode RF probe and see where the drive voltage doesnt match spec ie is the level good at output of TX Mixer? If not is TIF level good? Is Local Osc level good?

Where you find RF drive low you then troubleshoot. Is it due to low CBE or DSG voltages, is it low due to low Local Osc signal level, is it low because 12BY7A Driver tube voltages are low at tube socket pins especially Screen Grid voltage and so on.

Suggest you invest in a Pamona socket for measuring Driver tube voltages with tube in the socket and under key down.

Terry K9TW

> It's heat related! ALC fine when I turn rig on from cold. It goes awry when rig has been left on for period. Am checking now to see how long before problem starts but it's within an hour or so (and temps hit in UK just now and we don't have indoor aircon, so ambient reaches 25-30C).
>
> So where should I look for heat-related reduction of ALC? I'm going to at least make sure 12BY7A driver is firmly in base today (I replaced recently). Any other candidate parts/connectors/boards?

43670. Re: TS520SE IALC problem back to haunt me!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-27 13:02:56 UTC
From: Terry Wagoner
Topic: 43531 Message: 43670

Adrian:

I forgot to mention about your plan to reseat the driver tube. You might want to leave the shield off after you do this and then power rig on and when ALC falls off during attempt to peak the drive grasp the tube with a rag or cloth to protect your fingers and apply pressure and rock the tube in its sockets. Dont push too hard.

The tube socket can have bad solder connections at the pins and at the center. Usually this would cause intermittent RF drive, but not sure about low drive.

Terry

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> I would instrument the rig to find what required parameter(s) is falling off.
>
> As you know you need proper RF drive level, good cathode emission, proper operating bias, and proper Screen grid voltage.
>
> In RX mode not much you can monitor. You could watch 6146 Screen grid voltage and control grid cutoff bias voltages to see if they change over time. I doubt it.
>
> Easiest first thing to eliminate is to sub all three tubes even though you did that with the driver tube. Subs can be weak of bad even if supposed NOS tubes.
>
> Otherwise you need to measure RF drive and Operating bias voltage under key down into dummy load. You know RF drive must exceed the negative dc offset voltage. Either drive is low or bias is high. Usually it is low RF drive that causes low ALC indication.
>
> Easy to make a quick check at finals control grids to make sure operating bias isnt drifting high.
>
> Assuming bias is not the culprit I would run the TX level diagram using O-scope or RF millivolt meter or 3 diode RF probe and see where the drive voltage doesnt match spec ie is the level good at output of TX Mixer? If not is TIF level good? Is Local Osc level good?
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> Where you find RF drive low you then troubleshoot. Is it due to low CBE or DSG voltages, is it low due to low Local Osc signal level, is it low because 12BY7A Driver tube voltages are low at tube socket pins especially Screen Grid voltage and so on.
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> Suggest you invest in a Pamona socket for measuring Driver tube voltages with tube in the socket and under key down.
>
> Terry K9TW
>
>

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> >
> > So where should I look for heat-related reduction of ALC? I'm going to at least make sure 12BY7A driver is firmly in base today (I replaced recently). Any other candidate parts/connectors/boards?
>

43671. Re: TS520SE lALC problem back to haunt me!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-27 13:14:12 UTC
From: adrian.langford@ymail.com
Topic: 43531 Message: 43671

Thanks Terry,

I am going to do the voltage checks, but the ALC when tuning is behaving OK at the moment.

But I am doing some casual operating in IOTA contest, and have now noticed a much weirder ALC problem! Maybe the symptoms point to something obvious but am baffled:

- operating SSB, when I PTT (MC50 mike)and talk, the power fluctuates as expected on external meter, but the ALC does not shift from zero on internal meter

- if I remove antenna (OFCD, showing SWR just below 2.0 at this frequency) and connect dummy load, the ALC on internal meter now follows my speech peaks

- that's with speech compressor on. If I turn compressor off, I have to turn the mike gain all the way up to get ALC needle kicking

Have no idea if this is related to previous problem, but when I tune up the ALC looks normal in Tune position.

So what could cause no ALC voltage with external antenna, but ok into dummy load?

I've only noticed this problem today, in past I could always watch the ALC deflect on SSB, and get good levels without compressor.

Thanks as always.

73 Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Adrian:
>
> I forgot to mention about your plan to reseat the driver tube. You might want to leave the shield off after you do this and then power rig on and when ALC falls off during attempt to peak the drive grasp the tube with a rag or cloth to protect your fingers and apply pressure and rock the tube in its sockets. Dont push too hard.
>
> The tube socket can have bad solder connections at the pins and at the center. Usually this would cause intermittent RF drive, but not sure about low drive.
>
> Terry
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > I would instrument the rig to find what required parameter(s) is falling off.
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> >
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> >
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> >
>

43672. Re: TS520SE IALC problem back to haunt me!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-27 13:17:31 UTC
From: Terry Wagoner
Topic: 43531 Message: 43672

Adrian:

Sorry I had another thought. Need to slow down before I pull the trigger!

Another reason for the Pomona test socket adapter is that you can not only measure the key down voltages of the Driver tube. You can use a mini-grabber and connect your meter (analog meter is superior for this test as you dont have time to watch reading count up or down) to each pin and then apply pressure and rock the tube around and see if the measured voltage remains stable. For example you should see something around 4.5 to 5 volts on Pin 7 the Cathode. It should not vary or come and go as you rock the tube.

Terry

43673. Re: TS520SE IALC problem back to haunt me!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-27 13:51:07 UTC
From: Terry Wagoner
Topic: 43531 Message: 43673

Adrian:

I know of no correlation to what is connected to your SO-239 and ALC level when modulating the rig. I would say you had a problem with your speech amp, but if that was the case should not have good ALC deflection when operating on a dummy load. Speech amp doesnt know what is at the SO-239. Have you listened on the Moni? Where do you typically run the Mic gain for normal ALC indication on voice peaks?

When you modulate the rig ALC indication results any time your modulation of the rf drive envelope causes the Control grid to go positive with respect to the control grid. So on voice peaks when the RF drive level exceeds the -60vdc or so bias voltage you will have spikes of grid current (at ua levels). This results in a reduction in the ALC bus voltage at an audio rate and causes the ALC meter to move up scale.

Different impedances and SWR at the output of the rig pi-network is no problem as long as you are able to re-adjust the Plate Tune and Plate Load capacitors to get the rig to load into what ever impedance is being presented. This network works better than most people think unless trying to load very high impedance like random length end feed or very low impedance as might be encountered in mobile vertical antenna.

What can be a problem is if the load impedance is very high due to a loose connection or with total loss of load as there will be very high voltage across the Plate Load capacitor and can cause arcing.

The 6146 tubes could see varying levels of load under key down and the plate current would be varying due to this change in load Z. Not sure how that would be seen at the Control grid. Operating bias would be same and inter electrode capacitance same. Perhaps RF negative feedback would cause changing drive? Have to give this some more thought.

I think I would measure the RF drive at 6146 control grids on dummy load as you modulate the rig. See how high it goes as you "helloo helloo helloo" or "threee threee threee" or "fivee fivee fivee" in the mic.

Then do same on the OCF dipole on a clear frquency of course.

Do you see this effect on all bands that the OCF covers?

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@..." <adrian@...> wrote:
>
> Thanks Terry,
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> I am going to do the voltage checks, but the ALC when tuning is behaving OK at the moment.
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> But I am doing some casual operating in IOTA contest, and have now noticed a much weirder

ALC problem! Maybe the symptoms point to something obvious but am baffled:
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> So what could cause no ALC voltage with external antenna, but ok into dummy load?
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> I've only noticed this problem today, in past I could always watch the ALC deflect on SSB, and get good levels without compressor.
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> Thanks as always.
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> 73 Adrian G4IQW
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> > > As you know you need proper RF drive level, good cathode emission, proper operating bias, and proper Screen grid voltage.
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43674. Re: TS520SE lALC problem back to haunt me!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-27 14:06:31 UTC
From: Terry Wagoner
Topic: 43531 Message: 43674

Sorry---I made a mistake should have said any time control grid goes positive with respect to the cathode. Pretty hard to go positive with respect to itself!

Also the reason I asked about where you run the mic gain I was interested if you have noticed a change from where you use to run it. Do you now have to run it higher even when using the dummy load.

Terry

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Adrian:
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> I know of no correlation to what is connected to your SO-239 and ALC level when modulating the rig. I would say you had a problem with your speech amp, but if that was the case should not have good ALC deflection when operating on a dummy load. Speech amp doesnt know what is at the SO-239. Have you listened on the Moni? Where do you typically run the Mic gain for normal ALC indication on voice peaks?
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43675. Re: TS520SE IALC problem back to haunt me!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-27 16:28:37 UTC
From: adrian.langford@ymail.com
Topic: 43531 Message: 43675

Terry this may be all my bad work.

I changed the antenna lead and all was OK. However on a meter the old one checked out OK - continuity and no short. But I did change the plug at the rig end last week for a compression type PL259, and as that was last significant thing I did it has to be suspect. I did notice that when I was swapping that connector for the dummy load, the plug and socket had got very hot.

Maybe some intermittent fault with the ground braid as the lead looks ok with meter, even when I bend the coax at the end where I changed the plug.

Now things are OK and I immediately made a few QSOs on the IOTA contest! If it recurs with replacement lead I will put rig on bench and work through your troubleshooting.

Thanks a lot and 73

Adrian G4IQW

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> Adrian:
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43676. Re: TS520SE lALC problem back to haunt me!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-27 17:15:09 UTC
From: Terry Wagoner
Topic: 43531 Message: 43676

Adrian:

I have been sitting here thinking about RF negative feedback and relationship to ALC indication. What difference would high SWR (I mean really high not 2:1)make on RF negative feedback? I also looked at my TS-830 notes and the schematic. Over the years I have done a lot of testing to help me understand how the radio works. Unfortunately my notebooks are not well indexed. I find in the past I have done some measurement of RF negative feedback at the RF feed-thru on the PA cage.

If you look at the PA cage you will see near the Driver tube a teflon feed-thru with a white wire on it that goes to PC board near the Driver tube. That white wire is connected to the Driver tube cathode. You can follow this on the schematic and will see where C6 3pf cap couples RF voltage from the tank circuit to the NFB terminal (where white wire from PA cage lands on the RF board).

This RF negative feedback voltage is used to improve linearity. It reduces distortion ie splatter at slight sacrifice in gain.

It can be measured with RF probe/VTVM, O-scope, or RF Millivolt meter.

In my notes I see that loaded to 100 watts out into a 50 ohm non-reactive load if I modulate with the Threee Threee or Fiveee Fiveee technique using a MC-60 with mic gain at 1200 I read from 800mv to 1000mv on voice peaks. The ALC will kick up to approx full scale of the black printed box.

If I inject 1200hz @ 7mv from audio generator into the mic line and then key it in SSB mode I can get a sustained 1000mv. The ALC kicks up to full scale and remains there.

Now what happens if you load into a reactive load? I have a 200 ohm and a 25 ohm dummy load for testing wattmeters and directional couplers, but they do not present a high enough mismatch to see any effect on the feedback voltage or the ALC indication.

My notes show that I loaded on 20 meters using my 80 meter dipole. This gives a high mismatch. At this SWR level I measured approx 3000 mv at NFB and the ALC drops way down or barely comes off zero with Mic gain still at 1200. So "high" SWR does cause greater RF negative feedback voltage and lower ALC indication.

What is going in here? What I BELIEVE is that the high SWR is shifting the PA load line. The load impedance being presented to the 6146 finals is now too high. I am now in situation of being under coupled.
This means there will be less RF current, but much higher RF voltage. The "high" SWR is causing higher PA RF voltage swing.

C6 couples this higher RF voltage back to the 12BY7A cathode and RF drive is reduced. Reduced RF drive = less ALC indication.

So my theory is that the reason you are seeing less ALC indication on the OCF Dipole than you do on your dummy load is because you have pretty high SWR on all or some of the bands

it is cut for. Perhaps something is breaking down?

Are you seeing reduced ALC indication on all the bands that the OCF is cut for or just one particular band?

If you never previously had any reduced ALC indication while using the OCF on any of the bands it is cut for then I would be concerned about feedline connection problems, or connection problems at the center insulator, or balun breaking down etc.

What does the SWR look like in CW mode on the OCF? When you built it did you record the values on all bands it was cut for so you have them for reference?

I dont have covers off my TS-830 at moment. If I get time I will repeat the measurement tests of the NFB voltage and ALC indications for different load mismatches. Just dont want to end up arcing over my Plate load capacitor. I like to learn but dont like hard lessons!

Maybe others can shed some light on this. Appreciate hearing back any SWR measurements that you make on the OCF.

Terry K9TW

43677. Re: TS520SE IALC problem back to haunt me!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-27 17:18:34 UTC
From: Terry Wagoner
Topic: 43531 Message: 43677

OK sounds like you were presenting a high impedance to the pi-network.

Either open or high resistance short. I guess will never know for sure.

I need to wait awhile before writing these epistles!

Terry

--- In TS-520_820_530_830@yahoogroups.com, "adrian.langford@..." <adrian@...> wrote:
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> > > - if I remove antenna (OFCD, showing SWR just below 2.0 at this frequency) and connect dummy load, the ALC on internal meter now follows my speech peaks
> > >
> > > - that's with speech compressor on. If I turn compressor off, I have to turn the mike gain all the way up to get ALC needle kicking
> > >
> > > Have no idea if this is related to previous problem, but when I tune up the ALC looks normal in Tune position.
> > >
> > > So what could cause no ALC voltage with external antenna, but ok into dummy load?
> > >
> > > I've only noticed this problem today, in past I could always watch the ALC deflect on SSB, and get good levels without compressor.

> > >
> > > Thanks as always.
> > >
> > > 73 Adrian G4IQW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > > >
> > > > Adrian:
> > > >
> > > > I forgot to mention about your plan to reseat the driver tube. You might want to leave the shield off after you do this and then power rig on and when ALC falls off during attempt to peak the drive grasp the tube with a rag or cloth to protect your fingers and apply pressure and rock the tube in its sockets. Dont push too hard.
> > > >
> > > > The tube socket can have bad solder connections at the pins and at the center. Usually this would cause intermittent RF drive, but not sure about low drive.
> > > >
> > > > Terry
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> > > > >
> > > > > I would instrument the rig to find what required parameter(s) is falling off.
> > > > >
> > > > > As you know you need proper RF drive level, good cathode emission, proper operating bias, and proper Screen grid voltage.
> > > > >
> > > > > In RX mode not much you can monitor. You could watch 6146 Screen grid voltage and control grid cutoff bias voltages to see if they change over time. I doubt it.
> > > > >
> > > > > Easiest first thing to eliminate is to sub all three tubes even though you did that with the driver tube. Subs can be weak of bad even if supposed NOS tubes.
> > > > >
> > > > > Otherwise you need to measure RF drive and Operating bias voltage under key down into dummy load. You know RF drive must exceed the negative dc offset voltage. Either drive is low or bias is high. Usually it is low RF drive that causes low ALC indication.
> > > > >
> > > > > Easy to make a quick check at finals control grids to make sure operating bias isnt drifting high.
> > > > >
> > > > > Assuming bias is not the culprit I would run the TX level diagram using O-scope or RF millivolt meter or 3 diode RF probe and see where the drive voltage doesnt match spec ie is the level good at output of TX Mixer? If not is TIF level good? Is Local Osc level good?
> > > > >
> > > > > Where you find RF drive low you then troubleshoot. Is it due to low CBE or DSG voltages, is it low due to low Local Osc signal level, is it low because 12BY7A Driver tube voltages are low at tube socket pins especially Screen Grid voltage and so on.
> > > > >
> > > > > Suggest you invest in a Pamona socket for measuring Driver tube voltages with tube in the socket and under key down.

> > > > >
> > > > > Terry K9TW
> > > > >
> > > > >
> > > > > > It's heat related! ALC fine when I turn rig on from cold. It goes awry when rig has been left on for period. Am checking now to see how long before problem starts but it's within an hour or so (and temps hit in UK just now and we don't have indoor aircon, so ambient reaches 25-30C).
> > > > > >
> > > > > > So where should I look for heat-related reduction of ALC? I'm going to at least make sure 12BY7A driver is firmly in base today (I replaced recently). Any other candidate parts/connectors/boards?
> > > > > >
> > > > >
> > > >
> > >
>

43678. Re: TS520SE IALC problem back to haunt me!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-27 18:09:33 UTC
From: adrian.langford@ymail.com
Topic: 43531 Message: 43678

Gt
That is fascinating Terry, and supports idea that it may have been intermittent problem with new plug I put on using compression fitting, which is never satisfactory.

I will stay alert to recurrence of problem, and try to reproduce it with the original feed line too. I am using a coax switch so I can select the old and new feed lines, but still have to run to balun to swap them over.

I was having the problem on 20m, and now it's disappeared (even putting old feedline back) I can't confirm whether affects all bands equally.

Thank you for your expertise and time.

73s Adrian
--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Adrian:
>
> I have been sitting here thinking about RF negative feedback and relationship to ALC indication. What difference would high SWR (I mean really high not 2:1)make on RF negative feedback? I also looked at my TS-830 notes and the schematic. Over the years I have done a lot of testing to help me understand how the radio works. Unfortunately my notebooks are not well indexed. I find in the past I have done some measurement of RF negative feedback at the RF feed-thru on the PA cage.
>
> If you look at the PA cage you will see near the Driver tube a teflon feed-thru with a white wire on it that goes to PC board near the Driver tube. That white wire is connected to the Driver tube cathode. You can follow this on the schematic and will see where C6 3pf cap couples RF voltage from the tank circuit to the NFB terminal (where white wire from PA cage lands on the RF board).
>
> This RF negative feedback voltage is used to improve linearity. It reduces distortion ie splatter at slight sacrifice in gain.
>
> It can be measured with RF probe/VTVM, O-scope, or RF Millivolt meter.
>
> In my notes I see that loaded to 100 watts out into a 50 ohm non-reactive load if I modulate with the Threee Threee or Fiveee Fiveee technique using a MC-60 with mic gain at 1200 I read from 800mv to 1000mv on voice peaks. The ALC will kick up to approx full scale of the black printed box.
>
> If I inject 1200hz @ 7mv from audio generator into the mic line and then key it in SSB mode I can get a sustained 1000mv. The ALC kicks up to full scale and remains there.
>
> Now what happens if you load into a reactive load? I have a 200 ohm and a 25 ohm dummy load for testing wattmeters and directional couplers, but they do not present a high enough

mismatch to see any effect on the feedback voltage or the ALC indication.
>
> My notes show that I loaded on 20 meters using my 80 meter dipole. This gives a high mismatch. At this SWR level I measured approx 3000 mv at NFB and the ALC drops way down or barely comes off zero with Mic gain still at 1200. So "high" SWR does cause greater RF negative feedback voltage and lower ALC indication.
>
> What is going in here? What I BELIEVE is that the high SWR is shifting the PA load line. The load impedance being presented to the 6146 finals is now too high. I am now in situation of being under coupled.
> This means there will be less RF current, but much higher RF voltage. The "high" SWR is causing higher PA RF voltage swing.
>
> C6 couples this higher RF voltage back to the 12BY7A cathode and RF drive is reduced. Reduced RF drive = less ALC indication.
>
> So my theory is that the reason you are seeing less ALC indication on the OCF Dipole than you do on your dummy load is because you have pretty high SWR on all or some of the bands it is cut for. Perhaps something is breaking down?
>
> Are you seeing reduced ALC indication on all the bands that the OCF is cut for or just one particular band?
>
> If you never previously had any reduced ALC indication while using the OCF on any of the bands it is cut for then I would be concerned about feedline connection problems, or connection problems at the center insulator, or balun breaking down etc.
>
> What does the SWR look like in CW mode on the OCF? When you built it did you record the values on all bands it was cut for so you have them for reference?
>
> I dont have covers off my TS-830 at moment. If I get time I will repeat the measurement tests of the NFB voltage and ALC indications for different load mismatches. Just dont want to end up arcing over my Plate load capacitor. I like to learn but dont like hard lessons!
>
> Maybe others can shed some light on this. Appreciate hearing back any SWR measurements that you make on the OCF.
>
>
> Terry K9TW
>

43679. Re: [TS-520_820_530_830] Re: TS520SE IALC problem back to haunt me!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-27 18:47:40 UTC
From: Wes Will
Topic: 43531 Message: 43679

> I need to wait awhile before writing these epistles!
>
> Terry

NO, you shouldn't, not for a BIG clock! I have learned more from your "epistles" than from hours tracing the schematics....

So, you just keep right on jumping in, and I'll keep getting more good information from the Hybrid Gospel According to Terry Wagoner.

Have you considered a book? Won't be a big seller, maybe, but I would buy a copy....

--
Wes Will
N9KDY

43680. Re: TS520SE IALC problem back to haunt me!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-27 19:59:59 UTC
From: Terry Wagoner
Topic: 43531 Message: 43680

Wes:

I have talked to Mike Waldrop about collaborating on a Kenwood Operating and Maintenance Handbook but as you say it would not be big seller and would have to be self published.

I have also thought about You Tube videos series, but not pursued it. I know enough about video training to know that you cannot let the video production quality detract from the message. I have seen some really poor videos both technically and video/audio quality.

I have no idea what good camera, microphone, lighting, and editing software would cost. I am sure there is wide range of quality levels and costs and many opinions on what you would need. I hate to invest money on video production equipment that I could spend on test equipment!

Besides I might be camera and mic shy!

Maybe when I hit the lottery!

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Wes Will <wwill@...> wrote:
>
> > I need to wait awhile before writing these epistles!
> >
> > Terry
>
>
> NO, you shouldn't, not for a BIG clock! I have learned more from your
> "epistles" than from hours tracing the schematics....
>
> So, you just keep right on jumping in, and I'll keep getting more good
> information from the Hybrid Gospel According to Terry Wagoner.
>
> Have you considered a book? Won't be a big seller, maybe, but I would
> buy a copy....
>
> --
> Wes Will
> N9KDY
>

43681. Re: TS520SE IALC problem back to haunt me!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-27 20:32:56 UTC
From: adrian.langford@ymail.com
Topic: 43531 Message: 43681

Well I think you may have found problem in my antenna system from thousands of miles away Terry.

It's very wet here today and the OFCD takes odd course round corners and along fence at times, but in past on bands I use most 40 and 20 it's been around a 1.5 SWR

I just measured way high swr on all bands, and rig reluctant to tune into them in fact it was showing power up to 200W on some!

80m 6:1
40m 4:1
20m 2.4:1
15m 3:1

So either the feed SO239 got too wet as I attached coax (I had disconnected earlier as threat of storms), or there is as you say a breakdown somewhere, most likely at 4:1 balun.

Will check again when things dry out tomorrow.

73 Adrian G4IQW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Adrian:
>. looked at my TS-830 notes and the schematic. Over the years I have done a lot of testing to help me understand how the radio works. Unfortunately my notebooks are not well indexed. I find in the past I have done some measurement of RF negative feedback at the RF feed-thru on the PA cage.
>
> If you look at the PA cage you will see near the Driver tube a teflon feed-thru with a white wire on it that goes to PC board near the Driver tube. That white wire is connected to the Driver tube cathode. You can follow this on the schematic and will see where C6 3pf cap couples RF voltage from the tank circuit to the NFB terminal (where white wire from PA cage lands on the RF board).
>
> This RF negative feedback voltage is used to improve linearity. It reduces distortion ie splatter at slight sacrifice in gain.
>
> It can be measured with RF probe/VTVM, O-scope, or RF Millivolt meter.
>
> In my notes I see that loaded to 100 watts out into a 50 ohm non-reactive load if I modulate with the Threee Threee or Fiveee Fiveee technique using a MC-60 with mic gain at 1200 I read from 800mv to 1000mv on voice peaks. The ALC will kick up to approx full scale of the black printed box.
>
> If I inject 1200hz @ 7mv from audio generator into the mic line and then key it in SSB mode I can get a sustained 1000mv. The ALC kicks up to full scale and remains there.

>
> Now what happens if you load into a reactive load? I have a 200 ohm and a 25 ohm dummy load for testing wattmeters and directional couplers, but they do not present a high enough mismatch to see any effect on the feedback voltage or the ALC indication.
>
> My notes show that I loaded on 20 meters using my 80 meter dipole. This gives a high mismatch. At this SWR level I measured approx 3000 mv at NFB and the ALC drops way down or barely comes off zero with Mic gain still at 1200. So "high" SWR does cause greater RF negative feedback voltage and lower ALC indication.
>
> What is going in here? What I BELIEVE is that the high SWR is shifting the PA load line. The load impedance being presented to the 6146 finals is now too high. I am now in situation of being under coupled.
> This means there will be less RF current, but much higher RF voltage. The "high" SWR is causing higher PA RF voltage swing.
>
> C6 couples this higher RF voltage back to the 12BY7A cathode and RF drive is reduced. Reduced RF drive = less ALC indication.
>
> So my theory is that the reason you are seeing less ALC indication on the OCF Dipole than you do on your dummy load is because you have pretty high SWR on all or some of the bands it is cut for. Perhaps something is breaking down?
>
> Are you seeing reduced ALC indication on all the bands that the OCF is cut for or just one particular band?
>
> If you never previously had any reduced ALC indication while using the OCF on any of the bands it is cut for then I would be concerned about feedline connection problems, or connection problems at the center insulator, or balun breaking down etc.
>
> What does the SWR look like in CW mode on the OCF? When you built it did you record the values on all bands it was cut for so you have them for reference?
>
> I dont have covers off my TS-830 at moment. If I get time I will repeat the measurement tests of the NFB voltage and ALC indications for different load mismatches. Just dont want to end up arcing over my Plate load capacitor. I like to learn but dont like hard lessons!
>
> Maybe others can shed some light on this. Appreciate hearing back any SWR measurements that you make on the OCF.
>
>
> Terry K9TW
>

43682. Re: TS520SE IALC problem back to haunt me!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-27 22:03:01 UTC
From: Terry Wagoner
Topic: 43531 Message: 43682

Well probably should not get into long discussions about OCF dipoles.

If you flip wattmeter to reflected power and subtract reading from the 200 watts should get you back close to 100 watts.

I assume you are using a 4:1 current balun at the feed point?

If so make sure you connected the "High" voltage or "Plus" terminal to the long side of the offset. Some say makes no difference but most manufacturers mark balun polarity.

I have run 80 thru 10 meter OCFs here and found best SWR on 40 and 20. It depends on the off set dimensions you use. Really an antenna that helps if you have an analyzer to make sweeps for tuning it. Much harder to adjust the lengths just using a SWR bridge even if you make proportional cuts.

Last one I built was coax fed and I used good 4:1 current balun then a choke balun just below it to address the common mode on the shield and didnt use a tuner as the TS-830 pi-network could handle the impedance excursions presented with no problem.

If you are using a tuner might try taking it out to make sure it isnt breaking down.

I had a DX Engineering balun once that caused wattmeter to flick as if something breaking down as I loaded. Took off the cover and the O-ring gasket was not seated in the groove and was pinched and water poured out of the housing. I left cover off to let it dry and drilled couple of weep holes on bottom of the housing. All of that action belted in at 45 feet and my wife with frown on her face!

Terry K9TW

43683. TS-830s 7 pin DIN plug for remote connector

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-27 23:51:12 UTC
From: ralph_ts_830s
Topic: 43683 Message: 43683

FYI Group,
I have seen comments recently in addition to my own concerning the 7 pin remote connector. I have recently found a supplier. Currently they are $4.87 each. I received mine today and can confirm they are the correct configuration.
http://www.pacparts.com/part.cfm?part_no=E07-0751-15&mfg=Kenwood

73
Ralph/KB1ZYI

43684. Re: TS-830s 7 pin DIN plug for remote connector

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-28 00:08:47 UTC
From: n6wk_skcc3
Topic: 43683 Message: 43684

WOW,
I buy them for much less then that!
Maybe I should start selling mine for $4.87 each..LOL

73,
Gordon
N6WK

--- In TS-520_820_530_830@yahoogroups.com, "ralph_ts_830s" <r_krohne@...> wrote:
>
> FYI Group,
> I have seen comments recently in addition to my own concerning the 7 pin remote connector. I have recently found a supplier. Currently they are $4.87 each. I received mine today and can confirm they are the correct configuration.
> http://www.pacparts.com/part.cfm?part_no=E07-0751-15&mfg=Kenwood
>
> 73
> Ralph/KB1ZYI
>

43685. Re: [TS-520_820_530_830] Re: TS520SE IALC problem back to haunt me!

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-27 20:31:07 UTC
From: Wes Will
Topic: 43531 Message: 43685

> editing software would cost.

Free. Linux. Has pro-grade software available in the OSS repositories, for nothing except the download and learning curve.

As for cameras, those are nearly cheap. Yes, you can spend a bunch-a-ton of money. No, you don't really need to. Check into the actual resolution of the mythical "average" PC screen. You're gaming for that size, and to give more than adequate resolution for one step better than that, you can use about any medium- to high- grade web camera. Use a PC for the recording cache, make it a linux box and do the editing there. 3TB disks are under $150 now, and that's for high-reliability types of disk drives.

Lighting? You can fake up lighting pretty cheaply. ONE of the halogen stand lights you find in big-box hardware stores will provide more than enough, you'll likely have to back it up a few meters to keep from washing things out. A small, hand-held spot for close-ups, and Bob's your uncle.

Camera-aversion I can't help you with.

--
Wes Will
N9KDY

43686. KENWOOD HYBRID USER NET (July 28th, update)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-28 18:36:46 UTC
From: mvgilger
Topic: 43686 Message: 43686

The Saturday's net on 40 meter was called due to smoke in the shack. Jimmy, WB2KNR was supposed to run the net, but at the last minute he had smoke coming out of his radio so by the time he got everything under control, it was late and decided not to hold the net.

The Sunday's net on 20 meter we had 8 stations checking in under ok band conditions. We had one new check-in, KF0RQ. Out of those, there was:

4running TS-520(x)
0 running TS-530(x)
0 running TS-820(x)
2 running TS-830S

I was running my TS-940s. The rest were running non hybrids of one model or another.

We have been having several people checking in regularly with their TS-430, TS-440, and TS-940's, which of course is not a hybrid, although over 30+ years old. Everyone is welcome as long as they have an interest in the older equipment.

If anyone would be interested in filling in as a net control station, please send me an email. Currently it's just myself, WB2KNR and WB0SGA. I would like to get several more. If we do, we can alternate so everyone might be on a 3-4 week rotation. It's a lot of fun and a good way to make sure you station is optimized.

For anyone that has not heard, we have a new web site that WB4HFN is hosting. He currently has a very nice site for Drake, Collins and Heathkit and now Kenwood Hybrids. Good quality manuals plus sale flyers and brochures will be found here, along with user supplied information for all Hybrids.

His URL is:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

To date, we have had the following check-in:

Nov. 2011 ☐ Oct. 2012 Saturday total 754 check-ins, Sunday total 563 check-ins

November 2012, Saturday's, net total = 47, Sundays total = 20
December 2012, Saturday's, net total = 74, Sunday's total = 70
January 2013, Saturday's, net total = 93, Sunday's total = 87
February 2013, Saturday's net total = 103, Sundays total = 87
March 2013, Saturday's, net total = 112, Sunday's total =39
April 2013, Saturday's net total = 52, Sunday's total = 29
May 2013, Saturday's net total = 45, Sunday's total = 50
June 2013, Saturday's net total = 30, Sunday's total = 27
July 2013, Saturday's net total = 63, Sunday's total = 41 (Month to date)

Net Info:
Saturday: 7.235 @ 3:30 Eastern following the Swan Tech Net
Sunday: 14.316 @ 1800 UTC following the ICOM net

Web Site:
http://www.wb4hfn.com/KENWOOD/KenwoodHomePage.htm

73's,
Mark, WB0IQK

43687. new member intro

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-28 21:23:47 UTC
From: danweed85
Topic: 43687 Message: 43687

My name is dan weed from florida. i dont have my amateur license yet but am studying to take the tech and general, hopefully next month. I was gifted a ts 820s and i found this great resource. and im going to need it. ill post some question i have in a little bit but just wanted to say hi to everyone.

Daniel
future call sign here.

43688. Re: [TS-520_820_530_830] new member intro

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-28 21:58:36 UTC
From: Wes Will
Topic: 43687 Message: 43688

On 07/28/2013 04:23 PM, danweed85 wrote:
> My name is dan weed from florida. i dont have my amateur license yet but
> am studying to take the tech and general, hopefully next month. I was
> gifted a ts 820s and i found this great resource. and im going to need
> it. ill post some question i have in a little bit but just wanted to say
> hi to everyone.
>
> Daniel
> future call sign here.

Wishing you the absolute BEST of luck on the test.

But please, don't do what all too many do and stop with JUST knowing the test.

I don't have any clue as to your general knowledge of electronics, of course, but I have seen all too many new amateurs who only know the test bank questions, and have NO idea whatsoever about the WHY and the HOW behind them. If you're already well-taught on electronics and radio theory, then ignore the rest of this and welcome to Amateur Radio.

But if you're just beginning to find out about radio and electronics, PLEASE, ASK QUESTIONS.

Ask here, if you wish to be that 'cut above' sort of Ham, and someone (me, Terry, Mike, probably ANYONE on here), and we will point you to all kinds of FREE, web-based and book-based information on the basics of electronics and electricity.

Your browser, your local library, other Hams in your area, and this email list, will all be great resources in figuring out just why and how that radio actually does all of those nifty things that it does.

Again, best of luck. Get your ticket, but don't wait on that. Get an antenna on that 820 and start LISTENING. Besides, you can have a blast playing with various sorts of antennae, and learn even more (procedures and propagation if nothing else) while you are studying for the exams.

--
Wes Will
N9KDY

43689. problems with ts820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-28 22:34:49 UTC
From: danweed85
Topic: 43689 Message: 43689

Im new to amateur radio and electronics in general and this radio is making me feel like im in over my head, but it was free. The radio came with no outer case or external speaker, and aside from a lil dust looks to be in good shape. when i turned on the radio all the leds came on and the display screen was on. the 10 meter bands dont show the frequency or show something different and dont adjust when i move the knob. the rest of the bands tune fine are in the right range. the main problem i am having is there is only a constant tone noise coming out of the external speakers. there is no static on any band with antenna only the tone noise. the meter does not move at all on RF or IP, on ALC it was not moving but now goes to max if i move the mode switch off tune, on comp and hv it only moves for a brief second the goes to zero and that movement is only in between switching. ive only turned it on three times, only on rec, once when i got and twice after i put the antenna in. the first time i may have heard poping noises but there were also burts of noise from the speakers when i touched the speaker wire or some of the knobs. the service manual suggests the q3(which i believe is the chip on the af avr board is defective) is bad for no noise being heard, and it suggests a great many things could be causing the meter issues. i know ill need several pieces of test equip before i can really do anything, if i can do anything. but being knew to electronics and very tight on money and info would be helpful.

43690. TS830S -Intermittant loss of RX sensitivity and TX output (and drive)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-28 23:52:13 UTC
From: alan_wolf69
Topic: 43690 Message: 43690

I am a newbe to the users group. I've had some on the air support from Mark IQK and he also introduced me to the users group. I have multiple TS830s - but I am relatively a new hybrid user (but have been on the air more than 40 years).

Here is the symptom: going from receive to xmit to receive I sometimes lose receive sensitivity AND I have complete loss of final drive and full loss of output. It does not happen all of the time - but when it does, it affects all bands. The only way to get back to full receive sensitivity and drive is to repeatedly try and tune the rig on 160m. The problem most often occurs when I am on 40m - but it can happen on other bands. Once it happens, all bands are affected as described above.

I suspect the problem is with RL1. I have tried "tapping" RL1 when the problem is occurring - but no change.

I have read many postings on the group - and RL1 sounds like a possible culprit. I also noticed a comment to look at connector 5 on the IF board.

Comments and suggestions would be appreciated.

43691. Re: new member intro

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-28 22:28:27 UTC
From: danweed85
Topic: 43687 Message: 43691

--- In TS-520_820_530_830@yahoogroups.com, Wes Will <wwill@...> wrote:
>
> On 07/28/2013 04:23 PM, danweed85 wrote:
> > My name is dan weed from florida. i dont have my amateur license yet but
> > am studying to take the tech and general, hopefully next month. I was
> > gifted a ts 820s and i found this great resource. and im going to need
> > it. ill post some question i have in a little bit but just wanted to say
> > hi to everyone.
> >
> > Daniel
> > future call sign here.
>
> Wishing you the absolute BEST of luck on the test.
>
> But please, don't do what all too many do and stop with JUST knowing the
> test.
>
> I don't have any clue as to your general knowledge of electronics, of
> course, but I have seen all too many new amateurs who only know the test
> bank questions, and have NO idea whatsoever about the WHY and the HOW
> behind them. If you're already well-taught on electronics and radio
> theory, then ignore the rest of this and welcome to Amateur Radio.
>
> But if you're just beginning to find out about radio and electronics,
> PLEASE, ASK QUESTIONS.
>
> Ask here, if you wish to be that 'cut above' sort of Ham, and someone
> (me, Terry, Mike, probably ANYONE on here), and we will point you to all
> kinds of FREE, web-based and book-based information on the basics of
> electronics and electricity.
>
> Your browser, your local library, other Hams in your area, and this
> email list, will all be great resources in figuring out just why and how
> that radio actually does all of those nifty things that it does.
>
> Again, best of luck. Get your ticket, but don't wait on that. Get an
> antenna on that 820 and start LISTENING. Besides, you can have a blast
> playing with various sorts of antennae, and learn even more (procedures
> and propagation if nothing else) while you are studying for the exams.
>
> --
> Wes Will
> N9KDY
>

Thanx a lot Wes. yea i may put off getting the general because i am new to electronics and would like to learn about it, and being unemployed i have lots of time and a need to learn a new skill. unfortunately im having some issues with the radio, which i will post about later, so even listening which is what i was dying to do will have to wait.

ive found some great textbooks in pdf form from the 50s era of electronics that im just getting started on that are pretty incredible.

any books on more modern study of electronics would be really helpful especially those that help with trouble shooting. and first i would also appreciate just a good book with an intro to electronics and circuits. its seems like a lot of what i read in the service and operating manuals and the tech exam study guide would be more understandable with a good foundation.

thanks again!

43692. Re: [TS-520_820_530_830] Re: new member intro

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-29 00:30:07 UTC
From: Cliff White
Topic: 43687 Message: 43692

For basic electronic principles I find the older books muuuch better
than new textbooks. A lot of old Signal Corps training videos from the
'50s and '60s are on YouTube as well, these have some very good
information in them. Also, a man named Jim Williams wrote a book or two
on basic analog electronics (I don't remember the title) that is VERY
good. I can't recommend any books in particular for troubleshooting, but
I'm sure there are people here that can.

Respectfully,
Cliff White, W5CNW
w5cnw@... <mailto:w5cnw@...>
On 07/28/2013 05:28 PM, danweed85 wrote:
>
> --- In TS-520_820_530_830@yahoogroups.com, Wes Will <wwill@...> wrote:
>> On 07/28/2013 04:23 PM, danweed85 wrote:
>>> My name is dan weed from florida. i dont have my amateur license yet but
>>> am studying to take the tech and general, hopefully next month. I was
>>> gifted a ts 820s and i found this great resource. and im going to need
>>> it. ill post some question i have in a little bit but just wanted to say
>>> hi to everyone.
>>>
>>> Daniel
>>> future call sign here.
>> Wishing you the absolute BEST of luck on the test.
>>
>> But please, don't do what all too many do and stop with JUST knowing the
>> test.
>>
>> I don't have any clue as to your general knowledge of electronics, of
>> course, but I have seen all too many new amateurs who only know the test
>> bank questions, and have NO idea whatsoever about the WHY and the HOW
>> behind them. If you're already well-taught on electronics and radio
>> theory, then ignore the rest of this and welcome to Amateur Radio.
>>
>> But if you're just beginning to find out about radio and electronics,
>> PLEASE, ASK QUESTIONS.
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>> Ask here, if you wish to be that 'cut above' sort of Ham, and someone
>> (me, Terry, Mike, probably ANYONE on here), and we will point you to all
>> kinds of FREE, web-based and book-based information on the basics of
>> electronics and electricity.
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> thanks again!
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> Yahoo! Groups Links
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[Non-text portions of this message have been removed]

43693. Re: new member intro

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-29 00:50:34 UTC
From: danweed85
Topic: 43687 Message: 43693

--- In TS-520_820_530_830@yahoogroups.com, Cliff White <cn.white@...> wrote:
>
> For basic electronic principles I find the older books muuuch better
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> '50s and '60s are on YouTube as well, these have some very good
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> >> But if you're just beginning to find out about radio and electronics,
> >> PLEASE, ASK QUESTIONS.
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> >> Ask here, if you wish to be that 'cut above' sort of Ham, and someone
> >> (me, Terry, Mike, probably ANYONE on here), and we will point you to all
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> > Yahoo! Groups Links
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> [Non-text portions of this message have been removed]
>

thanx for the reply cliff. ill have to find some of the jim williams books. being as new to electronics as i am its hard to even know what to look for. so thanx again.

43694. Re: new member intro

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-29 03:54:26 UTC
From: w5rkl
Topic: 43687 Message: 43694

Another great book for studying/learning electronics is the John T. Frye "Basic Radio Course". This book is out of print but may be found at your local library, at used book stores, at hamfest, or you can purchase the 1951 edition on CD being sold on eBay.for $9.99 (ebay #200692897318).

73
Mike W5RKL

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> >> Wishing you the absolute BEST of luck on the test.
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> >> But please, don't do what all too many do and stop with JUST knowing the
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> >> I don't have any clue as to your general knowledge of electronics, of
> >> course, but I have seen all too many new amateurs who only know the test
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> >> But if you're just beginning to find out about radio and electronics,
> >> PLEASE, ASK QUESTIONS.
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> >> Ask here, if you wish to be that 'cut above' sort of Ham, and someone
> >> (me, Terry, Mike, probably ANYONE on here), and we will point you to all
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> > thanks again!
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> [Non-text portions of this message have been removed]
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43695. Re: TS830S -Intermittant loss of RX sensitivity and TX output (and drive)

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-29 10:47:57 UTC
From: Terry Wagoner
Topic: 43690 Message: 43695

This sounds like classic case of bad RL-1 Aux relay but tapping on relay case does not always confirm this.

It sounds like you are not getting Q1 RF Amp bias, TX Mixer bias, and/or Driver Tube bias TR change.

Leave top cover off rig and next time it happens measure following voltages on the RF board Molex connectors:

Conn 6 MXB (Transmit Mixer bias)
-4.0vdc RX
+1.8vdc TX

Conn 8 RB1 (Q1 RF Amp bias)
+1.1vdc RX
-2.9vdc TX

Conn 8 DRB (Driver tube bias)
-44.0vdc RX
+0.40vdc TX

If you plan to keep your TS-830 I would suggest you purchase a replacement RL-1 Aux relay while NOS subs are still available.

Ordinarily do not recommend replacing parts that are not proven to be bad, but in this case replacing this relay will ensure many years of trouble free operation. Cleaning the contacts of this relay does not prove to be very effective or a long lived fix.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "alan_wolf69" <alan_wolf69@...> wrote:
>
> I am a newbe to the users group. I've had some on the air support from Mark IQK and he also introduced me to the users group. I have multiple TS830s - but I am relatively a new hybrid user (but have been on the air more than 40 years).
>
> Here is the symptom: going from receive to xmit to receive I sometimes lose receive sensitivity AND I have complete loss of final drive and full loss of output. It does not happen all of the time - but when it does, it affects all bands. The only way to get back to full receive sensitivity and drive is to repeatedly try and tune the rig on 160m. The problem most often occurs when I am on 40m - but it can happen on other bands. Once it happens, all bands are affected as described above.
>
> I suspect the problem is with RL1. I have tried "tapping" RL1 when the problem is occurring - but no change.
>
> I have read many postings on the group - and RL1 sounds like a possible culprit. I also

noticed a comment to look at connector 5 on the IF board.
>
> Comments and suggestions would be appreciated.
>

43696. Re: [TS-520_820_530_830] Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-29 13:11:58 UTC
From: Don
Topic: 43556 Message: 43696

I was able to vary the voltage at RF-1 from 1v to 3.6 volts.
The AGC bus voltage was 340 volts.
I could not hear or see any signal when i injected a 8.830 signal.
My Marconi 2018 max is 500 mv,so that should have been enough signal i
would think to hear it.

The hum on the speaker is constant and i can not vary it,,like something
shorting to ground.If i remove Con 4 on the AF board the hum is gone.
I do now also have a BK200D which has a built in crystal calibrator
,,1MHz and 100 KHz
Still no audio,no marker signal,and no side tone.

73
Don/Ve2ud

On 26/07/2013 4:36 PM, Terry Wagoner wrote:
>
> Don:
>
> 1. Are you telling me you injected audio into the Product Detector
> output on the IF board and you got good tone out of the speaker? Were
> you able to vary the level with the AF gain pot?
>
> If so, your Audio Amp stage is working. Will have to troubleshoot lack
> of Side Tone later.
>
> 2. Are you telling me you injected 8.830mhz into RIF terminal on IF
> board Conn 6 and got no speaker tone and no S-meter indication? Are
> you sure you had good level at 8.830mhz? 500uv or -53dBm should give
> approx S9 indication. Suggest you repeat this test.
>
> If you get no results you know there is a problem on the IF board. It
> is possible could be as simple as a bad connection at Conn 6.
>
> If you turn the RF gain pot down full CCW does the S-meter drive up
> scale? If not, then the AGC bus may not be energized or something is
> pulling it down. You told me you had good 3.6vdc RF-1 voltage.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> > Terry
> > The first test worked for a 400hz tone
> > The second test did not yield any tone or S meter indication

> > I also have now a BK200D also,so i tried both
> >
> > Don/Ve2ud
> >
> >
> >
> > On 26/07/2013 2:42 PM, Terry Wagoner wrote:
> > >
> > > Does the Marconi have external modulation typically 400hz or 1000hz?
> > >
> > > If so inject it at IF Board Conn 11 Pin 1 DET. If you hear tone in
> > > speaker it tells you that Audio stage is working. Move on to testing
> > > the IF board as noted below.
> > >
> > > If you do not hear it then inject again at Audio Board Conn 1 Pin 2
> > > DET. If you do not hear it then inject at Conn 2 AV1. If you do not
> > > hear it inject at Conn 2 AV2. If you cannot hear it then inject at
> > > Conn 4 Pin 6 SP. Should hear it here as you are now injecting into
> the
> > > speaker (plus molex pin, solder connection and cabling to the
> > > headphones jack). If you can hear tone when injecting at Conn 4 Pin 6
> > > SP and not when injecting at AV-2 then likely have a bad Q4 output
> > > device. Just follow the path from the Produce Detector output on the
> > > IF board to the Speaker.
> > >
> > > Assuming AF stage is good now test IF board.
> > >
> > > If you hear the 1000hz tone when you inject it at output of Product
> > > Detector on the IF board then set the Marconi for 8.830 Mhz and
> switch
> > > your output cable from the AF output to the RF output. I dont know
> > > what kind of output level attenuator the Marconi has. Start with a
> > > high level and inject the 8.830mhz into the IF Board RIF input at
> Conn
> > > 6 Pin 6. Should hear tone and should get S meter indication. If
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> > > If you get good tone then you need to go back to RF board and inject
> > > there following the path from the RIF output back to the SO-239 or
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> > > other way around. I would use 14.200mhz as your test signal.
> > >
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> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>

> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
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> > > > Terry
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43697. Re: [TS-520_820_530_830] Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-29 13:18:13 UTC
From: Don
Topic: 43556 Message: 43697

Good Morning Terry and Group

Don

On 29/07/2013 9:11 AM, Don wrote:
>
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43698. Re: Power Supply

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-29 14:23:23 UTC
From: Terry Wagoner
Topic: 43556 Message: 43698

Don:

1. I told you to measure voltage at RFG on IF board as you varied the RF gain pot is that what you did? Not RF-1.

2. If you measured 340vdc then you did exactly as I cautioned you not to do? You were to measure the AGC bus voltage and not the 300 supply.

3. Why do you keep messing with the Audio board and unplugging connectors? You proved the Audio pre-amp and output were good by injecting audio from your RF sig gens and could hear the tone and vary its level in the speaker with the AF gain control.

I thought we had moved on to signal injection/signal tracing on the IF board? I am confused?

Our next goal was to confirm that the AGC bus was powered and that you can vary S-meter from 0 to FSD with the RF gain pot so that the IF amp mosfets have required gate 2 dc control voltage. No point in injecting 8.830mhz RIF signal if the IF amps are turned off.

4. Next step is to continue injecting 8.830mhz signal at RIF terminal and go down the signal path and look for presence with O-scope, RF Probe/VTVM/DMM. First easy spot is IFo1 either at IF board or at rear panel connector. Next is at filter switching diodes after Noise Blanker gate and so on.....until you find where signal is lost.

5. I previously mentioned assuming that you have good AGC bus voltage that you could skip ahead and validate that you have required LO for the RX 2nd Mixer. Was hoping you would review schematic and identify TP-1 as the test point to confirm you have good 8.375mhz VBT oscillator signal level (1.0rms or 2.8 P-P). 8.830mhz - 8.375mhz = 455khz. Absent 2nd Mixer LO there will be no 455khz IF and no output. Not common failure, but an easy quick check.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> I was able to vary the voltage at RF-1 from 1v to 3.6 volts.
NOT RF-1 SHOULD BE RFG????
>
The AGC bus voltage was 340 volts. NO NO NO THIS IS 300BUS AND NOT AGC BUS??? WHAT IS THE AGC BUS VOLTAGE AT PIN 3????
> I could not hear or see any signal when i injected a 8.830 signal.
> My Marconi 2018 max is 500 mv,so that should have been enough signal i> would think to hear it.
YOU CANT INJECT AT RIF AND IF CANT HEAR OR SEE CALL IT QUITS. NEED TO PROGRESS DOWN THE RIF SIGNAL PATH TO FIND WHERE LOSING THE SIGNAL???
>
> The hum on the speaker is constant and i can not vary it,,like something
> shorting to ground.If i remove Con 4 on the AF board the hum is gone.

WHY ARE YOU DOING THIS???WHAT HAS THIS TO DO WITH SIGNAL INJECTION SIGNAL TRACING ON THE IF BOARD??? I THOUGHT YOU PROVED THAT THE AUDIO AMP STAGE WAS WORKING????
>

I do now also have a BK200D which has a built in crystal calibrator
> ,,1MHz and 100 KHz
> Still no audio,no marker signal,and no side tone.
>
> 73
> Don/Ve2ud
>

43699. Looking for Kenwood Microphone

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-29 14:28:29 UTC
From: Rich Jones
Topic: 43699 Message: 43699

I am looking to buy a Kenwood MC-50 desk microphone. 4 pin.
Thanks, Rich K8UV 734-428-1477 Michigan

[Non-text portions of this message have been removed]

43700. AGC bus voltage

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-29 15:08:24 UTC
From: Terry Wagoner
Topic: 43700 Message: 43700

Don:

Please do this one AGC bus voltage measurement for me.

1. Conn 15 Pin 3 AGC at IF board. Caution: 340vdc at Pin 1
2. Measure the dc voltage at Pin 3 with a 10 meg DMM or 11 meg VTVM
3. Vary the RF gain pot from full CW to full CCW
4. Should see approx 3.0vdc at full CW or wide open
5. Should see approx 0.70vdc at full CWW or full off position

When you report this we can then take 1 or 2 sentence steps going forward.

Terry K9TW

43701. Re: [TS-520_820_530_830] AGC bus voltage

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-29 15:38:39 UTC
From: Don
Topic: 43700 Message: 43701

Terry
Measurement was it it should be
Next step

Don/Ve2ud

On 29/07/2013 11:08 AM, Terry Wagoner wrote:
>
> Don:
>
> Please do this one AGC bus voltage measurement for me.
>
> 1. Conn 15 Pin 3 AGC at IF board. Caution: 340vdc at Pin 1
> 2. Measure the dc voltage at Pin 3 with a 10 meg DMM or 11 meg VTVM
> 3. Vary the RF gain pot from full CW to full CCW
> 4. Should see approx 3.0vdc at full CW or wide open
> 5. Should see approx 0.70vdc at full CWW or full off position
>
> When you report this we can then take 1 or 2 sentence steps going
> forward.
>
> Terry K9TW
>
>

[Non-text portions of this message have been removed]

43702. TS-820S Display problem even after working on DG-1

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-29 12:18:12 UTC
From: w3drk
Topic: 43702 Message: 43702

So I have a TS-820S which I've been slowing bringing back from the dead. Everything works perfectly now but I have pressing issue I'm unable to solve.

The display works fine on 14 MHz through 29.5 MHz, but on any band below 14 MHz the display goes crazy. For example, on 40 meters the display will show 8.xxx with xxx being a random number that is constantly changing.

I re-soldered EVERY connection on the digital counter board, put wire through all the vias and also soldered the chip pins where there were solder pads on the component side of the board too. On the mixer board I re-soldered all the chip pins on both sides but didn't bother with the other components because the solder joints look decent.

I've cleaned the mating pins multiple times with deoxit as well as regular contact cleaner so the pins and sockets are sparkling clean but still no joy.

At this point I think it's time to move onto more detailed trouble shooting. I remember reading there was a way to check for proper signals into the mixer board and a clean signal out of the mixer into the counter. Does anyone have a link or a description on what those steps would be?

Thanks!!

43703. 520s LOW Rf output.....

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-29 14:11:31 UTC
From: Mike McHugh
Topic: 43703 Message: 43703

Help.....
I was going to fire up my stand by 520s last night(been awhile and wanted to make sure it was ok) and while tuning it I heard a spark on the left side of the rig....I wasn't sure if it was within or outside the 520 cabinet. Geez!
I did the smell test and all withing my sniffing detected nothing. I tried to continue on my tune up and all was normal EXCEPT very low rf output through my external wattmeter...(yes ,I verified the wattmeter with my other rig...830s). This morning I pulled the hood(s) on the 520 and looked around for any evidence of scorching or smells at all locations. Nothing. It may,well, have been external. Hope so. I did change out the finals and Saw no change. I get about 10-15 watts output...I do have the normal ip of 220 and FDM on drive.Grid is at 60 ma..My HV is at 750vdc. All looks good but very little output... I was lead to believe that the older Kenwoods do not have a "fold back" circuitry. True? Guess I need one of the members to get me pointed in the right direction. I am limited in my testing gear but have several Multimeters and a scope.If need be,I could come up with more testing apparatus...Just need suggestions as to where start troubleshooting.

Thanks Ahead of time.
Mike KD2DYY

43704. Re: new member intro

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-29 15:58:07 UTC
From: Barry
Topic: 43687 Message: 43704

Hey, Dan,

I've been a member of this group for only a couple of months, but these guys are extremely well versed in how the 820s works. I studied for about a month and got my Tech and almost passed the General that same day even though I didn't really study for it.

I bought the ARRL Tech Study Guide off of Amazon and at the same time downloaded the PDF for both the Tech and General guides from Dan Romanchik's site:

http://www.kb6nu.com/tech-manual/

I read the ARRL guide through completely twice to understand the concepts better and then started with Dan's guides to be sure I understood even better.

I agree with the advice the guys are giving you here - be sure to understand what the questions and answers mean instead of just rote memorizing. Everything builds on each other, and finding guys locally in ham groups helps a lot more to get hands on to see the concepts in action.

Hopefully by Thanksgiving I'll be comfortable enough to take the Extra exam.

After reading posts here and asking some questions, I've been able to find out so much on how to work on my 820. It will shock the crap out of you, though, so be careful if you mess around anywhere close to the back right where the tubes and high voltage are. If you don't know much about these radios, you will have a very rude awakening. Thankfully I haven't had any shocks yet, but I try to take that healthy fear to heart when working on mine.

I'm sure after enough study you'll do great on the exams. Here are some practice questions that you can take online:

http://www.qrz.com/hamtest/

Between QRZ.com, eHam.net and arrl.org, those should keep you busy finding out all kinds of new concepts.

If you need more info about licensing and studying, feel free to email me separately from this group so we don't tie up the message board. I'm not an expert on the radios like these guys are, but I'll help in any way I can. Follow their advice when they give it, and if you have any trouble understanding what they're talking about, find a local Elmer to help you out. The local Elmer is invaluable to you starting out - I have a couple of guys that are really helping me here.

Look forward to hearing you!

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, "danweed85" <danweed85@...> wrote:
>
> My name is dan weed from florida. i dont have my amateur license yet but am studying to take the tech and general, hopefully next month. I was gifted a ts 820s and i found this great resource. and im going to need it. ill post some question i have in a little bit but just wanted to say hi to everyone.
>
> Daniel
> future call sign here.
>

43705. Re: [TS-520_820_530_830] AGC bus voltage

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-29 16:46:33 UTC
From: Don
Topic: 43700 Message: 43705

Terry
I have a good signal at IFo1
I have 8.375 at TP1

Don/ve2ud

On 29/07/2013 11:08 AM, Terry Wagoner wrote:
>
> Don:
>
> Please do this one AGC bus voltage measurement for me.
>
> 1. Conn 15 Pin 3 AGC at IF board. Caution: 340vdc at Pin 1
> 2. Measure the dc voltage at Pin 3 with a 10 meg DMM or 11 meg VTVM
> 3. Vary the RF gain pot from full CW to full CCW
> 4. Should see approx 3.0vdc at full CW or wide open
> 5. Should see approx 0.70vdc at full CWW or full off position
>
> When you report this we can then take 1 or 2 sentence steps going
> forward.
>
> Terry K9TW
>
>

[Non-text portions of this message have been removed]

43706. Re: AGC bus voltage

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-29 17:31:54 UTC
From: Terry Wagoner
Topic: 43700 Message: 43706

Are you 100% sure that you have good Audio stage or do you need to repeat testing of it? No point in going on to the IF board until certain Audio stage is working.

One other thing you can do is to park one of your good TS-830s next to this broken one and take top cover off and you can jumper between the two rigs. For example you could couple IF Board Conn 11 DET output from the good rig to Conn 1 DET input on the bad rigs Audio board. Essentially would be using the good rig as a sig gen and/or sig detector.

If we are going forward with RF signal generator signal injection on the IF board do the following:

1. At each test point vary the rf output level from your sig gen while you are monitoring the signal at each test point to make sure that you are really seeing the test signal. You can also turn the modulation on and set it high (75 to 100%) to aid you in recognizing your test signal.

2. Also measure in CW mode and SSB mode at each test point because we will be dealing with filter switching diodes as we progress.

OK next place to look would be at the output of the Noise Blanker Gate and the input to the Xtal filter. Get on Diode D41 anode or D6 cathode.

If good signal there next place will be the output of the Xtal filter at the cathode of D7 (D7 and D42 are nearly touching each other). Level here will be lower due to filter insertion loss.

Once you get to the output of 2nd RX Mixer Q2/Q3 you will need to make sure the Sig gen internal modulation is turned on so you can measure the now 455khz test signal. If you do not do that the 8.375mhz LO leak thru at output of the mixer will fool you. Look at the schematic and see which switching diodes you can get on at the input of CF2. Look at installed config and see if anode or cathode is available to you on top side of board.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Terry
> I have a good signal at IFo1
> I have 8.375 at TP1
>
> Don/ve2ud
>
>
> On 29/07/2013 11:08 AM, Terry Wagoner wrote:
> >
> > Don:
> >

> > Please do this one AGC bus voltage measurement for me.
> >
> > 1. Conn 15 Pin 3 AGC at IF board. Caution: 340vdc at Pin 1
> > 2. Measure the dc voltage at Pin 3 with a 10 meg DMM or 11 meg VTVM
> > 3. Vary the RF gain pot from full CW to full CCW
> > 4. Should see approx 3.0vdc at full CW or wide open
> > 5. Should see approx 0.70vdc at full CWW or full off position
> >
> > When you report this we can then take 1 or 2 sentence steps going
> > forward.
> >
> > Terry K9TW
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

43707. Re: AGC bus voltage

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-29 17:44:52 UTC
From: Terry Wagoner
Topic: 43700 Message: 43707

Don:

There is one other method you can use if you are 100% certain Audio is working. You can just inject RF along the signal path and listen for a response from the speaker. Must make sure you have AF gain turned up.

You will use modulated 8.830mhz and inject at RIF and then IF01 and then D5,D6,D41 and then D7,D10, D42. When you move RF sig gen output probe to the output of RX Mixer (D11,D12,D34) you will need to change the RF Sig Gen output frequency from 8.830mhz to 455khz.

You just keep injecting until you get good signal out the speaker. You then know the fault is between that point and the last previous point.

This may be easier for you?

Terry K9TW

43708. Re: [TS-520_820_530_830] Re: AGC bus voltage

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-29 17:54:18 UTC
From: Don
Topic: 43700 Message: 43708

Terry
OK i will start at at the beginning again.The reason i was looking at the AF board as i thought maybe i had did a solder bridge when i reinstalled the diode.
First i need to reorganize all the printouts i have plus i have test equipment and tools all over the place.
My other TS-830's are running good and i don't want to screw any of them up,so i will pass on that for now
I am expecting to get a parts rig in the next month that does not have a lot wrong with it,so i could use it.

I'll be back
Don/Ve2ud

On 29/07/2013 1:31 PM, Terry Wagoner wrote:
>
> Are you 100% sure that you have good Audio stage or do you need to
> repeat testing of it? No point in going on to the IF board until
> certain Audio stage is working.
>
> One other thing you can do is to park one of your good TS-830s next to
> this broken one and take top cover off and you can jumper between the
> two rigs. For example you could couple IF Board Conn 11 DET output
> from the good rig to Conn 1 DET input on the bad rigs Audio board.
> Essentially would be using the good rig as a sig gen and/or sig detector.
>
> If we are going forward with RF signal generator signal injection on
> the IF board do the following:
>
> 1. At each test point vary the rf output level from your sig gen while
> you are monitoring the signal at each test point to make sure that you
> are really seeing the test signal. You can also turn the modulation on
> and set it high (75 to 100%) to aid you in recognizing your test signal.
>
> 2. Also measure in CW mode and SSB mode at each test point because we
> will be dealing with filter switching diodes as we progress.
>
> OK next place to look would be at the output of the Noise Blanker Gate
> and the input to the Xtal filter. Get on Diode D41 anode or D6 cathode.
>
> If good signal there next place will be the output of the Xtal filter
> at the cathode of D7 (D7 and D42 are nearly touching each other).
> Level here will be lower due to filter insertion loss.
>
> Once you get to the output of 2nd RX Mixer Q2/Q3 you will need to make

> sure the Sig gen internal modulation is turned on so you can measure
> the now 455khz test signal. If you do not do that the 8.375mhz LO leak
> thru at output of the mixer will fool you. Look at the schematic and
> see which switching diodes you can get on at the input of CF2. Look at
> installed config and see if anode or cathode is available to you on
> top side of board.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> > Terry
> > I have a good signal at IFo1
> > I have 8.375 at TP1
> >
> > Don/ve2ud
> >
> >
> > On 29/07/2013 11:08 AM, Terry Wagoner wrote:
> > >
> > > Don:
> > >
> > > Please do this one AGC bus voltage measurement for me.
> > >
> > > 1. Conn 15 Pin 3 AGC at IF board. Caution: 340vdc at Pin 1
> > > 2. Measure the dc voltage at Pin 3 with a 10 meg DMM or 11 meg VTVM
> > > 3. Vary the RF gain pot from full CW to full CCW
> > > 4. Should see approx 3.0vdc at full CW or wide open
> > > 5. Should see approx 0.70vdc at full CWW or full off position
> > >
> > > When you report this we can then take 1 or 2 sentence steps going
> > > forward.
> > >
> > > Terry K9TW
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> >
> > [Non-text portions of this message have been removed]
> >
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>

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43709. Re: [TS-520_820_530_830] Re: AGC bus voltage

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-29 17:57:04 UTC
From: Don
Topic: 43700 Message: 43709

Terry

Ok will give that a shot
Don/Ve2ud

On 29/07/2013 1:44 PM, Terry Wagoner wrote:
>
> Don:
>
> There is one other method you can use if you are 100% certain Audio is
> working. You can just inject RF along the signal path and listen for a
> response from the speaker. Must make sure you have AF gain turned up.
>
> You will use modulated 8.830mhz and inject at RIF and then IF01 and
> then D5,D6,D41 and then D7,D10, D42. When you move RF sig gen output
> probe to the output of RX Mixer (D11,D12,D34) you will need to change
> the RF Sig Gen output frequency from 8.830mhz to 455khz.
>
> You just keep injecting until you get good signal out the speaker. You
> then know the fault is between that point and the last previous point.
>
> This may be easier for you?
>
> Terry K9TW
>
>

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43710. Re: [TS-520_820_530_830] 520s LOW Rf output.....

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-29 18:43:19 UTC
From: W5RKL
Topic: 43703 Message: 43710

Mike,

"Grid is at 60ma"??
Where do you see "60ma of grid current" in your 520? None of the hybrids have the ability to display "grid current" on the meter.

"My HV is at y750VDC"???
Is that in SSB or CW with transmitter keyed, MIC and/or CAR gain control(s) set FULLY CCW and meter switch set to HV?
Is that with 220ma IP current displayed?
You need to specify which one.

None of the Kenwood hybrids have an SWR "Fold Back" circuit.

You said the 520 is producing 10 to 15 watts output. Is that into a 50 ohm dummy load and on "ALL" bands or just one band?

You need to explain further plus try ALL bands.

73
Mike W5RKL

On 7/29/2013 9:11 AM, Mike McHugh wrote:
>
>
> Help.....
> I was going to fire up my stand by 520s last night(been awhile and
> wanted to make sure it was ok) and while tuning it I heard a spark on
> the left side of the rig....I wasn't sure if it was within or outside
> the 520 cabinet. Geez!
> I did the smell test and all withing my sniffing detected nothing. I
> tried to continue on my tune up and all was normal EXCEPT very low rf
> output through my external wattmeter...(yes ,I verified the wattmeter
> with my other rig...830s). This morning I pulled the hood(s) on the
> 520 and looked around for any evidence of scorching or smells at all
> locations. Nothing. It may,well, have been external. Hope so. I did
> change out the finals and Saw no change. I get about 10-15 watts
> output...I do have the normal ip of 220 and FDM on drive.Grid is at 60
> ma..My HV is at 750vdc. All looks good but very little output... I was
> lead to believe that the older Kenwoods do not have a "fold back"
> circuitry. True?
> Guess I need one of the members to get me pointed in the right
> direction. I am limited in my testing gear but have several
> Multimeters and a scope.If need be,I could come up with more testing
> apparatus...Just need suggestions as to where start troubleshooting.
>
> Thanks Ahead of time.

> Mike KD2DYY
>
>

[Non-text portions of this message have been removed]

43711. Re: [TS-520_820_530_830] 520s LOW Rf output.....

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-29 19:43:07 UTC
From: John Davidson
Topic: 43703 Message: 43711

I think a lot of Hybrid users get confused when they are setting the bias pot to get 60mA of final resting PLATE CURRENT. and report it as 60 mA of GRID current .

From: W5RKL <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, July 29, 2013 2:43 PM
Subject: Re: [TS-520_820_530_830] 520s LOW Rf output.....

Mike,

"Grid is at 60ma"??
Where do you see "60ma of grid current" in your 520? None of the hybrids
have the ability to display "grid current" on the meter.

>
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

43712. Re: [TS-520_820_530_830] 520s LOW Rf output.....

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-29 20:23:14 UTC
From: Mike McHugh
Topic: 43703 Message: 43712

Ok John ,you are quite correct that the "bias control" (on the right side if rig)does,indeed, set the idling 60 ma of plate current....I merely wanted to call this adjustment out to you as I did adjust this to specs.to insure that I have followed the proper tune up conditions to get the 100 plus watts out of the rig....So we did establish this point..... Have you or one of the members formed any troubleshooting steps I can start on to help correct my issue?????

Thanks, Mike KD2DYY

On Mon, Jul 29, 2013 12:43 PM PDT John Davidson wrote:

>I think a lot of Hybrid users get confused when they are setting the bias pot to get 60mA of final resting PLATE CURRENT. and report it as 60 mA of GRID current .
>
>
>_____
> From: W5RKL <w5rkl@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Monday, July 29, 2013 2:43 PM
>Subject: Re: [TS-520_820_530_830] 520s LOW Rf output.....
>
>
>
>
>Mike,
>
>"Grid is at 60ma"??
>Where do you see "60ma of grid current" in your 520? None of the hybrids
>have the ability to display "grid current" on the meter.
>
>>
>>
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>
>
>[Non-text portions of this message have been removed]
>

43713. Re: [TS-520_820_530_830] 520s LOW Rf output.....

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-29 20:42:50 UTC
From: Mike McHugh
Topic: 43703 Message: 43713

Ok Mike
I will take your questions one at a time...First it is 60ma plate idling current (per tune up procedures)
750VDC is with "send" key up..
In "tune position" drive is adjusted to full meter deflection without pegging(Using the "car" control to bring it just to full scale with drive control,Not pegging the meter)
The 220 ma ip is with meter switch turned to HV position...
I am loading into 50 ohm dummy.
On all bands that I operate 80M/40m/and 20M, I am only getting the 10-15 watt output.
Just a point. I have been using the 520s for some time and have always had good 100 plus watts out using the "Book" tune up procedures... Unless I'm mistaken I am using the right tune up procedures.
I ask, again, what are your thoughts.....

Thanks,Mike,KD2DYY

On Mon, Jul 29, 2013 11:43 AM PDT W5RKL wrote:

>Mike,
>
>"Grid is at 60ma"??
>Where do you see "60ma of grid current" in your 520? None of the hybrids
>have the ability to display "grid current" on the meter.

>
>
>"My HV is at y750VDC"???
>Is that in SSB or CW with transmitter keyed, MIC and/or CAR gain
>control(s) set FULLY CCW and meter switch set to HV?
>Is that with 220ma IP current displayed?
>You need to specify which one.
>
>
>None of the Kenwood hybrids have an SWR "Fold Back" circuit.
>
>You said the 520 is producing 10 to 15 watts output. Is that into a 50
>ohm dummy load and on "ALL" bands or just one band?
>
>You need to explain further plus try ALL bands.
>
>73
>Mike W5RKL
>
>
>

>On 7/29/2013 9:11 AM, Mike McHugh wrote:
>>
>>
>> Help.....
>> I was going to fire up my stand by 520s last night(been awhile and
>> wanted to make sure it was ok) and while tuning it I heard a spark on
>> the left side of the rig....I wasn't sure if it was within or outside
>> the 520 cabinet. Geez!
>> I did the smell test and all withing my sniffing detected nothing. I
>> tried to continue on my tune up and all was normal EXCEPT very low rf
>> output through my external wattmeter...(yes ,I verified the wattmeter
>> with my other rig...830s). This morning I pulled the hood(s) on the
>> 520 and looked around for any evidence of scorching or smells at all
>> locations. Nothing. It may,well, have been external. Hope so. I did
>> change out the finals and Saw no change. I get about 10-15 watts
>> output...I do have the normal ip of 220 and FDM on drive.Grid is at 60
>> ma..My HV is at 750vdc. All looks good but very little output... I was
>> lead to believe that the older Kenwoods do not have a "fold back"
>> circuitry. True?
>> Guess I need one of the members to get me pointed in the right
>> direction. I am limited in my testing gear but have several
>> Multimeters and a scope.If need be,I could come up with more testing
>> apparatus...Just need suggestions as to where start troubleshooting.
>>
>> Thanks Ahead of time.
>> Mike KD2DYY
>>
>>
>
>
>
>[Non-text portions of this message have been removed]
>

43714. Re: [TS-520_820_530_830] problems with ts820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-29 21:33:54 UTC
From: Dave & Loraine
Topic: 43689 Message: 43714

Hi Dan,
Please don't touch any more 'wires'. These 900Vdc rigs can kill you.
"All the led's are lit" - FUNCTION switch is incorrectly set. See below.
Don't worry about the AF board yet.

With the rig disconnected, read the Operating Manual. If you don't have one, ask us.

Looking at the back of the rig :
- check the fuse for continuity and correct rating
- find the SG slide switch below the fan. Slide it down and leave it there.
- find the EXT VFO socket upper far right. A plug or shorting pin should be fitted.
- verify that the cooling fan turns when the POWER ON switch is briefly switched on.

Looking at the front with power connected but POWER switch off:
- push and release the RF ATT button near the band switch.
- push and release the RIT button near the band switch
- turn BAND switch to 14
- switch the row of 5 black switches to down position
- set MODE switch to USB.
- push and release the DH button out located below the METER switch.
- turn DRIVE knob to point staight up.
- turn RF GAIN full right
- turn AF GAIN to 3 o'clock
- verify HEATER switch is off
- turn FUNCTION switch to 25kHz position
- verify that IF SHIFT is centered
- verify that only the VFO led is lit when the POWER ON switch is briefly switched on.
- turn the tuning knob to 14.0MHz
- switch POWER on and rock the tuning knob around 14.0MHz.
Listen for whistles and watch for S-meter movement.
- switch off.

Report back on exceptions to the above.

Transformer saver :
- before switching on an unknown rig, an incandecent mains lamp can be wired in series with the rig. A continuously bright lamp indicates heavy current, a dimming lamp is good.

73 Dave f4eyk ts820s

[Non-text portions of this message have been removed]

43715. AGC bus voltage

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-29 22:01:04 UTC
From: Don D
Topic: 43700 Message: 43715

Terry
Starting at the beginning.
Lets go back to the audio AF board to make sure all is OK.

Now when you told me to inject a tone[400hz] at Conn 11 pin 1,[IF board]i did not do the rest of the test on the audio board if a tone was present.
On conn11 pin1,i get a tone only if i turned it up at least 3/4 of the way.

Decided to test the Af board to see what i could find.
Conn1 pin 2 DET----------very week
Conn 2 Av2----------very good tone
Conn 2 Av1----------have to turn it up to 3/4 to hear a tone
Conn4 pin-6 SP----------can hardly hear it.
Using the RF method,nothing is heard.
On the AF board 12 volt out pin,was 12.6 volts and now showing 14,5 volts but not concerned at this time.

Will do the next steps tomorrow

Don/Ve2ud

43716. Re: AGC bus voltage

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-30 00:44:54 UTC
From: Terry Wagoner
Topic: 43700 Message: 43716

Don :

Should not show 14 vdc on the 12 volt regulator post. Something wrong with your series pass regulator. What is your 9VDC regulated doing?

If these voltages are not to spec need to stop and repair regulated supply before going any further.

Print this note so can come back to testing the Audio amp stage.

Conn 11 Pin 1 is on the IF board. It is the audio output from the Product Detector. A red miniature coax cable connects Pin 1 DET (hot) and Pin 2 (shield braid)to Conn 1 Pins 1 and 2 on the Audio board. There is a transposition. Pin 1 is the shield braid and Pin 2 is the hot or audio signal.

The schematic is wrong at Conn 11. It shows Pin 2 just going to Chassis ground. This is not correct. The red coax shield braid is connected to Pin 2 G.

At the AF board the shield goes to Pin 1 GND and not Pin 2. Pin 2 is DET. This is important as the shield braid is needed to provide the ground return for audio pre-amp transistors Q2 and Q3. If you lose this shield braid you will have no audio output. Losing it means bad solder connection at molex pin at either connector, cracked trace to pad, or bad crimp to the braid.

So at the IF board connect your signal generator hot or audio test lead to Conn 11 Pin 1 DET through about a .47uf cap and connect the sig gen grd lead to Pin 2. Can use couple of straight pins pushed down inside the molex plug body to make good contact.

With AF gain at 3/4 and 10MV of audio injected volume will be loud. With 20mv of audio injected it will be very loud. Loud of course subjective.

If you have no audio it is possible that you have lost the return thru the mini coax braid path.

You can measure the resistance from the shield braid to chassis ground at each end of the mini coax at respective molex connectors. With each plug seated it should read approx 0.3 ohm or better.

You will need to have rig on its side. Suggest you take a piece of cardboard (8 1/2 x 11) and lean it to cover the HV filter caps to prevent accidently swinging a test lead into the 900vdc.

Lets not move on until we have good "loud" audio out the speaker by injecting audio at Conn 11 on the IF board.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@...> wrote:
>
> Terry
> Starting at the beginning.
> Lets go back to the audio AF board to make sure all is OK.
>
> Now when you told me to inject a tone[400hz] at Conn 11 pin 1,[IF board]i did not do the rest of the test on the audio board if a tone was present.
> On conn11 pin1,i get a tone only if i turned it up at least 3/4 of the way.
>
> Decided to test the Af board to see what i could find.
> Conn1 pin 2 DET----------very week
> Conn 2 Av2----------very good tone
> Conn 2 Av1----------have to turn it up to 3/4 to hear a tone
> Conn4 pin-6 SP----------can hardly hear it.
> Using the RF method,nothing is heard.
> On the AF board 12 volt out pin,was 12.6 volts and now showing 14,5 volts but not concerned at this time.
>
> Will do the next steps tomorrow
>
> Don/Ve2ud
>

43717. Re: [TS-520_820_530_830] 520s LOW Rf output.....

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-30 01:38:45 UTC
From: W5RKL
Topic: 43703 Message: 43717

Mike,

You said:

"The 220 ma ip is with meter switch turned to HV position..."

Setting the meter switch to "HV" (High Voltage) will not indicate final amplifier cathode current (IP meter switch setting). The "HV" meter switch setting displays the Rectifier Unit's high voltage (800 terminal on the Rectifier Unit) applied to the final tube plate caps. All the meter switch settings are disabled in standby (Receive).

You said:

"In "tune position" drive is adjusted to full meter deflection without pegging(Using the "car" control to bring it just to full scale with drive control,Not pegging the meter)"

I don't understand why, after you adjust the DRIVE control for a peak meter pointer indication, that you further adjust the CAR control for a further peak indication (not pegging the meter)? You do not have to do that. All that's necessary is to set the Mode switch to TUNE, set the DRIVE control to 12 o'clock, set the meter to ALC, set the CAR control to 9 o'clock, then key the transmitter and adjust the DRIVE control for a peak meter "pointer" indication, no meter scale are used. If the meter pointer pegs fully to the right, adjust the CAR control CCW for a meter pointer indication of 12 o'clock then continue adjusting the DRIVE control for peak meter pointer indication. Once the peak is achieve, you do not adjust the CAR control for a higher meter pointer indication. You achieve nothing, by doing that.

If the 750VDC and 220ma are correct, those figures indicate 165 watt DC input. The final amplifier in the 520 operates in Class AB1 which has an efficiency percentage of 55% so that would equate to approximately 90.75 watts output at the antenna connector (750 x .220 x .55 = 90.75). If the tune up is procedures you are using results in normal indication on the 520's meter switch settings as stated in the manual then I suspect your watt meter may be at fault.

73
Mike W5RKL

On 7/29/2013 3:42 PM, Mike McHugh wrote:
>
>
> Ok Mike
> I will take your questions one at a time...First it is 60ma plate

> idling current (per tune up procedures)
> 750VDC is with "send" key up..
> In "tune position" drive is adjusted to full meter deflection without
> pegging(Using the "car" control to bring it just to full scale with
> drive control,Not pegging the meter)
> The 220 ma ip is with meter switch turned to HV position...
> I am loading into 50 ohm dummy.
> On all bands that I operate 80M/40m/and 20M, I am only getting the
> 10-15 watt output.
> Just a point. I have been using the 520s for some time and have always
> had good 100 plus watts out using the "Book" tune up procedures...
> Unless I'm mistaken I am using the right tune up procedures.
> I ask, again, what are your thoughts.....
>
> Thanks,Mike,KD2DYY
>
> ----------
> On Mon, Jul 29, 2013 11:43 AM PDT W5RKL wrote:
>
> >Mike,
> >
> >"Grid is at 60ma"??
> >Where do you see "60ma of grid current" in your 520? None of the hybrids
> >have the ability to display "grid current" on the meter.
> >
> >
> >
> >
> >"My HV is at y750VDC"???
> >Is that in SSB or CW with transmitter keyed, MIC and/or CAR gain
> >control(s) set FULLY CCW and meter switch set to HV?
> >Is that with 220ma IP current displayed?
> >You need to specify which one.
> >
> >
> >None of the Kenwood hybrids have an SWR "Fold Back" circuit.
> >
> >You said the 520 is producing 10 to 15 watts output. Is that into a 50
> >ohm dummy load and on "ALL" bands or just one band?
> >
> >You need to explain further plus try ALL bands.
> >
> >73
> >Mike W5RKL
> >
> >
> >
> >On 7/29/2013 9:11 AM, Mike McHugh wrote:
> >>
> >>

> >> Help.....................
> >> I was going to fire up my stand by 520s last night(been awhile and
> >> wanted to make sure it was ok) and while tuning it I heard a spark on
> >> the left side of the rig....I wasn't sure if it was within or outside
> >> the 520 cabinet. Geez!
> >> I did the smell test and all withing my sniffing detected nothing. I
> >> tried to continue on my tune up and all was normal EXCEPT very low rf
> >> output through my external wattmeter...(yes ,I verified the wattmeter
> >> with my other rig...830s). This morning I pulled the hood(s) on the
> >> 520 and looked around for any evidence of scorching or smells at all
> >> locations. Nothing. It may,well, have been external. Hope so. I did
> >> change out the finals and Saw no change. I get about 10-15 watts
> >> output...I do have the normal ip of 220 and FDM on drive.Grid is at 60
> >> ma..My HV is at 750vdc. All looks good but very little output... I was
> >> lead to believe that the older Kenwoods do not have a "fold back"
> >> circuitry. True?
> >> Guess I need one of the members to get me pointed in the right
> >> direction. I am limited in my testing gear but have several
> >> Multimeters and a scope.If need be,I could come up with more testing
> >> apparatus...Just need suggestions as to where start troubleshooting.
> >>
> >> Thanks Ahead of time.
> >> Mike KD2DYY
> >>
> >>
> >
> >
> >
> >[Non-text portions of this message have been removed]
> >
>
>

[Non-text portions of this message have been removed]

43718. Re: problems with ts820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-30 00:30:47 UTC
From: danweed85
Topic: 43689 Message: 43718

thanks for the reply dave. id did have an operating manual but i guess i missed the sg switch settings, mine was on, however when i turned it off i still heard nothing coming for the external speaker other then this constant pitched tone. the meter in alc went about two thirds up instead of to max as it was, but still no meter movement in ip, rf, comp, or hv.

--- In TS-520_820_530_830@yahoogroups.com, "Dave & Loraine" <dave.crooks@...> wrote:
>
> Hi Dan,
> Please don't touch any more 'wires'. These 900Vdc rigs can kill you.
> "All the led's are lit" - FUNCTION switch is incorrectly set. See below.
> Don't worry about the AF board yet.
>

.....

> Report back on exceptions to the above.
>
> Transformer saver :
> - before switching on an unknown rig, an incandecent mains lamp can be wired in series with the rig. A continuously bright lamp indicates heavy current, a dimming lamp is good.
>
>
> 73 Dave f4eyk ts820s
>
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

43719. Re: new member intro

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-30 01:18:35 UTC
From: danweed85
Topic: 43687 Message: 43719

thanx barry. just finished signing up for qrz looks like a great site.
there's info pouring into my hardrive and hopefully soon into my head.

thanks everybody

daniel

--- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@...>

43720. Re: [TS-520_820_530_830] Re: AGC bus voltage

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-30 02:06:40 UTC
From: Don
Topic: 43700 Message: 43720

Terry
Will read that over very carefully first.I don't know what has changed
as i did get the 12.6 volts after i reinstalled the zener,
but as you pointed out,something wrong with pass resistor
I think the 9vdc was fine,but will recheck it too.
Yes it does not take much to have a lead swing or fall were you don't
want it too.
I need to order that large schematic from ken,as it's a pain to keep
blowing it up on the computer
to 400% to see it well,and even then you only get to see a small part of it.
Thanks for your time

Don/Ve2ud

On 29/07/2013 8:44 PM, Terry Wagoner wrote:
>
> Don :
>
> Should not show 14 vdc on the 12 volt regulator post. Something wrong
> with your series pass regulator. What is your 9VDC regulated doing?
>
> If these voltages are not to spec need to stop and repair regulated
> supply before going any further.
>
> Print this note so can come back to testing the Audio amp stage.
>
> Conn 11 Pin 1 is on the IF board. It is the audio output from the
> Product Detector. A red miniature coax cable connects Pin 1 DET (hot)
> and Pin 2 (shield braid)to Conn 1 Pins 1 and 2 on the Audio board.
> There is a transposition. Pin 1 is the shield braid and Pin 2 is the
> hot or audio signal.
>
> The schematic is wrong at Conn 11. It shows Pin 2 just going to
> Chassis ground. This is not correct. The red coax shield braid is
> connected to Pin 2 G.
>
> At the AF board the shield goes to Pin 1 GND and not Pin 2. Pin 2 is
> DET. This is important as the shield braid is needed to provide the
> ground return for audio pre-amp transistors Q2 and Q3. If you lose
> this shield braid you will have no audio output. Losing it means bad
> solder connection at molex pin at either connector, cracked trace to
> pad, or bad crimp to the braid.
>
> So at the IF board connect your signal generator hot or audio test
> lead to Conn 11 Pin 1 DET through about a .47uf cap and connect the

> sig gen grd lead to Pin 2. Can use couple of straight pins pushed down
> inside the molex plug body to make good contact.
>
> With AF gain at 3/4 and 10MV of audio injected volume will be loud.
> With 20mv of audio injected it will be very loud. Loud of course
> subjective.
>
> If you have no audio it is possible that you have lost the return thru
> the mini coax braid path.
>
> You can measure the resistance from the shield braid to chassis ground
> at each end of the mini coax at respective molex connectors. With each
> plug seated it should read approx 0.3 ohm or better.
>
> You will need to have rig on its side. Suggest you take a piece of
> cardboard (8 1/2 x 11) and lean it to cover the HV filter caps to
> prevent accidently swinging a test lead into the 900vdc.
>
> Lets not move on until we have good "loud" audio out the speaker by
> injecting audio at Conn 11 on the IF board.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Don D" <ve2ud@...> wrote:
> >
> > Terry
> > Starting at the beginning.
> > Lets go back to the audio AF board to make sure all is OK.
> >
> > Now when you told me to inject a tone[400hz] at Conn 11 pin 1,[IF
> board]i did not do the rest of the test on the audio board if a tone
> was present.
> > On conn11 pin1,i get a tone only if i turned it up at least 3/4 of
> the way.
> >
> > Decided to test the Af board to see what i could find.
> > Conn1 pin 2 DET-----------very week
> > Conn 2 Av2------------very good tone
> > Conn 2 Av1------------have to turn it up to 3/4 to hear a tone
> > Conn4 pin-6 SP--------------can hardly hear it.
> > Using the RF method,nothing is heard.
> > On the AF board 12 volt out pin,was 12.6 volts and now showing 14,5
> volts but not concerned at this time.
> >
> > Will do the next steps tomorrow
> >
> > Don/Ve2ud
> >
>

>

[Non-text portions of this message have been removed]

43721. Re: new member intro

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-30 02:16:27 UTC
From: w5rkl
Topic: 43687 Message: 43721

Daniel,

Do not operate the TS-820, which includes not plugging the TS-820 into the wall outlet, until you obtain the top and bottom covers. Operating the 820 without the top and bottom covers is dangerous!

I also recommend you thoroughly read/study the TS-820 operator's manual first. You should have a thorough understanding of what each control is for, how to use the control(s), and never operate the TS-820 without the top and bottom covers installed. Once you have experience in troubleshooting you will learn how to safely operate the TS-820 with the covers off but until you gain that experience, do not take the covers off without an experienced person/ham by your side. As one response said and I agree, there are voltages in the TS-820 that can easily KILL YOU!!!

The rear panel "SG" switch must be set to "ON" for normal transmit operation. The "SG" switch has nothing to do with nor does it have any affect on receive.

The meter switch settings are disabled in receive, activated ONLY in transmit. Each meter switch setting is explained in the operators manual. Normal operation the "FUNCTION" switch MUST be set to "VFO".

73
Mike W5RKL

--- In TS-520_820_530_830@...m, "danweed85" <danweed85@...> wrote:
>
> thanx barry. just finished signing up for qrz looks like a great site.
> there's info pouring into my hardrive and hopefully soon into my head.
>
> thanks everybody
>
> daniel
>
> --- In TS-520_820_530_830@yahoogroups.com, "Barry" <bonnevilleblb@>
>

43722. Re: [TS-520_820_530_830] Re: problems with ts820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-30 10:44:15 UTC
From: Dave & Loraine
Topic: 43689 Message: 43722

Dan,

It is essential for you to read the Operating Manual.
Go to Gordons website and download it for free.

The SG switch setting is to protect the finals and prevent inadvertent Tx.
It does not affect receive.

Does the "constant pitched tone" respond to the AF GAIN control?
Is it a 'pure tone' or noisy?
If you switch FUNCTION to VFO position does the tone stop or change?

In recive, the meter only functions as an S-meter. The METER switch is not used in Rx.
ALC, IP, RF COMP and HV are for Tx.

Is just the VFO led lit when the POWER ON switch is briefly switched on?

***** Did you set the rig as advised? ****

73 Dave f4eyk

[Non-text portions of this message have been removed]

43723. Re: AGC bus voltage

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-30 11:37:48 UTC
From: Terry Wagoner
Topic: 43700 Message: 43723

Yes I would get Kens big schematic. I use one all the time and have one in reserve. Much easier to use.

Question: When you are injecting 400hz audio into Conn 11 on IF board do you have Conn 11 plugged in and Conn 1 on Audio board plugged in? They must both be plugged in.

If you are uncertain of audio level from your Marconi suggest that you use the BK200D for your 400hz audio test signal. Connect test leads to Red/Blk jacks, set selector switch to 400hz out, place meter selector to % modulation, increase Modulation level pot for maximum on the meter (never need this level but start here).

If you are uncertain if it is working you can look at the 400hz level on your O-scope. I am former owner of this sig gen and as I recall you can get over a volt of audio out of it at the 50% mod level.

You could also inject it into the mic/line input on your laptop to confirm it is working.

You dont need more than 10-20mv rms or 56mv P-P to get very loud tone from your TS-830. So you could set the P-P level around 100mv on the scope and then connect to Conn 11 at IF board and back it down from there.

Terry K9TW

43724. Re: [TS-520_820_530_830] Re: AGC bus voltage

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-30 12:34:49 UTC
From: Don
Topic: 43700 Message: 43724

Terry

I checked the voltages around the Q34 area AF board and found that they
were too high,for my liking.
So i removed Q34 and it is bad.The 1000uf cap was reading about 780uf,so
i should change those caps also as you suggested way back.
The 9 volt side is fine.
So i need a source or maybe someone in the group that has one.
Don't know if this will solve the problem totally ,.but it's a good start.

Don/Ve2ud

On 30/07/2013 7:37 AM, Terry Wagoner wrote:
>
> Yes I would get Kens big schematic. I use one all the time and have
> one in reserve. Much easier to use.
>
> Question: When you are injecting 400hz audio into Conn 11 on IF board
> do you have Conn 11 plugged in and Conn 1 on Audio board plugged in?
> They must both be plugged in.
>
> If you are uncertain of audio level from your Marconi suggest that you
> use the BK200D for your 400hz audio test signal. Connect test leads to
> Red/Blk jacks, set selector switch to 400hz out, place meter selector
> to % modulation, increase Modulation level pot for maximum on the
> meter (never need this level but start here).
>
> If you are uncertain if it is working you can look at the 400hz level
> on your O-scope. I am former owner of this sig gen and as I recall you
> can get over a volt of audio out of it at the 50% mod level.
>
> You could also inject it into the mic/line input on your laptop to
> confirm it is working.
>
> You dont need more than 10-20mv rms or 56mv P-P to get very loud tone
> from your TS-830. So you could set the P-P level around 100mv on the
> scope and then connect to Conn 11 at IF board and back it down from
> there.
>
> Terry K9TW
>
>

[Non-text portions of this message have been removed]

43725. Re: [TS-520_820_530_830] Re: problems with ts820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-30 12:37:15 UTC
From: Dave & Loraine
Topic: 43689 Message: 43725

Dan, (Mike and Gordon)
Leave the SG switch off. You won't be transmitting.
The originator of this group called the SG switch "the grandkid's switch".

Be aware that those high voltages still exist on the rig with the SG off, during receive and even after switching mains off and disconnecting from mains.
As Mike indicated, if you 'tinker' with this rig, you won't need our help...

Dan, forgive the question but how old are you and how much technical knowledge do you have?

Gordon, would you kindly help Dan to download the Operating Manual. Thanks.

73 Dave f4eyk

[Non-text portions of this message have been removed]

43726. Re: AGC bus voltage

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-30 13:01:58 UTC
From: Terry Wagoner
Topic: 43700 Message: 43726

You can find 2SA473Y pulls and new ones on Ebay or use a NTE 153 sub also available on Ebay for around $3.00.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Terry
>
> I checked the voltages around the Q34 area AF board and found that they
> were too high,for my liking.
> So i removed Q34 and it is bad.The 1000uf cap was reading about 780uf,so
> i should change those caps also as you suggested way back.
> The 9 volt side is fine.
> So i need a source or maybe someone in the group that has one.
> Don't know if this will solve the problem totally ,.but it's a good start.
>
> Don/Ve2ud
>
>
>
>
>
> On 30/07/2013 7:37 AM, Terry Wagoner wrote:
> >
> > Yes I would get Kens big schematic. I use one all the time and have
> > one in reserve. Much easier to use.
> >
> > Question: When you are injecting 400hz audio into Conn 11 on IF board
> > do you have Conn 11 plugged in and Conn 1 on Audio board plugged in?
> > They must both be plugged in.
> >
> > If you are uncertain of audio level from your Marconi suggest that you
> > use the BK200D for your 400hz audio test signal. Connect test leads to
> > Red/Blk jacks, set selector switch to 400hz out, place meter selector
> > to % modulation, increase Modulation level pot for maximum on the
> > meter (never need this level but start here).
> >
> > If you are uncertain if it is working you can look at the 400hz level
> > on your O-scope. I am former owner of this sig gen and as I recall you
> > can get over a volt of audio out of it at the 50% mod level.
> >
> > You could also inject it into the mic/line input on your laptop to
> > confirm it is working.
> >

> > You dont need more than 10-20mv rms or 56mv P-P to get very loud tone
> > from your TS-830. So you could set the P-P level around 100mv on the
> > scope and then connect to Conn 11 at IF board and back it down from
> > there.
> >
> > Terry K9TW
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

43727. Re: problems with ts820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-30 12:58:15 UTC
From: danweed85
Topic: 43689 Message: 43727

im 28 and while i did know capacitors hold a charge and this a an HV rig, other then that my electronics knowledge is very limited. im reading a pretty good and watching an online class about electronics as we speak but i imagine it will be a few weeks or months before im comfortable doing anything beside soldering something simple and easy to get to(which appears non existent on this rig). i do have the operating manual a did follow the procedures on setting up for recieve. after i heard no noise other then this constant tone i started reading the service manual. i have attempted nothing on send. and thats where we (and sadly the radio) sit today.

daniel

--- In TS-520_820_530_830@yahoogroups.com, "Dave & Loraine" <dave.crooks@...> wrote:
>
> Dan, (Mike and Gordon)
> Leave the SG switch off. You won't be transmitting.
> The originator of this group called the SG switch "the grandkid's switch".
>
> Be aware that those high voltages still exist on the rig with the SG off, during receive and even after switching mains off and disconnecting from mains.
> As Mike indicated, if you 'tinker' with this rig, you won't need our help...
>
> Dan, forgive the question but how old are you and how much technical knowledge do you have?
>
> Gordon, would you kindly help Dan to download the Operating Manual. Thanks.
>
> 73 Dave f4eyk
>
>
> [Non-text portions of this message have been removed]
>

43728. Re: TS-820S Display problem even after working on DG-1

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-30 14:10:07 UTC
From: w3drk
Topic: 43702 Message: 43728

Before anyone wastes their time responding to this post, I wanted to follow-up that managed to solve the problem.

I documented the repair here, but long story short it was a bad choke on the DG-1 Mixer board. Hopefully this info can help some others struggling with their DG-1.

http://www.w3drk.com/wordpress/?p=142

73!

43729. Re: problems with ts820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-30 14:41:47 UTC
From: w5rkl
Topic: 43689 Message: 43729

The sole purpose of the rear panel "SG" switch is to control the "Polarity" of the DC voltage applied to the final tube screens, nothing more.

Setting the SG switch to OFF results in a "Negative" voltage applied to the screens.

Setting the SG switch to ON results in a "Positive" voltage to the final tube screens.

The "normal" setting of the SG switch is "ON".

Applying a negative voltage to the final tube screens will BLOCK the flow of current t0 the final tube plates. This results in an IP meter indication of "zero" in transmit. Do NOT confuse this with blown cathode resistors. Blown cathode resistors will result in zero ALC and zero IP current meter indications on ALL bands.

If the final tube cathode resistors are okay, placing the SG switch in the OFF position will result in zero IP current indication but it will NOT result in zero peak ALC indication in TUNE mode adjusting the DRIVE control! Why? Because the "GRID" sits between the cathode and the screen and plate. Electrons will still flow from the tube's cathode to the grid with the SG switch set to OFF but electrons will be BLOCKED from reaching the tube's plate by the "negative field" surrounding the tube's screen. The tube's screen is between the "grid" and the "plate".

To understand what this all means and how this all works take the time and study vacuum tube theory in the ARRL handbooks if you plan on servicing vacuum tube circuits. One should have a solid understanding of what polarity an electrons has and how electrons react to negative and positive potentials.

73
Mike W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Dave & Loraine" <dave.crooks@...> wrote:
>
> Dan, (Mike and Gordon)
> Leave the SG switch off. You won't be transmitting.
> The originator of this group called the SG switch "the grandkid's switch".
>
> Be aware that those high voltages still exist on the rig with the SG off, during receive and even after switching mains off and disconnecting from mains.
> As Mike indicated, if you 'tinker' with this rig, you won't need our help...
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> Dan, forgive the question but how old are you and how much technical knowledge do you have?
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> Gordon, would you kindly help Dan to download the Operating Manual. Thanks.
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>
> [Non-text portions of this message have been removed]
>

43730. Re: [TS-520_820_530_830] Re: problems with ts820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-30 14:47:15 UTC
From: W5RKL
Topic: 43689 Message: 43730

I forgot to include:

Although the SG switch is set to OFF when neutralizing the final amplifier, the switch itself has nothing to do with neutralization of the final amplifier nor is the switch part of the final amplifier's Neutralization circuit. The switch simply controls the "Polarity" of the DC voltage applied to the final tube screens, nothing more.

73
Mike W5RKL

On 7/30/2013 9:41 AM, w5rkl wrote:
>
> The sole purpose of the rear panel "SG" switch is to control the
> "Polarity" of the DC voltage applied to the final tube screens,
> nothing more.
>
> Setting the SG switch to OFF results in a "Negative" voltage applied
> to the screens.
>
> Setting the SG switch to ON results in a "Positive" voltage to the
> final tube screens.
>
> The "normal" setting of the SG switch is "ON".
>
> Applying a negative voltage to the final tube screens will BLOCK the
> flow of current t0 the final tube plates. This results in an IP meter
> indication of "zero" in transmit. Do NOT confuse this with blown
> cathode resistors. Blown cathode resistors will result in zero ALC and
> zero IP current meter indications on ALL bands.
>
> If the final tube cathode resistors are okay, placing the SG switch in
> the OFF position will result in zero IP current indication but it will
> NOT result in zero peak ALC indication in TUNE mode adjusting the
> DRIVE control! Why? Because the "GRID" sits between the cathode and
> the screen and plate. Electrons will still flow from the tube's
> cathode to the grid with the SG switch set to OFF but electrons will
> be BLOCKED from reaching the tube's plate by the "negative field"
> surrounding the tube's screen. The tube's screen is between the "grid"
> and the "plate".
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> To understand what this all means and how this all works take the time
> and study vacuum tube theory in the ARRL handbooks if you plan on
> servicing vacuum tube circuits. One should have a solid understanding
> of what polarity an electrons has and how electrons react to negative
> and positive potentials.

>
> 73
> Mike W5RKL
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> off, during receive and even after switching mains off and
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> > 73 Dave f4eyk
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> >
> > [Non-text portions of this message have been removed]
> >
>
>

[Non-text portions of this message have been removed]

43731. Re: [TS-520_820_530_830] Re: problems with ts820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-30 16:11:55 UTC
From: Dave & Loraine
Topic: 43689 Message: 43731

OK Dan. Thanks for the personal info.

Please answer my previous questions :
-Does the "constant pitched tone" respond to the AF or RF GAIN controls?
-Is it a 'pure tone' or noisy?
-If you switch FUNCTION to VFO position does the tone stop or change?
-Is just the VFO led lit?

73 Dave f4eyk

[Non-text portions of this message have been removed]

43732. Re: problems with ts820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-30 16:29:30 UTC
From: danweed85
Topic: 43689 Message: 43732

it responds only to the AF gain (tone gets louder as af gain is increased)

pure tone like a keyboard key held done.

changing function switch does nothing to the tone.

and yes only the vfo led is lit when switch is set to vfo

sorry about not answering the first time

daniel

--- In TS-520_820_530_830@yahoogroups.com, "Dave & Loraine" <dave.crooks@...> wrote:
>
> OK Dan. Thanks for the personal info.
>
> Please answer my previous questions :
> -Does the "constant pitched tone" respond to the AF or RF GAIN controls?
> -Is it a 'pure tone' or noisy?
> -If you switch FUNCTION to VFO position does the tone stop or change?
> -Is just the VFO led lit?
>
> 73 Dave f4eyk
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

43733. Re: [TS-520_820_530_830] Re: AGC bus voltage

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-30 17:13:36 UTC
From: Don
Topic: 43700 Message: 43733

Terry
Do you have any preference's on buying the original ones or are the
NTE153 just as good.
The NTE ones are cheaper and less shipping charges,and i will get two to
be safe.
When i reinstalled that zener the voltages were the correct,so something
took it out as that's why we moved on to your other steps.
Was that a mistake on the schematic [had to be]at post 14A it says
17.6 ac volts,as you stated VDC and that's what i measure was DC volts.
Chokes block AC.

On the good side you will get a rest from me until i get the
replacements in hi hi
Have lots of good reading to do in the mean time on all that valuable
information you have given me.

Don/Ve2ud

On 30/07/2013 9:01 AM, Terry Wagoner wrote:
>
> You can find 2SA473Y pulls and new ones on Ebay or use a NTE 153 sub
> also available on Ebay for around $3.00.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> > Terry
> >
> > I checked the voltages around the Q34 area AF board and found that they
> > were too high,for my liking.
> > So i removed Q34 and it is bad.The 1000uf cap was reading about
> 780uf,so
> > i should change those caps also as you suggested way back.
> > The 9 volt side is fine.
> > So i need a source or maybe someone in the group that has one.
> > Don't know if this will solve the problem totally ,.but it's a good
> start.
> >
> > Don/Ve2ud
> >
> >
> >
> >
> >

> > On 30/07/2013 7:37 AM, Terry Wagoner wrote:
> > >
> > > Yes I would get Kens big schematic. I use one all the time and have
> > > one in reserve. Much easier to use.
> > >
> > > Question: When you are injecting 400hz audio into Conn 11 on IF board
> > > do you have Conn 11 plugged in and Conn 1 on Audio board plugged in?
> > > They must both be plugged in.
> > >
> > > If you are uncertain of audio level from your Marconi suggest that
> you
> > > use the BK200D for your 400hz audio test signal. Connect test
> leads to
> > > Red/Blk jacks, set selector switch to 400hz out, place meter selector
> > > to % modulation, increase Modulation level pot for maximum on the
> > > meter (never need this level but start here).
> > >
> > > If you are uncertain if it is working you can look at the 400hz level
> > > on your O-scope. I am former owner of this sig gen and as I recall
> you
> > > can get over a volt of audio out of it at the 50% mod level.
> > >
> > > You could also inject it into the mic/line input on your laptop to
> > > confirm it is working.
> > >
> > > You dont need more than 10-20mv rms or 56mv P-P to get very loud tone
> > > from your TS-830. So you could set the P-P level around 100mv on the
> > > scope and then connect to Conn 11 at IF board and back it down from
> > > there.
> > >
> > > Terry K9TW
> > >
> > >
> >
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> >
> > [Non-text portions of this message have been removed]
> >
>
>

[Non-text portions of this message have been removed]

43734. Re: AGC bus voltage

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-30 17:35:19 UTC
From: Terry Wagoner
Topic: 43700 Message: 43734

NTE153 is fine. Schematic is wrong. Output of the C-L-C pi-filter is DC.

Pretty sure I gave you a resistance measurement to make from the 12vdc post to chassis ground to make sure you had no fault on it.

I like to know the root cause of failures, but sometimes no obvious reasons why can be determined. Just gets tired.

I know you have voiced reluctance to use your other TS-830 rigs in troubleshooting, but it can be invaluable aid in determining what "normal" design operational parameters are so you can compare with the problem rig. Can also measure and record currents, voltages, resistance, waveforms etc in notebooks or mark up the large schematic so you dont have to constantly remove covers or leave covers off. It helps me all the time. I have some of the basic stuff in the file cabinet between my ears, but most of time I refer to my big schematic and notebooks developed over the years.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Terry
> Do you have any preference's on buying the original ones or are the
> NTE153 just as good.
> The NTE ones are cheaper and less shipping charges,and i will get two to
> be safe.
> When i reinstalled that zener the voltages were the correct,so something
> took it out as that's why we moved on to your other steps.
> Was that a mistake on the schematic [had to be]at post 14A it says
> 17.6 ac volts,as you stated VDC and that's what i measure was DC volts.
> Chokes block AC.
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>
> On the good side you will get a rest from me until i get the
> replacements in hi hi
> Have lots of good reading to do in the mean time on all that valuable
> information you have given me.
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> Don/Ve2ud
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> On 30/07/2013 9:01 AM, Terry Wagoner wrote:
> >
> > You can find 2SA473Y pulls and new ones on Ebay or use a NTE 153 sub
> > also available on Ebay for around $3.00.

> >
> > Terry K9TW
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> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
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> > > > Question: When you are injecting 400hz audio into Conn 11 on IF board
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> > > > They must both be plugged in.
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> > > > If you are uncertain of audio level from your Marconi suggest that
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> > > > meter (never need this level but start here).
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> > > > on your O-scope. I am former owner of this sig gen and as I recall
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> > > > can get over a volt of audio out of it at the 50% mod level.
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> > > > You could also inject it into the mic/line input on your laptop to
> > > > confirm it is working.
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> > > > You dont need more than 10-20mv rms or 56mv P-P to get very loud tone

> > > > from your TS-830. So you could set the P-P level around 100mv on the
> > > > scope and then connect to Conn 11 at IF board and back it down from
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> > >
> > > [Non-text portions of this message have been removed]
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>
> [Non-text portions of this message have been removed]
>

43735. Re: problems with ts820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-30 17:54:15 UTC
From: Terry Wagoner
Topic: 43689 Message: 43735

Hi Mike:

I dont have a problem with recommendation to a newly licensed and new Hybrid owner to leave the SG switch off for time being. Not designed specifically for operator error, but in this case inadvertent keying of rig with Heaters on, CW mode, and Car Pot turned up could result in loss of finals and/or plate choke or ???

Kenwood provided the SG switch for two purposes: (See TS-820 Operating Instruction Manual Maintenance Section 6)

1. To allow "cold" neutralization without having to lift the screen grid lead and anode leads and having to worry about securing the hot ends of those leads if you did the lifting at the tubes.

2. To allow Transmitter alignment ie peaking of the coil pack Drive Coils without RF output.

3. I use it also for load testing the Drive tube stage, but Kenwood makes no mention of this in the manuals.

4. As noted above it can prevent inadvertent transmit which could damage the rig. I often see Hybrid pictures on Ebay that show the heaters on and the rig flipped to send and it makes me cringe!

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> The sole purpose of the rear panel "SG" switch is to control the "Polarity" of the DC voltage applied to the final tube screens, nothing more.
>
> Setting the SG switch to OFF results in a "Negative" voltage applied to the screens.
>
> Setting the SG switch to ON results in a "Positive" voltage to the final tube screens.
>
> The "normal" setting of the SG switch is "ON".
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> Applying a negative voltage to the final tube screens will BLOCK the flow of current t0 the final tube plates. This results in an IP meter indication of "zero" in transmit. Do NOT confuse this with blown cathode resistors. Blown cathode resistors will result in zero ALC and zero IP current meter indications on ALL bands.
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> If the final tube cathode resistors are okay, placing the SG switch in the OFF position will result in zero IP current indication but it will NOT result in zero peak ALC indication in TUNE mode adjusting the DRIVE control! Why? Because the "GRID" sits between the cathode and the screen and plate. Electrons will still flow from the tube's cathode to the grid with the SG switch set to OFF but electrons will be BLOCKED from reaching the

tube's plate by the "negative field" surrounding the tube's screen. The tube's screen is between the "grid" and the "plate".
>
> To understand what this all means and how this all works take the time and study vacuum tube theory in the ARRL handbooks if you plan on servicing vacuum tube circuits. One should have a solid understanding of what polarity an electrons has and how electrons react to negative and positive potentials.
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> --- In TS-520_820_530_830@yahoogroups.com, "Dave & Loraine" <dave.crooks@> wrote:
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> > Gordon, would you kindly help Dan to download the Operating Manual. Thanks.
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> >
> > [Non-text portions of this message have been removed]
> >
>

43736. Re: [TS-520_820_530_830] Re: AGC bus voltage

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-30 18:00:46 UTC
From: Don
Topic: 43700 Message: 43736

Terry
I don't remember if you gave the resistance test,for it,but now that i
have time to check all my notes i will look for it.
I checked with the fellow who is selling me a TS830 with minor problems
to see if he will be shipping it soon,so i will use that one for
troubleshooting,after we troubleshoot that one hi hi.
I have that cheap ESR Chinese meter from Ebay, so should i remove the
caps in that area and check them before i order the pnp's as that seller
carries a wide selection of other electronic parts

http://www.ebay.com/itm/NTE-NTE153-BIPOLAR-TRANSISTOR-PNP-90V-TO-220-NEW-Qty-1-/140878446238?pt=LH_DefaultDomain_0&hash=
<http://www.ebay.com/itm/NTE-NTE153-BIPOLAR-TRANSISTOR-PNP-90V-TO-220-NEW-Qty-1-/140878446238?pt=LH_DefaultDomain_0&hash=item20cd027e9e>item20cd027e9e
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73
Don/Ve2ud

On 30/07/2013 1:35 PM, Terry Wagoner wrote:
>
> NTE153 is fine. Schematic is wrong. Output of the C-L-C pi-filter is DC.
>
> Pretty sure I gave you a resistance measurement to make from the 12vdc
> post to chassis ground to make sure you had no fault on it.
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> I like to know the root cause of failures, but sometimes no obvious
> reasons why can be determined. Just gets tired.
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> > > Terry K9TW
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> > > --- In TS-520_820_530_830@yahoogroups.com
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> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
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> > > > I checked the voltages around the Q34 area AF board and found
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> > > > So i removed Q34 and it is bad.The 1000uf cap was reading about
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> > > > > Question: When you are injecting 400hz audio into Conn 11 on
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> > > > > If you are uncertain of audio level from your Marconi suggest
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> > > > > use the BK200D for your 400hz audio test signal. Connect test
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> > > > > If you are uncertain if it is working you can look at the
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> > > > > on your O-scope. I am former owner of this sig gen and as I
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> > > you
> > > > > can get over a volt of audio out of it at the 50% mod level.
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> > > > > You could also inject it into the mic/line input on your laptop to
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> > > > > there.
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> > > > > Terry K9TW
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43737. Re: [TS-520_820_530_830] Re: problems with ts820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-30 19:09:10 UTC
From: Dave & Loraine
Topic: 43689 Message: 43737

Hi Daniel,

We were just checking setup and a few functions of receive.
Sometimes, simple setup errors cause faults. In your case it seems to be more than that.
Sorry I can't offer any solution.

When I got my 820s years ago, it also wasn't working. I received help from my local radio club and repaired it. It's been good ever since and has been maintained via this group.

The experts may be able to help you (along with your local club?)
Over to Mike, Terry, Gordon, ...

Bonne chance
73 Dave f4eyk

[Non-text portions of this message have been removed]

43738. Re: problems with ts820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-30 19:22:56 UTC
From: danweed85
Topic: 43689 Message: 43738

eliminating non possibilities is still very helpful. despite having the manual i was still nervous when i flipped the switched the first time(now i wish i had waited till i joined a club and got some face to face before i did) and i appreciate all your responses dave, they also opened up an interesting discussion on the sg switch. we have at least three clubs i know of in the pinellas county (gulf side near tampa) and im excited to get involved with them as well.

daniel

--- In TS-520_820_530_830@yahoogroups.com, "Dave & Loraine" <dave.crooks@...> wrote:
>
> Hi Daniel,
>
> We were just checking setup and a few functions of receive.
> Sometimes, simple setup errors cause faults. In your case it seems to be more than that.
> Sorry I can't offer any solution.
>
> When I got my 820s years ago, it also wasn't working. I received help from my local radio club and repaired it. It's been good ever since and has been maintained via this group.
>
> The experts may be able to help you (along with your local club?)
> Over to Mike, Terry, Gordon, ...
>
> Bonne chance
> 73 Dave f4eyk
>
>
>
>
> [Non-text portions of this message have been removed]
>

43739. Re: AGC bus voltage

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-30 19:45:01 UTC
From: Terry Wagoner
Topic: 43700 Message: 43739

OK I likewise have digital LCR bridge and the Anatek Blue ESR meter.

Without original factory data sheets dont know how you know what ESR is too high for these? You could use a rule of thumb plus ESR meter use practical experience to set some acceptance criteria for these electrolytics, but with the board folded over on a 30 plus year old rig with failure of the series pass transistor I would install new filter caps and be done for remainder of the rigs life. Certainly for remainder of my life!

Goes against the "if not broke dont fix it" and I am not in favor of wholesale recap of the electrolytics in these rigs, but I think these caps are good candidates for replacement if a related failure presents the opportunity. I would ESR and Bridge them and record the as found readings same as I would for the new ones.

Just my thoughts.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
>
> Terry
> I don't remember if you gave the resistance test,for it,but now that i
> have time to check all my notes i will look for it.
> I checked with the fellow who is selling me a TS830 with minor problems
> to see if he will be shipping it soon,so i will use that one for
> troubleshooting,after we troubleshoot that one hi hi.
> I have that cheap ESR Chinese meter from Ebay, so should i remove the
> caps in that area and check them before i order the pnp's as that seller
> carries a wide selection of other electronic parts
>
> http://www.ebay.com/itm/NTE-NTE153-BIPOLAR-TRANSISTOR-PNP-90V-TO-220-NEW-Qty-1-/140878446238?pt=LH_DefaultDomain_0&hash=
> <http://www.ebay.com/itm/NTE-NTE153-BIPOLAR-TRANSISTOR-PNP-90V-TO-220-NEW-Qty-1-/140878446238?pt=LH_DefaultDomain_0&hash=item20cd027e9e>item20cd027e9e
> <http://www.ebay.com/itm/NTE-NTE153-BIPOLAR-TRANSISTOR-PNP-90V-TO-220-NEW-Qty-1-/140878446238?pt=LH_DefaultDomain_0&hash=item20cd027e9e>
>
> 73
> Don/Ve2ud
>
>
>
> On 30/07/2013 1:35 PM, Terry Wagoner wrote:
> >
> > NTE153 is fine. Schematic is wrong. Output of the C-L-C pi-filter is DC.
> >

> > Pretty sure I gave you a resistance measurement to make from the 12vdc
> > post to chassis ground to make sure you had no fault on it.
> >
> > I like to know the root cause of failures, but sometimes no obvious
> > reasons why can be determined. Just gets tired.
> >
> > I know you have voiced reluctance to use your other TS-830 rigs in
> > troubleshooting, but it can be invaluable aid in determining what
> > "normal" design operational parameters are so you can compare with the
> > problem rig. Can also measure and record currents, voltages,
> > resistance, waveforms etc in notebooks or mark up the large schematic
> > so you dont have to constantly remove covers or leave covers off. It
> > helps me all the time. I have some of the basic stuff in the file
> > cabinet between my ears, but most of time I refer to my big schematic
> > and notebooks developed over the years.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > >
> > > Terry
> > > Do you have any preference's on buying the original ones or are the
> > > NTE153 just as good.
> > > The NTE ones are cheaper and less shipping charges,and i will get
> > two to
> > > be safe.
> > > When i reinstalled that zener the voltages were the correct,so
> > something
> > > took it out as that's why we moved on to your other steps.
> > > Was that a mistake on the schematic [had to be]at post 14A it says
> > > 17.6 ac volts,as you stated VDC and that's what i measure was DC volts.
> > > Chokes block AC.
> > >
> > >
> > > On the good side you will get a rest from me until i get the
> > > replacements in hi hi
> > > Have lots of good reading to do in the mean time on all that valuable
> > > information you have given me.
> > >
> > > Don/Ve2ud
> > >
> > >
> > >
> > >
> > > On 30/07/2013 9:01 AM, Terry Wagoner wrote:
> > > >
> > > > You can find 2SA473Y pulls and new ones on Ebay or use a NTE 153 sub
> > > > also available on Ebay for around $3.00.
> > > >

> > > > Terry K9TW
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > > > > >
> > > > > Terry
> > > > > >
> > > > > I checked the voltages around the Q34 area AF board and found
> > that they
> > > > > were too high,for my liking.
> > > > > So i removed Q34 and it is bad.The 1000uf cap was reading about
> > > > 780uf,so
> > > > > i should change those caps also as you suggested way back.
> > > > > The 9 volt side is fine.
> > > > > So i need a source or maybe someone in the group that has one.
> > > > > Don't know if this will solve the problem totally ,.but it's a good
> > > > start.
> > > > > >
> > > > > Don/Ve2ud
> > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > On 30/07/2013 7:37 AM, Terry Wagoner wrote:
> > > > > > >
> > > > > Yes I would get Kens big schematic. I use one all the time and
> > have
> > > > > one in reserve. Much easier to use.
> > > > > > >
> > > > > Question: When you are injecting 400hz audio into Conn 11 on
> > IF board
> > > > > do you have Conn 11 plugged in and Conn 1 on Audio board
> > plugged in?
> > > > > They must both be plugged in.
> > > > > > >
> > > > > If you are uncertain of audio level from your Marconi suggest
> > that
> > > > you
> > > > > use the BK200D for your 400hz audio test signal. Connect test
> > > > leads to
> > > > > Red/Blk jacks, set selector switch to 400hz out, place meter
> > selector
> > > > > to % modulation, increase Modulation level pot for maximum on the
> > > > > meter (never need this level but start here).
> > > > > > >
> > > > > If you are uncertain if it is working you can look at the
> > 400hz level
> > > > > on your O-scope. I am former owner of this sig gen and as I

> > recall
> > > > you
> > > > > > can get over a volt of audio out of it at the 50% mod level.
> > > > > >
> > > > > > You could also inject it into the mic/line input on your laptop to
> > > > > > confirm it is working.
> > > > > >
> > > > > > You dont need more than 10-20mv rms or 56mv P-P to get very
> > loud tone
> > > > > > from your TS-830. So you could set the P-P level around 100mv
> > on the
> > > > > > scope and then connect to Conn 11 at IF board and back it down
> > from
> > > > > > there.
> > > > > >
> > > > > > Terry K9TW
> > > > > >
> > > > > >
> > > > > >
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> > > > > > [Non-text portions of this message have been removed]
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43740. Re: [TS-520_820_530_830] Re: TS-820S Display problem even after working on DG-1

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-30 19:55:47 UTC
From: Joseph Stiles
Topic: 43702 Message: 43740

NICE JOB!

I'm going to file this one away! TNX!

73 Joe
WB7UQU

From: w3drk <dieter.kedrowitsch@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, July 30, 2013 7:10 AM
Subject: [TS-520_820_530_830] Re: TS-820S Display problem even after working on DG-1

Before anyone wastes their time responding to this post, I wanted to follow-up that managed to solve the problem.

I documented the repair here, but long story short it was a bad choke on the DG-1 Mixer board. Hopefully this info can help some others struggling with their DG-1.

http://www.w3drk.com/wordpress/?p=142

73!

[Non-text portions of this message have been removed]

43741. Re: problems with ts820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-30 20:07:27 UTC
From: Terry Wagoner
Topic: 43689 Message: 43741

Daniel:

You might try contacting Danny Cannon KI4AX at Hudson Florida. Not too sure how close he is to you? He is experienced TS520 and TS820 owner. He can help you learn how to load the rig.

Mike W5RKL gave you good advice about cracking the books and learning how a vacuum tube works especially a tetrode (tube with Screen Grid). That knowledge wont come over nite and of course not realistic to expect you to wait to fire up the rig until you have that fundamental understanding. An expectation not to plug it in until you have acquired and read at minimum the Operating manual is a reasonable expectation and wise counsel.

I would say that 95% of all newly licensed Hybrid owners almost immediately fire up their new Ebay or Hamfest hybrid when they get it home and most with no copy of the Operating Manual and the Service Manual.

For that reason Daves suggestion to leave the SG switch turned off until you have read tuning/loading instructions is a legitimate use for the switch. Not a Kenwood design purpose, but a good safety valve.

These rigs are pretty robust. Mike and several others here are experienced with operation and repair of TS-820 rigs. One or more of them should be able to help you with your rig. Of course you need to know that next thing you will hear about is the minimum level of required test equipment to keep these rigs on the air. A modest investment that will include a dummy load most likely as your first acquisition. Either home brew or purchased.

Good Luck
Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "danweed85" <danweed85@...> wrote:
>
> eliminating non possibilities is still very helpful. despite having the manual i was still nervous when i flipped the switched the first time(now i wish i had waited till i joined a club and got some face to face before i did) and i appreciate all your responses dave, they also opened up an interesting discussion on the sg switch. we have at least three clubs i know of in the pinellas county (gulf side near tampa) and im excited to get involved with them as well.
> >
> >
> > daniel
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Dave & Loraine" <dave.crooks@> wrote:
> > >
> > > Hi Daniel,
> > >
> > > We were just checking setup and a few functions of receive.
> > > Sometimes, simple setup errors cause faults. In your case it seems to be more than that.

> > Sorry I can't offer any solution.
> >
> > When I got my 820s years ago, it also wasn't working. I received help from my local radio club and repaired it. It's been good ever since and has been maintained via this group.
> >
> > The experts may be able to help you (along with your local club?)
> > Over to Mike, Terry, Gordon, ...
> >
> > Bonne chance
> > 73 Dave f4eyk
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

43742. Re: problems with ts820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-30 20:29:49 UTC
From: Terry Wagoner
Topic: 43689 Message: 43742

Daniel:

Dave gave you a very detailed list of how to pre-set all the controls for receive mode essentially out of the manual. I have just couple of questions and will back away and let Mike, Joe and others work with you. If anyone needs help I will try to lend whatever support I can.

1. How did you connect the remote speaker or speakers?

2. You report ALC indication (S-meter) in receive mode is 2/3 full scale. Is the RF gain pot full CW position?

3. What happens when you turn the AGC off?

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Dave & Loraine" <dave.crooks@...> wrote:
>
> Hi Daniel,
>
> We were just checking setup and a few functions of receive.
> Sometimes, simple setup errors cause faults. In your case it seems to be more than that.
> Sorry I can't offer any solution.
>
> When I got my 820s years ago, it also wasn't working. I received help from my local radio club and repaired it. It's been good ever since and has been maintained via this group.
>
> The experts may be able to help you (along with your local club?)
> Over to Mike, Terry, Gordon, ...
>
> Bonne chance
> 73 Dave f4eyk
>
>
>
>
> [Non-text portions of this message have been removed]
>

43743. Re: problems with ts820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-30 21:09:15 UTC
From: danweed85
Topic: 43689 Message: 43743

i connected to external speakers through the speaker jack in the rear, there is no internal speaker but the wire and plug is still there.

yes the rf gain pot is turned fully clockwise

nothing changes when i switch the AGC to off.

thanks for the reply's terry

daniel

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Daniel:
>
> Dave gave you a very detailed list of how to pre-set all the controls for receive mode essentially out of the manual. I have just couple of questions and will back away and let Mike, Joe and others work with you. If anyone needs help I will try to lend whatever support I can.
>
> 1. How did you connect the remote speaker or speakers?
>
> 2. You report ALC indication (S-meter) in receive mode is 2/3 full scale. Is the RF gain pot full CW position?
>
> 3. What happens when you turn the AGC off?
>
> Terry K9TW
>

> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

43744. Re: problems with ts820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-30 23:04:33 UTC
From: roberteleazer@rocketmail.com
Topic: 43689 Message: 43744

Dan:

Given that the rig has no outer case, I would expect that the TR relay on the bottom has fallen out of its socket, which will cause all sorts of problems. That happens with my TS-820S every time I take the case off. Set the rig on its right side and take a look at the relay located in more or less the center of the bottom.

The tone you describe I also experienced when I was first checking out my problem-plagued TS-820S. I think you are hearing the sidetone in CW transmit mode. If that is the case you also have probably burned out the usual suspect resistors, which is are no big deal to repair.

Where are you at in Florida? I am on the central east coast.

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "danweed85" <danweed85@...> wrote:
>
> i connected to external speakers through the speaker jack in the rear, there is no internal speaker but the wire and plug is still there.
>
> yes the rf gain pot is turned fully clockwise
>
> nothing changes when i switch the AGC to off.
>
> thanks for the reply's terry
>
> daniel
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Daniel:
> >
> > Dave gave you a very detailed list of how to pre-set all the controls for receive mode essentially out of the manual. I have just couple of questions and will back away and let Mike, Joe and others work with you. If anyone needs help I will try to lend whatever support I can.
> >
> > 1. How did you connect the remote speaker or speakers?
> >
> > 2. You report ALC indication (S-meter) in receive mode is 2/3 full scale. Is the RF gain pot full CW position?
> >
> > 3. What happens when you turn the AGC off?
> >

> > Terry K9TW
> >
>
> > >
> > >
> > >
> > >
> > > [Non-text portions of this message have been removed]
> > >
> >
>

43745. Re: problems with ts820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-31 00:11:34 UTC
From: Terry Wagoner
Topic: 43689 Message: 43745

Daniel:

OK Strongest recommendation I can give you is one you probably wont like and that is to get local in person help if at all possible. Perhaps from a club? As I mentioned give Danny KI4AX an email if Hudson is close to you. Lots of hams in Tampa/St. Pete area.

There is exposed 900vdc and 300vdc with enough ampacity to kill you in this radio.

It is hard enough to come in completely cold and get a fully functional KW Hybrid operating properly. When you have one that has these kinds of problems it is really helpful if you get someone with experience who can help you. Far better to be able to observe as well as reading.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "danweed85" <danweed85@...> wrote:
>
> i connected to external speakers through the speaker jack in the rear, there is no internal speaker but the wire and plug is still there.
>
> yes the rf gain pot is turned fully clockwise
>
> nothing changes when i switch the AGC to off.
>
> thanks for the reply's terry
>
> daniel
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Daniel:
> >
> > Dave gave you a very detailed list of how to pre-set all the controls for receive mode essentially out of the manual. I have just couple of questions and will back away and let Mike, Joe and others work with you. If anyone needs help I will try to lend whatever support I can.
> >
> > 1. How did you connect the remote speaker or speakers?
> >
> > 2. You report ALC indication (S-meter) in receive mode is 2/3 full scale. Is the RF gain pot full CW position?
> >
> > 3. What happens when you turn the AGC off?
> >
> > Terry K9TW
> >

>
> > >
> > >
> > >
> > >
> > > [Non-text portions of this message have been removed]
> > >
> >
>

43746. Re: problems with ts820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-30 23:24:42 UTC
From: danweed85
Topic: 43689 Message: 43746

i live near st petersburg in pinellas county. the relay looked ok nice and snug. ive seen resistor kits for sale on k4eaa's website (hes in sarasota) for incredibly cheap.

daniel

--- In TS-520_820_530_830@...m, "roberteleazer@..." <roberteleazer@...> wrote:
>
> Dan:
>
> Given that the rig has no outer case, I would expect that the TR relay on the bottom has fallen out of its socket, which will cause all sorts of problems. That happens with my TS-820S every time I take the case off. Set the rig on its right side and take a look at the relay located in more or less the center of the bottom.
>
> The tone you describe I also experienced when I was first checking out my problem-plagued TS-820S. I think you are hearing the sidetone in CW transmit mode. If that is the case you also have probably burned out the usual suspect resistors, which is are no big deal to repair.
>
> Where are you at in Florida? I am on the central east coast.
>
> Robert
> WB5WSV
>

43747. Re: problems with ts820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-31 00:27:27 UTC
From: danweed85
Topic: 43689 Message: 43747

yea terry i think joining a club (or multiple ones) is my best bet to not destroying this thing, or myself, and its actually an idea i do like. im very excited to get into all things possible in the ham world. and if the members are half as helpful as you guys this kenwood will be back to its happy state in no time. thnx for the replies terry.

daniel

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Daniel:
>
> OK Strongest recommendation I can give you is one you probably wont like and that is to get local in person help if at all possible. Perhaps from a club? As I mentioned give Danny KI4AX an email if Hudson is close to you. Lots of hams in Tampa/St. Pete area.
>
> There is exposed 900vdc and 300vdc with enough ampacity to kill you in this radio.
>
> It is hard enough to come in completely cold and get a fully functional KW Hybrid operating properly. When you have one that has these kinds of problems it is really helpful if you get someone with experience who can help you. Far better to be able to observe as well as reading.
>
>
>
> Terry K9TW
>

43748. New guy introduction

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-31 03:27:24 UTC
From: Matt W
Topic: 43748 Message: 43748

Hello all. New guy here. My name is Matt, callsign KF5LCH. I recently picked up my first hybrid Kenwood rig, a TS820S. It's in mint condition inside & out, very clean. I am still relatively new to Amateur Radio, so I consider it a learning experience. I want to learn the hobby. I'm currently being elmered by a couple of great old school hams at the club & I'm studying for the extra ticket. I'm also doing my best to learn code. I have also enrolled at the local vo-tech, taking intro to electronics. Please excuse my ignorance. I have been a locomotive engineer for the last 12 years, so electronics is a little out of my league. I have been using all Kenwood gear since I got my ticket & prefer using it over other equipment. The first time I heard a hybrid on the other end was at Field Day last year with the local club. I had been working a Kenwood TS480 all day, when I cam across a station with the BEST sounding audio I have yet to hear. Every contact was asking him about his rig. He advised it was a Kenwood TS820 he bought new in 1979. Man did it sound good. Anyways, I'm looking forward to meeting you guys & talking about these rigs. Thanks for having me.

KF5LCH
WWW.W5CUQ.COM

[Non-text portions of this message have been removed]

43749. New guy introduction

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-31 03:28:43 UTC
From: kf5lch
Topic: 43748 Message: 43749

Hello all. New guy here. My name is Matt, callsign KF5LCH. I recently picked up my first hybrid Kenwood rig, a TS820S. It's in mint condition inside & out, very clean. I am still relatively new to Amateur Radio, so I consider it a learning experience. I want to learn the hobby. I'm currently being elmered by a couple of great old school hams at the club & I'm studying for the extra ticket. I'm also doing my best to learn code. I have also enrolled at the local vo-tech, taking intro to electronics. Please excuse my ignorance. I have been a locomotive engineer for the last 12 years, so electronics is a little out of my league. I have been using all Kenwood gear since I got my ticket & prefer using it over other equipment. The first time I heard a hybrid on the other end was at Field Day last year with the local club. I had been working a Kenwood TS480 all day, when I cam across a station with the BEST sounding audio I have yet to hear. Every contact was asking him about his rig. He advised it was a Kenwood TS820 he bought new in 1979. Man did it sound good. Anyways, I'm looking forward to meeting you guys & talking about these rigs. Thanks for having me.

43750. Re: problems with ts820s

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-31 10:33:39 UTC
From: Terry Wagoner
Topic: 43689 Message: 43750

OK I know you are excited and anxious to get this rig going. Just take it one step at a time. It is possible you may need cathode meter shunt resistors later when you attempt to load the rig, but dont worry about that at this time. As you know Ken K4EAA is close to you so good resource for parts you may need.

I also note you joined QRZ forum. That is OK just be careful with the Kenwood Hybrid specific advice you get there. Need to evaluate it same as any forum. Problem over there is many of the folks are not and have never been Kenwood hybrid owners and will give you general boat anchor answers that seldom address your specific problem and sometimes are just flat wrong.

If you cannot get local help come back here and one or more of us will take you step by step thru troubleshooting your rig.

I have 10 years practical hands on experience and sometimes I can put my finger on a problem literally in minutes and in other cases where a radio has been abused, modified, hacked it can take me a week or two to figure out what is wrong.

Regards the yellow Speaker wire in the rig wrap some tape around the two bare plugs so not shorting them to anything in the rig.

Lastly, when you do get some help you may want to carefully unplug all the white Molex connector plugs on each PC board ONE AT A TIME and apply a small amount of Deoxit contact cleaner on the pins and reseat them. Often can cause a problem radio to come alive.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "danweed85" <danweed85@...> wrote:
>
> yea terry i think joining a club (or multiple ones) is my best bet to not destroying this thing, or myself, and its actually an idea i do like. im very excited to get into all things possible in the ham world. and if the members are half as helpful as you guys this kenwood will be back to its happy state in no time. thnx for the replies terry.
>
> daniel
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Daniel:
> >
> > OK Strongest recommendation I can give you is one you probably wont like and that is to get local in person help if at all possible. Perhaps from a club? As I mentioned give Danny KI4AX an email if Hudson is close to you. Lots of hams in Tampa/St. Pete area.
> >
> > There is exposed 900vdc and 300vdc with enough ampacity to kill you in this radio.
> >
> > It is hard enough to come in completely cold and get a fully functional KW Hybrid

operating properly. When you have one that has these kinds of problems it is really helpful if you get someone with experience who can help you. Far better to be able to observe as well as reading.
> >
> >
> >
> > Terry K9TW
> >
>

43751. Resistance Checks TS-830 Audio Board

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-31 15:35:36 UTC
From: Terry Wagoner
Topic: 43751 Message: 43751

Don:

While you have the Audio board folded over to replace Q34 suggest you check the DET signal return lead from Audio Board Conn 1 and IF Board Conn 11 as follows.

1. With both connectors plugged in measure from Conn 1 Pin 1 to Conn 11 Pin 2 = 0.20 ohms or less.

2. Locate TPG on Audio board diagonally from TP-1 and below Jumper J6. There is no ground post at this point just a hole and at bottom of hole is the silver/aluminum ground foil. This is the audio pre-amp ground plane.

3. Unplug Conn 1 and measure from Conn 1 Pin 1 (at the board mounted connector body and not at the pulled plug)to TPG = 0.10 ohms or less.

4. Measure from TPG to Chassis ground = 3k ohm or slightly less.

Re-land Conn 1.

Reminder the resistance at 12vdc regulated post to ground should be approx 40 ohms.

Terry K9TW

43752. Re: Resistance Checks TS-830 Audio Board

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-31 15:53:50 UTC
From: Terry Wagoner
Topic: 43751 Message: 43752

Don:

I forgot to mention with board folded over ideal time to check all the molex pin soldering especially Conn 1 where DET signal enters the board. I do this with Molex plugs plugged into board mounted connector body and use good lite and magnification and gently rock the plug side to side and observe for any pin movement in the solder cone.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Don:
>
> While you have the Audio board folded over to replace Q34 suggest you check the DET signal return lead from Audio Board Conn 1 and IF Board Conn 11 as follows.
>
> 1. With both connectors plugged in measure from Conn 1 Pin 1 to Conn 11 Pin 2 = 0.20 ohms or less.
>
> 2. Locate TPG on Audio board diagonally from TP-1 and below Jumper J6. There is no ground post at this point just a hole and at bottom of hole is the silver/aluminum ground foil. This is the audio pre-amp ground plane.
>
> 3. Unplug Conn 1 and measure from Conn 1 Pin 1 (at the board mounted connector body and not at the pulled plug)to TPG = 0.10 ohms or less.
>
> 4. Measure from TPG to Chassis ground = 3k ohm or slightly less.
>
> Re-land Conn 1.
>
> Reminder the resistance at 12vdc regulated post to ground should be approx 40 ohms.
>
>
> Terry K9TW
>

43753. Re: New guy introduction

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-31 16:26:07 UTC
From: scott10k
Topic: 43748 Message: 43753

Hi Matt,

Congratulations on your TS-820S acquisition and welcome to the forum. Of all the Yahoo forums on various radios, this one is by far the best in my opinion. If manuals did not come with your radio, be sure to get copies of both the operating and service manuals by downloading off of the net (or available on eBay), so you have a good understanding of your radio. On this forum we have Terry and Mike who are absolute masters of these hybrids, plus there are many other knowledgeable members. I own a TS-530S and a TS-830S, and my first "modern" radio in my early days of hamming was a TS-520. Lately after I retired the hybrid bug bit me again and here I am. My TS-830S, purchased on eBay, needed quite a bit of advice from Terry on this forum before I could get it working and now it runs just fine.
Again welcome to hybrids and to the forum!
Scott, N6CIC

--- In TS-520_820_530_830@yahoogroups.com, "kf5lch" <kf5lch@...> wrote:
>
> Hello all. New guy here. My name is Matt, callsign KF5LCH. I recently picked up my first hybrid Kenwood rig, a TS820S. It's in mint condition inside & out, very clean. I am still relatively new to Amateur Radio, so I consider it a learning experience. I want to learn the hobby. I'm currently being elmered by a couple of great old school hams at the club & I'm studying for the extra ticket. I'm also doing my best to learn code. I have also enrolled at the local vo-tech, taking intro to electronics. Please excuse my ignorance. I have been a locomotive engineer for the last 12 years, so electronics is a little out of my league. I have been using all Kenwood gear since I got my ticket & prefer using it over other equipment. The first time I heard a hybrid on the other end was at Field Day last year with the local club. I had been working a Kenwood TS480 all day, when I cam across a station with the BEST sounding audio I have yet to hear. Every contact was asking him about his rig. He advised it was a Kenwood TS820 he bought new in 1979. Man did it sound good. Anyways, I'm looking forward to meeting you guys & talking about these rigs. Thanks for having me.
>

43754. Re: [TS-520_820_530_830] Re: Resistance Checks TS-830 Audio Board

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-31 17:15:57 UTC
From: Don
Topic: 43751 Message: 43754

Hi Terry

Sure will give that a go and report it back.
I have a old parts power supply that has two 2200uf caps in it and i
will take those out to see if they might be a good candidate for
replacements.
I had a hard time to remove those caps[C83&C84] until i realized they
had another post on them i guess four stability.
C83 on the parts manual is marked wrong.
I have the $17 ESR meter i got on Ebay,and here is the readings i
got,The readings do very a bit when retested.
C83---2081 .13 ohms
C84 --1843 .36
C81 -- 765 .15
C82---3277 3.7

Don/Ve2ud

On 31/07/2013 11:53 AM, Terry Wagoner wrote:
> Don:
>
> I forgot to mention with board folded over ideal time to check all the
> molex pin soldering especially Conn 1 where DET signal enters the
> board. I do this with Molex plugs plugged into board mounted connector
> body and use good lite and magnification and gently rock the plug side
> to side and observe for any pin movement in the solder cone.
>
> Terry K9TW

43755. Re: Resistance Checks TS-830 Audio Board

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-31 18:34:04 UTC
From: Terry Wagoner
Topic: 43751 Message: 43755

Don:

I would not install old 2200uf, pulls but up to you. Low voltage supplies are the heart of the rig and when have opportunity to upgrade I would do it.

I assume your first readings are UF followed by ESR.

As I previously noted determining what is good vs bad ESR takes a lot of experience and developing some rules of thumb. Especially helpful if have original data sheets that have the quality specs. Different quality levels means lower "normal" ESR.

Lower capacitance values typically means higher ESR value
Higher capacitance values typically means lower ESR value

1. ESR Less than 1 usually OK
2. ESR Greater than 10 usually BAD
3. What do you do about ESR values in between 1 and 10?

You essentially have to build a table from experience.

It appears C84 ESR is too high.

C82 capacitance should not be that high? Isnt it 3.3uf and not a 3300 uf? A 3.3uf then 3.7 esr could be good, but on edge of being too high. It is the noise decoupling cap for the zener and not typically that high a value of capacitance would be used. Wrong Xc?

As previously noted now that you have them out I would not put any of them back in. I dont like to repeat desolder/resolder on any of these boards and I avoid repeated exercising of the molex connectors. Try to do it once only for any rigs I work on for customers. To easy to induce obvious new failures or latent failures (cracked traces that manifest themselves later).

OK to study the capacitance and ESR values on pulls to see what you can learn from it, but silly at cost of new caps to re-install them. Also you can upgrade from the original 85 degree to modern 105 degree and low ESR filter caps for little money.

Anytime you see a bulged capacitor body or vent or white crystalline powder at the vent I like to ESR it. You can develop a table of capacitance vs ESR for all your removed caps and all the new ones you install to help you determine when ESR is too high.

In my opinion ESR testing is not the magic test set that some say it is. Maybe I just need more experience.

The whole idea of ESR testing in my mind was to be able to test in circuit with no need to lift capacitor lead. Kenwood Hybrid configuration does not facilitate that on very many capacitors mounted on PC boards. If I have to remove board and lift one lead to test suspect capacitor you can bet I am going to lift both leads and replace the 35 year old electrolytic while I am there.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Hi Terry
>
> Sure will give that a go and report it back.
> I have a old parts power supply that has two 2200uf caps in it and i
> will take those out to see if they might be a good candidate for
> replacements.
> I had a hard time to remove those caps[C83&C84] until i realized they
> had another post on them i guess four stability.
> C83 on the parts manual is marked wrong.
> I have the $17 ESR meter i got on Ebay,and here is the readings i
> got,The readings do very a bit when retested.
> C83---2081 .13 ohms
> C84 --1843 .36
> C81 -- 765 .15
> C82---3277 3.7
>
> Don/Ve2ud
>
>
>
>
>
> On 31/07/2013 11:53 AM, Terry Wagoner wrote:
> > Don:
> >
> > I forgot to mention with board folded over ideal time to check all the
> > molex pin soldering especially Conn 1 where DET signal enters the
> > board. I do this with Molex plugs plugged into board mounted connector
> > body and use good lite and magnification and gently rock the plug side
> > to side and observe for any pin movement in the solder cone.
> >
> > Terry K9TW
>

43756. transformer output

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-31 19:03:12 UTC
From: n4mcy
Topic: 43756 Message: 43756

I think I am correct on this but I would like confirmation before I try it. a transformer with input of 120 volts AC output of 220 AC connected backwards so that input on the 220 side would give me output of 120 on the other side. In other words using the primary as the secondary. oh yea, of course the 220 would have to be european type using two poles or wires instead of the three we use here in the U.S.
on the other hand if the transformer had a center tap on the 220 side could I use that with U.S. 220 ?

43757. Re: [TS-520_820_530_830] Resistance Checks TS-830 Audio Board

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-31 19:15:08 UTC
From: Don
Topic: 43751 Message: 43757

Terry

Conn 1 pin 1 to Conn 11 pin2 ,,, test was fine
Unplug Conn 1 and measure to con 1 at the board mount,,, was fine
Measure from TPG to chassis ground 3.1 ohm's,, was fine.

Re Conn 1 and measure 12vdc post to ground was 20 ohm's

Don/Ve2ud

On 31/07/2013 11:35 AM, Terry Wagoner wrote:
>
> Don:
>
> While you have the Audio board folded over to replace Q34 suggest you
> check the DET signal return lead from Audio Board Conn 1 and IF Board
> Conn 11 as follows.
>
> 1. With both connectors plugged in measure from Conn 1 Pin 1 to Conn
> 11 Pin 2 = 0.20 ohms or less.
>
> 2. Locate TPG on Audio board diagonally from TP-1 and below Jumper J6.
> There is no ground post at this point just a hole and at bottom of
> hole is the silver/aluminum ground foil. This is the audio pre-amp
> ground plane.
>
> 3. Unplug Conn 1 and measure from Conn 1 Pin 1 (at the board mounted
> connector body and not at the pulled plug)to TPG = 0.10 ohms or less.
>
> 4. Measure from TPG to Chassis ground = 3k ohm or slightly less.
>
> Re-land Conn 1.
>
> Reminder the resistance at 12vdc regulated post to ground should be
> approx 40 ohms.
>
> Terry K9TW
>
>

[Non-text portions of this message have been removed]

43758. Re: [TS-520_820_530_830] Re: Resistance Checks TS-830 Audio Board

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-31 19:27:10 UTC
From: Don
Topic: 43751 Message: 43758

Terry
Yes you are right that ESR testing is not the magic test for sure,unless
you have the value from new stock[chart] and then i would not be too sure.
I did three repeat test's and they all varied,but close to same values
I am trying to find a supplier on Ebay that can supply them all of the caps.
I try to buy the 105 degree ones if i can get them.Mouser is carrying a
good selection now of higher temp ones.
The 2200uf's have a spacing of 7 mm.
By the way i did check the connector at Conn 1 and had a slight
movement,so i desoldered them all and resolded.

When in doubt pull them out
Don/Ve2ud

On 31/07/2013 2:34 PM, Terry Wagoner wrote:
>
> Don:
>
> I would not install old 2200uf, pulls but up to you. Low voltage
> supplies are the heart of the rig and when have opportunity to upgrade
> I would do it.
>
> I assume your first readings are UF followed by ESR.
>
> As I previously noted determining what is good vs bad ESR takes a lot
> of experience and developing some rules of thumb. Especially helpful
> if have original data sheets that have the quality specs. Different
> quality levels means lower "normal" ESR.
>
> Lower capacitance values typically means higher ESR value
> Higher capacitance values typically means lower ESR value
>
> 1. ESR Less than 1 usually OK
> 2. ESR Greater than 10 usually BAD
> 3. What do you do about ESR values in between 1 and 10?
>
> You essentially have to build a table from experience.
>
> It appears C84 ESR is too high.
>
> C82 capacitance should not be that high? Isnt it 3.3uf and not a 3300
> uf? A 3.3uf then 3.7 esr could be good, but on edge of being too high.
> It is the noise decoupling cap for the zener and not typically that
> high a value of capacitance would be used. Wrong Xc?
>

> As previously noted now that you have them out I would not put any of
> them back in. I dont like to repeat desolder/resolder on any of these
> boards and I avoid repeated exercising of the molex connectors. Try to
> do it once only for any rigs I work on for customers. To easy to
> induce obvious new failures or latent failures (cracked traces that
> manifest themselves later).
>
> OK to study the capacitance and ESR values on pulls to see what you
> can learn from it, but silly at cost of new caps to re-install them.
> Also you can upgrade from the original 85 degree to modern 105 degree
> and low ESR filter caps for little money.
>
> Anytime you see a bulged capacitor body or vent or white crystalline
> powder at the vent I like to ESR it. You can develop a table of
> capacitance vs ESR for all your removed caps and all the new ones you
> install to help you determine when ESR is too high.
>
> In my opinion ESR testing is not the magic test set that some say it
> is. Maybe I just need more experience.
>
> The whole idea of ESR testing in my mind was to be able to test in
> circuit with no need to lift capacitor lead. Kenwood Hybrid
> configuration does not facilitate that on very many capacitors mounted
> on PC boards. If I have to remove board and lift one lead to test
> suspect capacitor you can bet I am going to lift both leads and
> replace the 35 year old electrolytic while I am there.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> > Hi Terry
> >
> > Sure will give that a go and report it back.
> > I have a old parts power supply that has two 2200uf caps in it and i
> > will take those out to see if they might be a good candidate for
> > replacements.
> > I had a hard time to remove those caps[C83&C84] until i realized they
> > had another post on them i guess four stability.
> > C83 on the parts manual is marked wrong.
> > I have the $17 ESR meter i got on Ebay,and here is the readings i
> > got,The readings do very a bit when retested.
> > C83---2081 .13 ohms
> > C84 --1843 .36
> > C81 -- 765 .15
> > C82---3277 3.7
> >
> > Don/Ve2ud
> >

> >
> >
> >
> >
> > On 31/07/2013 11:53 AM, Terry Wagoner wrote:
> > > Don:
> > >
> > > I forgot to mention with board folded over ideal time to check all
> the
> > > molex pin soldering especially Conn 1 where DET signal enters the
> > > board. I do this with Molex plugs plugged into board mounted
> connector
> > > body and use good lite and magnification and gently rock the plug
> side
> > > to side and observe for any pin movement in the solder cone.
> > >
> > > Terry K9TW
> >
>
>

[Non-text portions of this message have been removed]

43759. Re: [TS-520_820_530_830] transformer output

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-31 20:21:08 UTC
From: W5RKL
Topic: 43756 Message: 43759

Yes that applying 220VAC on the secondary will produce 120VAC on the primary.

The same thing is done quite often with a filament transformer that has, for example, a 6.3VAC secondary filament winding that is connected to another transformer's 6.3VAC winding resulting in 120VAC on the primary of the transformer.

Make sure you do not exceed the current rating of the windings. Fuse the secondary winding that is now being used as the primary winding with the appropriate fuse. If you know the Volt amp rating (VA) you can calculate the approximate fuse using Amps = VA / Volts. For example, if the VA rating is 50 VA at 120VAC then the current will be 50 / 120 = .416 or 416 ma. a 3/4 amp fuse would work. If the reverse is done, 220VAC applied to the secondary resulting in 120VAC on the primary, AND the VA rating is still 50 VA, then the fuse rating would be 50 / 220 = .227amps or 227ma, a 1/2 amp fuse at 220VAC would work.

73
Mike W5RKL

On 7/31/2013 2:03 PM, n4mcy wrote:
>
> I think I am correct on this but I would like confirmation before I
> try it. a transformer with input of 120 volts AC output of 220 AC
> connected backwards so that input on the 220 side would give me output
> of 120 on the other side. In other words using the primary as the
> secondary. oh yea, of course the 220 would have to be european type
> using two poles or wires instead of the three we use here in the U.S.
> on the other hand if the transformer had a center tap on the 220 side
> could I use that with U.S. 220 ?
>
>

[Non-text portions of this message have been removed]

43760. Re: New guy introduction

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-31 14:48:07 UTC
From: Barry
Topic: 43748 Message: 43760

Glad to see you on here, Matt! I'm proud of my 820 and have only had it a couple of months, but these guys are an invaluable resource and have helped me tremendously to get it up and going.

Barry
KK4RXN
Jeremiah 29:11-13 / John 3:16

--- In TS-520_820_530_830@yahoogroups.com, Matt W <kf5lch@...> wrote:
>
> Hello all. New guy here. My name is Matt, callsign KF5LCH. I recently picked up my first hybrid Kenwood rig, a TS820S. It's in mint condition inside & out, very clean. I am still relatively new to Amateur Radio, so I consider it a learning experience. I want to learn the hobby. I'm currently being elmered by a couple of great old school hams at the club & I'm studying for the extra ticket. I'm also doing my best to learn code. I have also enrolled at the local vo-tech, taking intro to electronics. Please excuse my ignorance. I have been a locomotive engineer for the last 12 years, so electronics is a little out of my league. I have been using all Kenwood gear since I got my ticket & prefer using it over other equipment. The first time I heard a hybrid on the other end was at Field Day last year with the local club. I had been working a Kenwood TS480 all day, when I cam across a station with the BEST sounding audio I have yet to hear. Every contact was
> asking him about his rig. He advised it was a Kenwood TS820 he bought new in 1979. Man did it sound good. Anyways, I'm looking forward to meeting you guys & talking about these rigs. Thanks for having me.
>
>
>
> KF5LCH
> WWW.W5CUQ.COM
>
> [Non-text portions of this message have been removed]
>

43761. Re: transformer output

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-31 20:38:34 UTC
From: John Cox
Topic: 43756 Message: 43761

P.S. I am talking about 220volt and miliamps not megawatts. I am aware that the secondary winding could be and most probably is smaller gauge wire.

[Non-text portions of this message have been removed]

43762. Re: Resistance Checks TS-830 Audio Board

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-31 20:51:56 UTC
From: Terry Wagoner
Topic: 43751 Message: 43762

I think you mean TPG is 3.1k to chassis ground.

Measure 12vdc regulated post after you have remounted the new components and board folded back in place and heatsink resecured to chassis.

When you have board repaired and mounted and have good 12vdc let me know and we will go back to injecting audio at IF board DET output. No signal injecting on IF board path until we are 100% certain you have good audio.

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
> Terry
>
> Conn 1 pin 1 to Conn 11 pin2 ,,, test was fine
> Unplug Conn 1 and measure to con 1 at the board mount,,, was fine
> Measure from TPG to chassis ground 3.1 ohm's,, was fine.
>
> Re Conn 1 and measure 12vdc post to ground was 20 ohm's
>
> Don/Ve2ud
>
>
>
>
>
> On 31/07/2013 11:35 AM, Terry Wagoner wrote:
> >
> > Don:
> >
> > While you have the Audio board folded over to replace Q34 suggest you
> > check the DET signal return lead from Audio Board Conn 1 and IF Board
> > Conn 11 as follows.
> >
> > 1. With both connectors plugged in measure from Conn 1 Pin 1 to Conn
> > 11 Pin 2 = 0.20 ohms or less.
> >
> > 2. Locate TPG on Audio board diagonally from TP-1 and below Jumper J6.
> > There is no ground post at this point just a hole and at bottom of
> > hole is the silver/aluminum ground foil. This is the audio pre-amp
> > ground plane.
> >
> > 3. Unplug Conn 1 and measure from Conn 1 Pin 1 (at the board mounted
> > connector body and not at the pulled plug)to TPG = 0.10 ohms or less.
> >

> > 4. Measure from TPG to Chassis ground = 3k ohm or slightly less.
> >
> > Re-land Conn 1.
> >
> > Reminder the resistance at 12vdc regulated post to ground should be
> > approx 40 ohms.
> >
> > Terry K9TW
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

43763. HO-13 L2 coil

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-31 20:53:22 UTC
From: W5RKL
Topic: 43763 Message: 43763

I know this is not Kenwood but I thought I would try anyway.

I need the High Frequency L2 coil, part number 40-589, for my Heathkit HO-13 Ham Scan Panoramic Adaptor. I have the Low Frequency coil, 40-588, but that doesn't do me any good for a 3.395Mhz IF. I would rather align the scope with the proper oscillator coil rather than aligning it with the Low Frequency coil then do the alignment again if I can get the high frequency coil.

If you have one or know of a source, even a parts chassis of an HO-13 with the 40-589 L2 installed would be great, please let me know off the group, mycall at yahoo.com.

73
Mike W5RKL

[Non-text portions of this message have been removed]

43764. Re: Resistance Checks TS-830 Audio Board

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-31 20:56:28 UTC
From: Terry Wagoner
Topic: 43751 Message: 43764

If you are trying to find the same radial lead spacing in a new cap I dont think that is going to be easy. Typically the new packages are smaller so the caps wont sit flush and look as nice on the board as the original. Maybe better to mount them with a little excess lead length that will allow getting on the leads in future if you need to.

Maybe Jim at HybridRestore sells exact package replacements?

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Don <ve2ud@...> wrote:
>
>
> Terry
> Yes you are right that ESR testing is not the magic test for sure,unless
> you have the value from new stock[chart] and then i would not be too sure.
> I did three repeat test's and they all varied,but close to same values
> I am trying to find a supplier on Ebay that can supply them all of the caps.
> I try to buy the 105 degree ones if i can get them.Mouser is carrying a
> good selection now of higher temp ones.
> The 2200uf's have a spacing of 7 mm.
> By the way i did check the connector at Conn 1 and had a slight
> movement,so i desoldered them all and resolded.
>
> When in doubt pull them out
> Don/Ve2ud
>
>
>
>
> On 31/07/2013 2:34 PM, Terry Wagoner wrote:
> >
> > Don:
> >
> > I would not install old 2200uf, pulls but up to you. Low voltage
> > supplies are the heart of the rig and when have opportunity to upgrade
> > I would do it.
> >
> > I assume your first readings are UF followed by ESR.
> >
> > As I previously noted determining what is good vs bad ESR takes a lot
> > of experience and developing some rules of thumb. Especially helpful
> > if have original data sheets that have the quality specs. Different
> > quality levels means lower "normal" ESR.
> >
> > Lower capacitance values typically means higher ESR value
> > Higher capacitance values typically means lower ESR value

> >
> > 1. ESR Less than 1 usually OK
> > 2. ESR Greater than 10 usually BAD
> > 3. What do you do about ESR values in between 1 and 10?
> >
> > You essentially have to build a table from experience.
> >
> > It appears C84 ESR is too high.
> >
> > C82 capacitance should not be that high? Isnt it 3.3uf and not a 3300
> > uf? A 3.3uf then 3.7 esr could be good, but on edge of being too high.
> > It is the noise decoupling cap for the zener and not typically that
> > high a value of capacitance would be used. Wrong Xc?
> >
> > As previously noted now that you have them out I would not put any of
> > them back in. I dont like to repeat desolder/resolder on any of these
> > boards and I avoid repeated exercising of the molex connectors. Try to
> > do it once only for any rigs I work on for customers. To easy to
> > induce obvious new failures or latent failures (cracked traces that
> > manifest themselves later).
> >
> > OK to study the capacitance and ESR values on pulls to see what you
> > can learn from it, but silly at cost of new caps to re-install them.
> > Also you can upgrade from the original 85 degree to modern 105 degree
> > and low ESR filter caps for little money.
> >
> > Anytime you see a bulged capacitor body or vent or white crystalline
> > powder at the vent I like to ESR it. You can develop a table of
> > capacitance vs ESR for all your removed caps and all the new ones you
> > install to help you determine when ESR is too high.
> >
> > In my opinion ESR testing is not the magic test set that some say it
> > is. Maybe I just need more experience.
> >
> > The whole idea of ESR testing in my mind was to be able to test in
> > circuit with no need to lift capacitor lead. Kenwood Hybrid
> > configuration does not facilitate that on very many capacitors mounted
> > on PC boards. If I have to remove board and lift one lead to test
> > suspect capacitor you can bet I am going to lift both leads and
> > replace the 35 year old electrolytic while I am there.
> >
> > Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@> wrote:
> > >
> > > Hi Terry
> > >
> > > Sure will give that a go and report it back.
> > > I have a old parts power supply that has two 2200uf caps in it and i

> > > will take those out to see if they might be a good candidate for
> > > replacements.
> > > I had a hard time to remove those caps[C83&C84] until i realized they
> > > had another post on them i guess four stability.
> > > C83 on the parts manual is marked wrong.
> > > I have the $17 ESR meter i got on Ebay,and here is the readings i
> > > got,The readings do very a bit when retested.
> > > C83---2081 .13 ohms
> > > C84 --1843 .36
> > > C81 -- 765 .15
> > > C82---3277 3.7
> > >
> > > Don/Ve2ud
> > >
> > >
> > >
> > >
> > >
> > > On 31/07/2013 11:53 AM, Terry Wagoner wrote:
> > > > Don:
> > > >
> > > > I forgot to mention with board folded over ideal time to check all
> > the
> > > > molex pin soldering especially Conn 1 where DET signal enters the
> > > > board. I do this with Molex plugs plugged into board mounted
> > connector
> > > > body and use good lite and magnification and gently rock the plug
> > side
> > > > to side and observe for any pin movement in the solder cone.
> > > >
> > > > Terry K9TW
> > >
> > >
> > >
> >
> >
> > [Non-text portions of this message have been removed]
>

43765. Re: [TS-520_820_530_830] Re: Resistance Checks TS-830 Audio Board

Yahoo group: TS-520_820_530_830 (2013-01 — 2013-07)
Date: 2013-07-31 21:14:55 UTC
From: Don
Topic: 43751 Message: 43765

yes,that is correct
I will fire off a email to Jim
thanks
Don/Ve2ud

On 31/07/2013 4:51 PM, Terry Wagoner wrote:
>
> I think you mean TPG is 3.1k to chassis ground.
>
> Measure 12vdc regulated post after you have remounted the new
> components and board folded back in place and heatsink resecured to
> chassis.
>
> When you have board repaired and mounted and have good 12vdc let me
> know and we will go back to injecting audio at IF board DET output. No
> signal injecting on IF board path until we are 100% certain you have
> good audio.
>
> Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Don <ve2ud@...> wrote:
> >
> > Terry
> >
> > Conn 1 pin 1 to Conn 11 pin2 ,,, test was fine
> > Unplug Conn 1 and measure to con 1 at the board mount,,, was fine
> > Measure from TPG to chassis ground 3.1 ohm's,, was fine.
> >
> > Re Conn 1 and measure 12vdc post to ground was 20 ohm's
> >
> > Don/Ve2ud
> >
> >
> >
> >
> >
> >
> > On 31/07/2013 11:35 AM, Terry Wagoner wrote:
> > >
> > > Don:
> > >
> > > While you have the Audio board folded over to replace Q34 suggest you
> > > check the DET signal return lead from Audio Board Conn 1 and IF Board
> > > Conn 11 as follows.
> > >

> > > 1. With both connectors plugged in measure from Conn 1 Pin 1 to Conn
> > > 11 Pin 2 = 0.20 ohms or less.
> > >
> > > 2. Locate TPG on Audio board diagonally from TP-1 and below Jumper
> J6.
> > > There is no ground post at this point just a hole and at bottom of
> > > hole is the silver/aluminum ground foil. This is the audio pre-amp
> > > ground plane.
> > >
> > > 3. Unplug Conn 1 and measure from Conn 1 Pin 1 (at the board mounted
> > > connector body and not at the pulled plug)to TPG = 0.10 ohms or less.
> > >
> > > 4. Measure from TPG to Chassis ground = 3k ohm or slightly less.
> > >
> > > Re-land Conn 1.
> > >
> > > Reminder the resistance at 12vdc regulated post to ground should be
> > > approx 40 ohms.
> > >
> > > Terry K9TW
> > >
> > >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
>

[Non-text portions of this message have been removed]